

**CHAPTER FOUR**

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**SUGAR INDUSTRY IN INDIA**

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Textile is the first largest industry in India while sugar industry ranks as the second largest one. Sugar industry occupies a prominent position in the industrial sector of the country. It is one of the largest agro-based industries in India. Nearly 7 million acres of land have been infested with sugarcane crop in the world, but the yield and quality are poor in sub-tropic regions. The importance of sugar industry in the Indian economy can be gauged from the fact that it provides employment to about 35 million cultivators, 3.6 lakh skilled and unskilled workers and its by-products are used as raw material in industries like paper, alcohol, pharmaceuticals, plastics, synthetic rubber, fibreboard, etc. Further, the sugar industry is also an exchange earner and contributes handsomely to both the central and State exchequers.

It is said that the production of sugarcane, as a crop, was started first in India. In 1903, the first sugar factory was established in India at Mairwa in East Uttar Pradesh. In the year 1931, there were only 21 sugar factories in India, with a total sugar production of 1.0 lakh tonnes.

The industry was granted tariff protection in 1932 and as a result, there was rapid growth, both in the number of factories and the production of sugar. In 1934-35, the number of sugar factories rose to 130 and the sugar production to 9.57 lakh tonnes. But there was a set-back in the growth of the industry due to the Second World War. However, in 1951, the industry got an impetus because of the launching of Planned Economic Development. During the year 1990-91, there were 385 sugar factories in operation in the country.

Three-fourths of the sugar factories are located in Northern India, particularly Uttar-Pradesh, because of the rich and fertile alluvial soil, containing lime and potash, cheap and extensive irrigation facilities and favourable climatic conditions. However, in recent years, the sugar industry has become dispersed to the South.

Following Table shows the trends in the number of factories, production and consumption of sugar in India from 1950-51 to 1990-91.

Table 4.1  
Number of sugar-factories, production and consumption  
of sugar in India

Year	No. of sugar factories	Sugar	
		production in lakh tonnes	consumption in lakh tonnes
1950-51	138	11.34	10.98
1960-61	174	30.28	21.13
1970-71	216	37.40	40.27
1980-81	314	51.58	49.70
1990-91	385	120.47	100.57 (89.90)

Source: 'Cooperative Sugar', January 1992.

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The above Table shows that the total number of factories increased by 179 %, i.e. from 138 in 1950-51 to 385 in 1990-91. Similarly, the total production of sugar has gone up from 11.34 lakh tonnes in 1950-51 to 120.47 lakh tonnes in 1990-91.

**state-wise Location of Sugar Factories:**

The location of the sugar factories initially was governed by the proximity of sugarcane acreage, which was concentrated in UP and Bihar, because of rich and fertile soil of lime and potash as also cheap and extensive irrigation facilities and favourable climatic conditions. However, in recent years, the sugar industry has been dispersed to the South. In India, sugar factories are mostly situated in the rural areas of UP, Bihar, Andhra Pradesh, Tamilnadu, Karnataka, Gujarat and Maharashtra.

Table 4.2  
State-wise sugar industries in India

States	1950-51	1960-61	1970-71	1980-81	1990-91
Uttar Pradesh	57	70	71	92	105
Bihar	29	29	27	28	28
Maharashtra	15	27	41	78	97
Andhra Pradesh	-	12	19	28	32
Tamil Nadu	12	8	15	21	31
Karnataka	1	8	11	23	27
<b>Total in India</b>	<b>138</b>	<b>178</b>	<b>216</b>	<b>320</b>	<b>385</b>

Source: 'Cooperative Sugar', January 1992.

The cooperative sugar industry today occupies a prominent position in the field of processing of agricultural produce. In 1950-51, there were, in all, 139 working sugar factories in the country; of which only one was in the cooperative sector. By the year 1990-91, there were 385 sugar factories; of which, 220 were in the cooperative sector. A notable feature of the growth of sugar factories in India is that because of the remarkable growth of such cooperatives in the State of Maharashtra, where the first cooperative sugar factory was organized in the year 1950-51. By 1960-61, there were 174 sugar factories in India, of which 34 were in the cooperative sector and 140 were in the private sector. By the year 1990-91, there were 385 sugar factories in the country, of which, 220 were in the cooperative sector and 165 were in the private sector. The growth of the sugar industry in India in the cooperative and the private sector is given in the following Table.

Table 4.3  
Number of working sugar factories in India

Year	Cooperative sector	Private sector	TOTAL
1950-51	1	138	139
1960-61	34	140	174
1970-71	73	142	215
1980-81	149	166	315
1984-85	178	161	339
1990-91	220	165	385

Source: 'Cooperative Sugar'  
January 1992.

**State-wise Sugar Production in India:**

The major sugar producing States are Uttar Pradesh, Bihar, Maharashtra, Tamil Nadu and Karnataka. These States accounted for more than 99% of the total production of sugar in 1985-86.

Table 4.4  
State-wise sugar production

States	(in lakh tonnes)				
	1950-51	1960-61	1970-71	1981-82	1990-91
Uttar Pradesh	6.02	14.27	12.99	20.81	29.75
Bihar	2.92	3.85	2.92	3.44	4.15
Maharashtra	3.20	5.23	10.55	30.26	41.19
Andhra Pradesh	1.00	1.83	2.67	5.46	7.01
Tamil Nadu	0.92	1.31	2.29	7.55	11.83
Karnataka	0.20	1.20	2.05	6.48	9.42
<b>All India</b>	<b>11.18</b>	<b>30.28</b>	<b>37.40</b>	<b>84.37</b>	<b>120.47</b>

Source: 'Cooperative Sugar', January 1992.

From the above Table, it is observed that the country's total production of sugar has increased from 11.8 lakh tonnes in 1950-51 to 120.47 lakh tonnes in 1990-91.

**Need and Importance of Sugar Industry:**

Sugar industry is one of the most important agro-based industries in our country. It is quite different from other agro-based industries, i.e. cotton, jute, etc. Mostly, the sugar factories have been set up in rural areas because

sugarcane growers are village dwellers.

Sugar factories are the means of economic development of rural people. They are helpful for the development of other trends and allied industries like distilleries, papermills, acetone products, etc. The sugar industry's contribution to central and State exchequer is really admirable one. Sugarcane is the single largest crop in the country, its annual output is even higher than that of foodgrains. India is the only country in the whole world, where cane is still being paid on the basis of weight and not on the basis of quality. So, the cultivator who is the bulk supplier of sugarcane to the factories is naturally interested in the tonnage of his cane per acre.

Sugarcane is the main raw material of a sugar factory. It is perishable. Therefore, it is necessary to carry it immediately; otherwise the recovery decreases. Sugar industry brings about a change in the socio-economic, cultural, educational and political affairs of the rural areas.

Particularly in Maharashtra, cooperative sugar industries have played a dynamic role in rural development. India's sugar producing capacity is highest in the world. As far as sugar production is concerned, Maharashtra stands first in India and 10th in the world in producing white sugar.

Sugar industry plays an important role in the adoption of improved crop technology by rendering different services to the sugarcane growers, like supply of inputs, financial assistance, harvesting, transportation, etc.

**Definition of term 'Cooperation':**

The Cooperative Planning Committee defined the term 'Cooperation' as follows:

"Cooperation is a form of organization in which persons voluntarily associate together on a basis of equality for the promotion of their economic interests."

V.L.Mehta has commented that,

"Cooperation is a vast movement which promotes voluntary association of individuals having common needs who combine towards the achievement of common economic ends".

**Profile of Shree Warana Sahakari  
Sakhar Karkhana Limited, Warananagar:**

A brief history of Warana Sugar Factory will enable us to have a better understanding of the nature of socio-economic transformation. Warana Valley, before the establishment of the factory in 1955, was a barren hilly track, notorious

for the activities of dacoits and hardened criminals. Due to poor soil, traditional methods of cultivation, lack of irrigation facilities and low productivity of the farms, the peasants in the valley had poor income. So the farmers were much worried due to the irregular monsoons and violent fluctuations in the prices of agricultural produce.

In the year 1951, farmers of this region had to face decrease in the price of sugarcane to such an extent that poor farmers could not recoup even the cost of making jaggery. In order to overcome this difficulty, the local leaders of the region, with their enthusiastic nature, searching for a solution, decided to bring together all the farmers and establish a modern cooperative sugar factory. However, it was very difficult task for the local leaders to collect the share-capital from the ignorant and conservative minded farmers. But the local leaders succeeded in convincing the farmers that there should be a cooperative sugar factory in this area.

V.A. alias Tatyasaheb Kore played a very important role in uniting and encouraging the tradition-bound farmers. Due to his foresight, ceaseless effort and organizational ability, the community prospered. Tatyasaheb Kore and other social workers tried their best and convinced the farmers of the

need of a sugar factory in this region. As the farmers of the region were very poor, the major hurdle that they had to face was of monetary nature. However, they could secure some financial help from rich farmers for the factory. All the farmers unanimously decided to dispose off their valuables for raising the funds for the factory.

A society was registered under the Cooperative Societies' Act on 27th September 1955. The main objectives incorporated in the bye-laws were:

1. To improve the economic condition of the agricultural producers through cooperative processing and marketing of their agricultural produce, especially of sugarcane and products obtained therefrom;
2. To undertake such other activities as are incidental and essential for the above object;
3. To undertake all such activities as are conducive to an all-round development and welfare of the people residing in the area of operation of the factory.

Another factor which contributed to the setting up of the factory was the preferential licensing policy adopted by the Government in favour of the sugar factories in the cooperative sector. The Government adopted this policy because of the great success of Pravara Cooperative Sugar Factory. On receipt of the industrial licence from the Government of India,

the construction of the factory building and installation of the plant and machinery were undertaken. The factory was commissioned on 1st November 1959. Initially, the daily crushing capacity was 1,000 metric tonnes.

Objectives of Warana  
Cooperative Sugar Factory:

Every activity has its own objectives. Objectives are the ends towards which all management activities are directed. Before taking any course of action, the objectives must be clearly defined, well understood. Well defined objectives and goals lead to continuous growth and progress. They must also be realistic and reachable. In this connection, Webster rightly says,

"Effective management is management by objectives".

The important objective of Warana Sugar Factory is to improve the economic conditions of the agricultural producers through cooperative processing and marketing of their agricultural produce, especially of sugarcane and products obtained therefrom.

Location:

Warana cooperative sugar factory is located at Warananagar, 30 kms. North-West of Kolhapur city in Panhala Tahsil. It is 10 kms. to the West of national highway no.4. Although

Warananagar is under the jurisdiction of Kodoli Gram Panchayat, this cooperative complex is situate between Kodoli and Bahirewadi. The name of this well planned township owes its origin to the River Warana, which is about 3 kms. to the north of it and is the only major source of water, besides the wells.

Area of Operation:

The area of operation of the factory consists of 66 villages from Kolhapur and Sangli district. Of these, 42 are from Kolhapur district and 24 are from Sangli district.

Tahsil-wise, villages are distributed as under:

<u>District</u>	<u>Tahsil</u>	<u>No.of villages</u>	
1. Kolhapur	Panhala	18	
	Hatkanangale	20	
	Karveer	<u>4</u>	42
2. Sangli	Walva	18	
	Shirala	<u>6</u>	<u>24</u>
Total			<b>66</b>

All these villages fall within a radius of 15 kms. of the factory.

Organization:

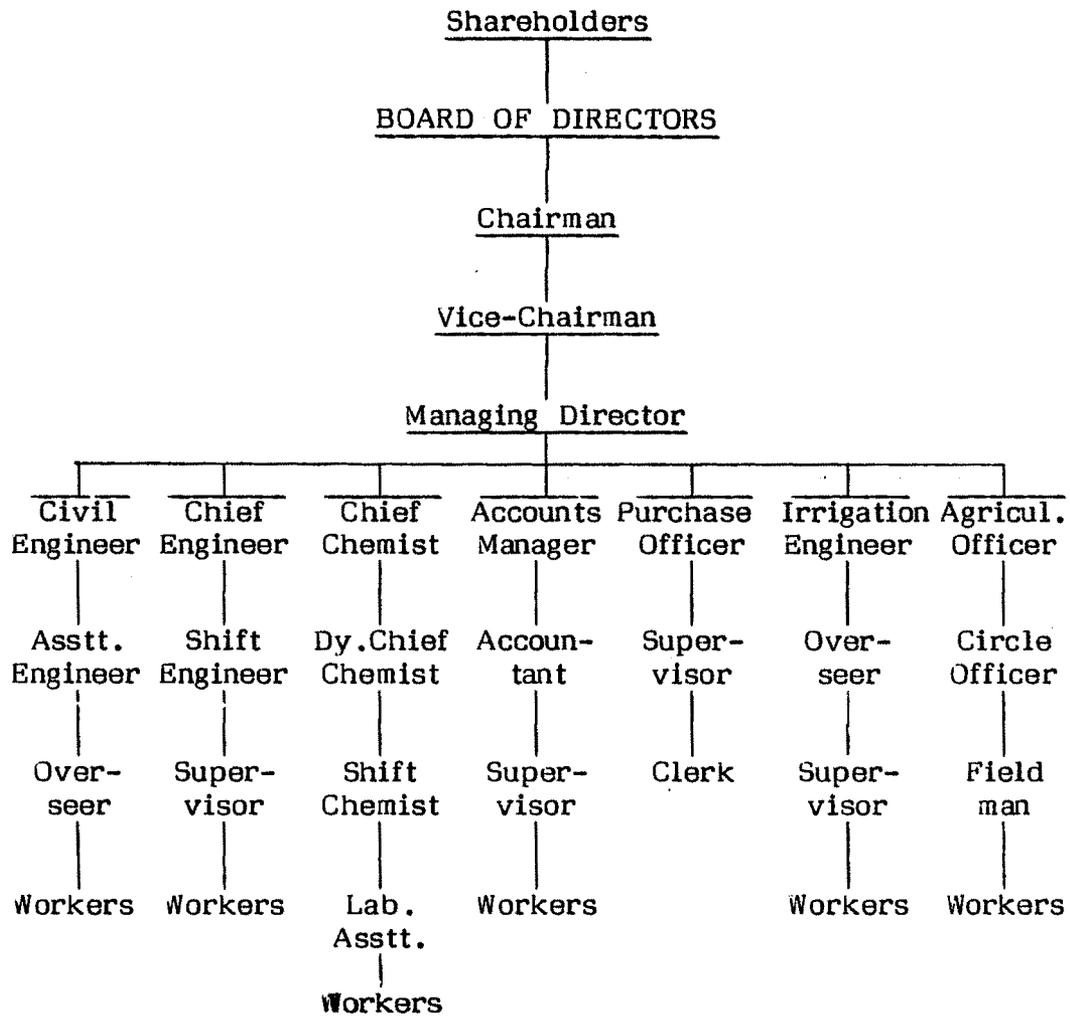
The management of the factory vests in the Board of Directors. There are 25 Directors on the Board, of which 17 are elected by the producer-members and the rest are the

nominees of various other agencies as under:

- (a) 2 Directors : Representative of the workers,
- (b) 1 Director : Representative of the Backward Classes,
- (c) 1 Director : Representative of the Weaker Section,
- (d) 1 Director : Co-opted Expert Member,
- (e) 1 Director : Nominee of the Director of Sugar,  
Maharashtra State, Pune,
- (f) 1 Director : Nominee of the District Central  
Cooperative Bank.

The Managing Director is a salaried employee appointed by the Board, who also is an ex-officio member of the Board of Directors. The tenure of the Board of Directors is five years. The Chairman and the Vice-Chairman are elected from amongst the members of the Board. The Board of Directors normally meets once in a month for taking policy decisions. The Board is responsible to the General Body of the Shareholders. The General Body meets atleast once in a year. The Board is vested with wide decision-making powers, subject to the approval of the General Body in certain matters.

The Managing Director is the chief executive officer who guides and coordinates all the activities of day-to-day consultations with the heads of various departments. The following organizational structure gives an idea of the nature of working and functions of various officials in the factory.



Membership:

As per the bye-laws of the factory, there are three classes of members:

- (a) Producer-members, who are known as Class 'A';
- (b) Ordinary-members, who are known as Class 'B';
- (c) Nominal-members, who are known as Class 'C'.

The main conditions for membership as per the bye-laws of the factory are as follows:

(a) Producer-Member:

- (i) A producer member should be a sugarcane grower

in the area of operation, producing the crop on land, as an owner or a tenant;

(ii) He should have atleast half an acre of land under sugarcane; however, in the case of backward class farmers and marginal farmers, the minimum holding under sugarcane is 5 Gunthas and 10 Gunthas, respectively.

(iii) He should subscribe to atleast one share of Rs.2000 and should agree to supply sugarcane to the factory in proportion to his shareholding;

(iv) If he grows additional cane over and above the proportion of his shareholding, the factory is bound to buy such additional cane. But if the factory, in a particular year is unable to buy such additional cane, it should be conveyed to the concerned shareholder before the crushing season commences on or before 15th September;

(v) He will not be allowed to hold shares worth more than Rs.25,000/- nor will the factory buy more than 25 acres of cane from him.

(b) Ordinary Members:

This membership is open to cooperative institutions and individuals in the area of operation of the factory, provided such institutions and individuals subscribe to atleast one share of the face-value of Rs.2,000/-.

(c) Nominal Members:

- (i) This membership is open to any individual, firm, company, society and institution, transacting any kind of business with the factory;
- (ii) These members do not subscribe to any shares and have no rights to vote or participate in the management of the factory.

The producer-members are the most important members, because they supply sugarcane, the main raw material, to the factory. They also enjoy maximum benefits of the membership since the chief objective of the factory is to improve the economic condition of the producer-members. These producer-members are spread over 66 villages within a radius of 15 kms. from the factory. There were 1,821 members of the factory in 1959-60 and there were 13,667 members in 1990-91.

Table 4.5  
Number of members of Warana Sugar Factory

Year	Producer Member Class-A	Ordinary Class-B Individuals	Member Institutions	Maharashtra State Govt.	Total Membership	Nominal Class Members
1959-60	1768	21	31	1	1821	173
1960-61	2148	22	36	1	2207	788
1970-71	5029	18	53	1	5101	871
1980-81	8232	17	62	-	8311	21374
1990-91	13584	17	66	-	13667	26645

Source: Annual Reports of Warana Sugar Factory.

Share-Capital:

In the year 1955-56, when the factory was established, its initial authorized share capital was Rs.60.0 lakhs, consisting of 6,000 shares of Rs.1,000 each; of this 1,000 Redeemable Shares worth Rs.10.0 lakhs were bought by the Government of Maharashtra. In the year 1965-66, the authorized share capital was raised from Rs.60.0 lakhs to Rs.90.0 lakhs; thereafter, in 1972-73, to Rs.1.50 crores and subsequently, to Rs.2.0 crores in the year 1983-84. Presently, the authorized share-capital is Rs.6.0 crores consisting of 30,000 shares of Rs.,2,000 each for the producer-members and 750 shares for the ordinary members.

Table 4.6  
Share capital of Warana Sugar Factory

Years	Producer Members Class-A	Ordinary Members Class-B Individuals	Institutions	Mahara-shtra State Govt.	(in Rupees)
					Total paid-up share capital
1959-60	20,79,000	16,000	91,000	10,00,000	26,12,159.51
1960-61	23,64,750	16,500	1,17,000	10,00,000	28,03,733.89
1970-71	56,01,750	15,500	1,30,000	6,00,000	63,47,151.80
1980-81	104,60,000	22,000	1,21,000	-	105,65,157.39
1990-91	311,73,250	36,000	1,73,000	-	313,82,250.00

Source: Annual Reports of Warana Sugar Factory

Borrowing:

The factory has borrowed long term loans from the Industrial Finance Corporation of India (IFCI) and the

Industrial Credit and Investment Corporation of India (ICICI). Initially, the loan was availed for the erection of plant and machinery of the factory and subsequently, for the expansion of its crushing capacity. A total of Rs.124.75 lakhs were borrowed from the IFCI and Rs.75 lakhs from the ICICI.

As the redeemable share capital of the State Government of Maharashtra was redeemed in the year 1976-77 by the factory, similarly in the years 1975-76 and 1977-78, the factory had repaid the entire loan to the IFCI and ICICI, respectively. This reflects on the capacity of the factory and its reduced dependence on the financing agencies. It may be noted that the borrowings of the factory to meet its working capital requirements are not taken into consideration but only the funds borrowed for meeting its fixed capital requirements have been considered.

#### Development of Agriculture & Irrigation:

Warana river is the sole source of water in the area of factory's operation. Due to low water source, farmers were interested in foodgrains. Warana river is not a perennial river. It shows low production of sugarcane in the area of operation, but the factory has developed the lift irrigation scheme for increasing sugarcane production. A significant factor is that Warana irrigation project has increased the

total irrigation of this area. At present, this dam provides the water source to increase the production of sugarcane. In order to have the expected production of sugarcane and its quality, the farmers have been provided with scientifically cultured seeds, fertilizers and soil-testing facility. The factory has also implemented a sugarcane pilot project for developing sugarcane production and its quality.

Workers' Welfare:

The workers can work efficiently towards production, if they are provided with such service facilities and amenities which are conducive to good health and high morale. The factory management has always given due weightage to this factor and made all possible efforts to promote the welfare of its employees.

The factory has constructed well-planned 430 quarters for its employees with all basic amenities like water-supply, electricity, free maintenance and sanitary requirements.

The factory has a well-equipped small hospital with 11 beds for maternity and minor operations. These facilities are provided at nominal charges to employees and their dependents.

The employees have been encouraged by the management to establish a Benevolent Society, 'Shree Warana Kamagar

Kalyan Mandal'. In the same way, welfare activities are run by the factory.

Operational Efficiency:

The factory has been always alert in maintaining its technical efficiency. Continuous efforts are made to keep the working of plant and machinery at its highest efficiency. The technical efficiency in the sugar industry is the recovery rate, viz. the weight of sugar produced from a tonne of sugarcane, expressed in percentage. The average recovery rate of Warana sugar factory is 12.00%, with the highest recovery rate of 13.58% recorded in the year 1982-83.

Table 4.7  
Recovery of Sugar

Year	Sugar recovery in percentage
1959-60	12.72
1960-61	12.66
1962-63	13.58
1965-66	12.04
1970-71	12.10
1975-76	12.54
1980-81	12.02
1985-86	12.19
1990-91	11.94

Source: Annual Reports of Warana  
Sugar Factory

Capacity utilization is another measure of technical efficiency. The following Table clearly shows that the technical efficiency of the factory is more than 100%. In the year 1968-69, the factory had the highest crushing capacity of 163.51%. It shows the total mechanical efficiency and well-planned organization. That is why the factory won Second Prize in the year 1982-83 and First Prize in the year 1988-89 from the National Federation of Cooperative Sugar Industries, New Delhi.

Table 4.8  
Capacity utilization of Warana Sugar Factory

Year	Average per day crushing in m.tonnes	Installed cane crushing capacity	Percentage of capacity utilization
1959-60	755.00	1,000	75.50%
1960-61	1102.56	1,000	110.25%
1965-66	1236.96	1,000	123.69%
1970-71	2015.04	2,000	100.75%
1975-76	2265.60	2,000	113.28%
1980-81	2917.00	2,000	145.85%
1985-86	3553.44	3,000	118.44%
1990-91	4125.36	4,000	137.53%

Source: Annual Reports of Warana Sugar Factory

The above Table shows that the operational efficiency of Warana Sugar Factory and its management efficiency.

Growth Profile:

The following statistical Table shows the progress made by the factory during the last three decades. The Table itself explains and reveals how the factory has gained sound position during these years.

Table 4.9  
Growth profile of Warana Sugar Factory  
(Rs.in crores)

Particulars	1959-60	1969-70	1979-80	1989-90
1. Capital assets	1.37	4.12	6.58	31.34
2. Current assets	0.62	4.13	9.92	28.85
3. Total assets	1.99	8.43	16.50	60.19
4. Depreciation fund	0.07	1.16	3.07	9.83
5. Non-refundable deposits from members	0.02	0.95	2.56	4.93
6. Development deposits from members and non-members	-	1.04	3.22	17.43
7. Reserve funds	0.0039	0.08	0.12	0.19
8. Paid-up capital	0.26	0.62	0.98	1.42
9. No.of shares held	3,895	8,038	10,137	14,803
10. Cane crushed in MTs.	67,843	3,15,562	3,89,320	6,83,109
11. Production of sugar in quintals	84,517	3,50,572	46,670	8,13,635
12. Minimum caneprice fixed by the Govt. (ex-factory) in Rs.	56.00	89.80	186.80	220.0
13. Cane price paid by the factory (ex-field) in Rs.	54.00	78.00	255.00	485.0

Source: Annual Reports of Warana SSK Ltd.  
for respective years:

Paper-Plant and Distillery:

Two more units, a paper-plant and a distillery, have been started by the sugar factory, with a view to manufacture by-products, namely, paper from bagasse and alcohol from molasses.

The paper-plant was set up on 27th May 1982. The licensed capacity of the plant is 20 tonnes of paper per day and it manufactures writing, printing and duplicating papers. At present, the plant is undergoing some troubles, but the management is confident of its recovery by the end of 1992-93.

The distillery started in March 1989 with an installed capacity of manufacturing 25,000 litres of industrial alcohol per day. The total expenses incurred so far on the construction of building, erection of plant, effluent treatment plant, etc., is Rs.315.41 lakhs. The distillery has manufactured 23,67,060 litres of industrial alcohol in the year 1990-91.

**Profile of the Ugar Sugar Works Ltd., Ugar:**

In the year 1932, the Government of India introduced the policy of encouraging the production of indigenous sugar. This was accomplished by imposing a prohibitive import-duty

on the sugar brought into the country. The Government of India introduced excise duty on sugar in India. Indian States were naturally free to impose and to collect a duty on the same scale from the manufacturers of sugar in their own territories. The State of Phaltan did actually start a factory soon after the announcement of the new policy of imposition of sugar excise. In Kolhapur and some of the Deccan States, sugarcane was one of the main cashcrops which was grown by the cultivators wherever a perennial supply of water from wells or rivers was available easily. Dr. Shirgaonkar was a pioneer in the sugar industry in the southern part of Deccan. The Kolhapur Sugar Mills, a public limited company, was enjoying a certain amount of financial aid and some concessions from certain local and State taxes, and in spite of this, it had become a source of income to the State Treasury. Messrs. Shirgaonkar Brothers, a Firm, were the Managing Agents of the Kolhapur Sugar Mills Limited. The success of Kolhapur State in establishing a new factory in its territory was worth emulating by other States.

Sangli, which was one of the most advanced Deccan State, had the good fortune of being ruled by an enlightened, benevolent and saintly ruler, His Highness the late Sir Chintamanrao A. Patwardhan, the Rajasaheb of Sangli, who made efforts to sustain a successful sugar factory. The river

Krishna, in its course, flowed through the territory of the Sangli State, it was helpful for setting a successful sugar factory.

Under the able guidance and kind patronage of Rajasaheb of Sangli, a public limited company, called 'THE UGAR SUGAR WORKS LIMITED', was floated on the 11th September, 1939, and was registered under the Sangli State Companies' Act. Its authorized capital was fixed at Rs.15,00,000/-, of which, shares worth Rs.10,00,000 were to be issued in the beginning.

The promoters of the company appointed Messrs.Vaidya and Company as the first Managing Agents of the concern. Shri.Vaidya was a versatile man of engineering and was also a keen agriculturist. Shri.Gadgil was to have joined him to form the Managing Agency Firm, but he never turned up.

The managing agents of the Company did the necessary spadework in making various exploratory surveys in the entire territory of the Sangli State for the selection of a proper place for the factory to be set up. Taking into consideration, the various favourable characteristics of Ugar-Khurd, such as (a) the availability of a sufficient supply of water and good foundation of hard black rock on the bank of the river Krishna for erection of diesel engines and pump-houses at the same spot; (b) availability of railway transport facility, (c) the presence of an ideal location for the factory building, (d) availability of ready

markets for sugar in cities such as Sangli, Belgaum, Bijapur and Nipani, (e) suitability of the soil for growing sugarcane in plenty and the possibility of the development of cane farms in the neighbourhood. The Rajasaheb's Government granted concession to the company by (i) subscribing to the share capital to the extent of Rs.2,00,000/-, (ii) granting exemption from the levy of royalty for water taken out of river by it, (iii) allowing a corporate tax holiday for five years, (iv) charging only nominal non-agricultural cess. The Rajasaheb and members of the Royal Family purchased shares out of their privy purses.

Although there was the full support of the State, yet the Company's prospects did not attract general support from the investing public. The managing agents did not succeed in collecting above Rs.1,50,000 in paid-up capital. The collected capital was exhausted in the preliminary expenses, erection of a pumping station with two diesel engines and cultivation of the first sugarcane crop of the company in an area of 28 acres of land. Due to the shortage of funds, the Company could not move further. In the Board of Directors' meeting held on 1st January 1941, it was decided to change the managing agents.

On 20th February, 1941, new managing agents, Messrs. Shirgaonkar Brothers, was appointed and this was to be a

turning point in the course of the Ugar Sugar Works Limited. The issued share capital was entirely subscribed in a short span of only two months and the amount of paid-up capital rose from a miserable Rs.1,50,000/- to Rs.10,00,000/-. The major problem of finance was thus overcome in a record time.

The management bought 21 acres of land to erect the factory building. After the completion of the building, the plant and machinery were to be installed, but at the very time, the Second World War broke out and the management found it difficult to purchase the plant and machinery for the factory. Besides, the plant required for the factory was not readily available and even if it was, its transportation was next to impossible because of the World War.

Under these circumstances, the management purchased the plant and machinery of Laxmiji Sugar Mills Limited at Maholi in Uttar Pradesh for Rs.7,50,000/-. The total amount of investment in terms of share-capital, deposits and loans was Rs.17,52,000/- at the end of the first crushing season.

The factory was established with a crushing capacity of 500 metric tonnes per day. This capacity was further expanded in 1954 upto 800 tonnes. In the year 1949-50, the Company bought 1,000 acres of land for sugarcane cultivation. In the year 1960, the company made further expansion from 800

to 1200 tons of crushing capacity. Soon after this, the Company further expanded upto 2000 tons. The present capacity is 5,000 metric tonnes of sugarcane crushing daily.

Location of the Ugar Sugar Factory:

The Ugar Sugar Factory is located at Ugar-Khurd, which is about 35 kms. south-east of Sangli city in Athani Tahsil of Belgaum district of Karnataka State. The factory comes under the jurisdiction of Ugar Grampanchayat. The name of this factory owes its origin to the name of the village Ugar-Khurd. The river Krishna which passes from the village Ugar-Khurd and it is the only major supply of water besides the wells. A railway line from Miraj to Belgaum is 2.5 kms. away from the factory.

Objectives of the Ugar Sugar Works Ltd.

Every activity has its own objectives. Objectives are the ends towards which all management activities are directed. Before taking any course of action, the objectives must be clearly defined and well-understood. Well-defined objectives and goals will lead to continuous growth and progress. They must also be realistic and attainable as has been rightly observed by Webster, "Effective management is management by objectives".

The aims and objectives of the sugar factory are listed in the Memorandum of Association of the Ugar Sugar Works Limited.

Area of Operation of Ugar Sugar Factory:

The area of operation of the Ugar sugar factory consists of 94 villages from Athani, Jamkhandi, Chikkodi and Raibag Tahsils of Belgaum district in Karnataka State and Shirol, Miraj and Jath Tahsils of Sangli district in Maharashtra State. All these villages are within a distance of about 25 miles from the factory. Sugarcane can be transported within 24 hours of harvesting. Therefore, there does not arise any problem of less recovery in sugar.

The sugarcane supplying villages are grouped into five zones. These are (1) Ainapur, (2) Ugar-Budruk, (3) Kudchi, (4) Athani and (5) Subsagar. Currently, the supply of sugarcane from these five zones exceeds the demand for it and, therefore, the factory finds it very difficult to crush the entire cane available in its area of operation.

Organization:

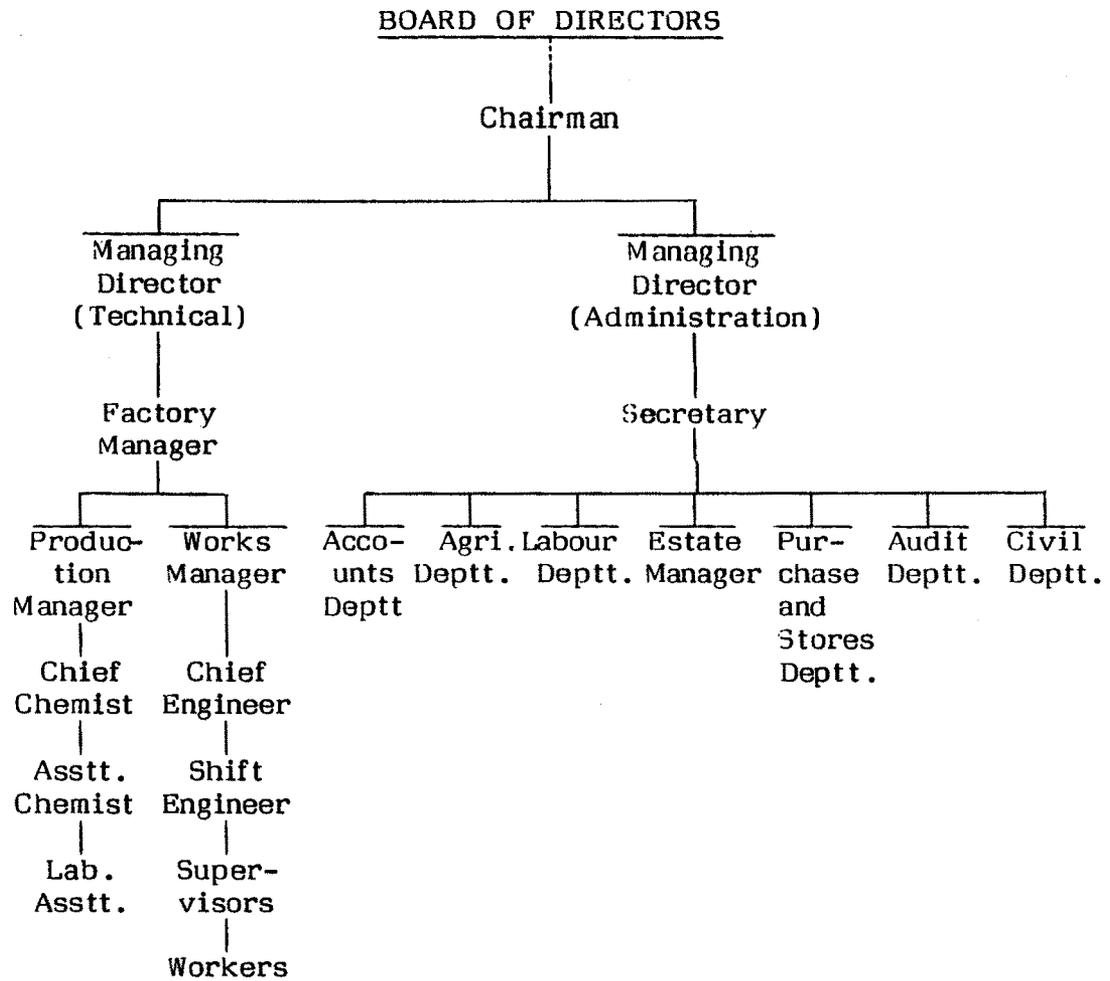
The management of the factory vests in the hands of a Board of Directors. Till 1969, there was a managing agent, Messrs. Shirgaonkar Brothers. The minimum and maximum number of directors on the Board is 9 and 15, respectively, including the ex-officio directors and corporation directors, if the company has borrowed finance from the below mentioned:

- (a) 2 Directors - Nominees of the Industrial Finance Corporation of India (IFCI)
- (b) 1 Director - Representative of the Debenture-holders.

Other directors are appointed in the Annual General Meeting by rotation-method. For the appointment of a Director, the minimum qualifications is that he should hold atleast 50 shares of Rs.100 each. A director may be appointed before acquiring the minimum number of shares as specified, but he shall have to acquire the same within two months after his appointment. The tenure of directorship is three years.

The directors may appoint one or more managing directors from their body, for such term not exceeding five years at a time. This appointment is made according to the Articles of Association. The Directors may elect a chairman and determine the period for which he is hold the office. The meeting of the directors shall be held as often as they think, but atleast once in three calender months, and atleast four such meetings shall be held in a year, for taking policy decisions. The board is responsible to the General Body of the shareholders. The General Body meets once every year. The Board is vested with wide decision-making powers, subject to the approval of the General Body in certain matters.

The Managing Director is the chief executive, who guides and coordinates all the activities by means of day-to-day consultations with the heads of various departments. The organizational structure (given on the following page) gives an idea of the nature, working and functions of various officials.



Membership:

There is no restriction on the membership. Membership is open to all. It is not necessary that a member should be a producer of sugarcane. Any citizen of India can purchase shares and become the member of the company.

Share-Capital:

In the year 1939, when the factory was established, its initial authorized share capital was Rs.15,00,000/-; of which,

Table 4.10  
Number of shares and shareholders of  
the Ugar Sugar Factory (upto July 1991)

Shares	Number of shareholders	Number of shares held
1 to 10	5,108	34,182
11 to 50	2,406	53,646
51 to 100	334	24,034
101 to 1,000	155	59,624
1,000 & above	<u>15</u>	<u>28,514</u>
	8,018	3,00,000

Source: Annual Reports of Ugar Sugar Works Ltd. shares worth Rs.10,00,000/- were to be issued in the beginning.

But the first managing-agents, Messrs.Vaidya and Company, were able to mobilize only Rs.1,50,000/-. Thereafter, the managing-agents, Messrs.Shirgaonkar Brothers, took over and were able to collect the required issued capital of Rs.10,00,000/- in the year 1941. The share-capital was raised from time to time according to the requirements of the factory to meet the capital expenditure. In the year 1988, the authorised share capital was raised from Rs.2.0 crores to Rs.3.0 crores, which was divided into 3,00,000 equity shares of Rs.100 each.

Table 4.11  
Equity share capital of the Ugar Sugar Works Ltd.

Year	Share-capital in Rupees
1940-41	1,15,980
1950-51	22,28,400
1960-61	40,00,000
1970-71	84,01,750
1980-81	1,00,89,600
1990-91	2,00,00,000

Source: Annual Reports of Ugar  
Sugar Works Limited

In the years 1950-51, 1966-67 and 1973-74, the company issued Bonus Shares of the value of Rs.7,47,000/-, Rs.10,65,200/- and Rs.16,81,600/- by capitalization of reserves.

In the year 1966-67, Preference 'A' shares, out of the reserves at the time of conversion of preference into equity shares, shares of the face-value of Rs.13,26,000/- were issued.

#### Development of Agriculture and Irrigation:

The Company started with an initial plantation of about 28 acres in the year 1942. In the year 1965, Company's own land was 300 acres and 3150 acres was lease-hold; out of which, 2,482 acres were under cane cultivation. Now the Company owns 1,000 acres of land. An Estate Manager is appointed for the Estate Department. In this estate, new varieties of cane, such as Col.740 and Col.775, which have better yields, are developed to replace the traditional Col.419 variety.

The river Krishna is almost the sole natural source of water in the factory area. To facilitate maximum utilization of the water, the Company has constructed water storage tanks for the supply of water. For lifting the water from the river, the Company has erected new pumping stations, diesel engines replaced by a central power house with electric turbine pumps. The work was completed in 1954-56. This

new powerhouse supplies electricity too other lift irrigation societies and also to the street lighting in Ugar Khurd village.

The idea of preparing composte manure from sugarcane trash and other waste matter was introduced, which has helped in improving the yield of cane from 21 tonnes in 1942 to 58.43 tonnes per acre in 1964.

The giant-pit method of composte-making is another important innovation introduced by the factory. Useful manure can be made out of waste. In regard to cultivation of sugarcane, all possible modern mechanical devices and agricultural methods are used. The factory had taken care to help the cultivators with loans, use of factory implements at moderate rates and supply of chemical fertilizers. The factory gave support to cooperative cane-growing societies such as Better Farming Cooperative Society Limited, Jugul, Gundawad Cooperative Society Limited. Factory had given financial aid in the form of manures, oils and seeds.

The factory not only developed sugarcane but also other foodgrains such as wheat, maize by establishing Research and Development Department. Now, within the factory area, availability of cane exceeds its requirement and the factory finds it difficult to crush all the sugarcane within the factory area.

Workers' Welfare:

"Plan your work and work your plan", it is said about good and successful management of any activity and that in the running of the Ugar Sugar Works, this rule is being implemented in its day-to-day functioning. This can be studied in the organization of labour at Ugar.

The factory has constructed well-planned 351 quarters for its employees with all the basic amenities like water, electricity, free maintenance and sanitary requirements. Those who reside on the estate at various places away from the factory, the Company has provided small colonies with water and other amenities and a small building for a Social Centre where books and newspapers are kept.

The factory has a well-equipped hospital where free medical aid is given to the workers. Besides, the factory also provides for the hospitalization charges, if the worker is admitted to other hospital.

The employees have been encouraged by the management to establish a cooperative multipurpose society to meet their requirement of credit, foodgrains and other commodities.

The factory has provided educational facilities to the children of the factory employees and others. The company provides this facility from primary to high school levels, with all amenities of the building. The factory has provided

all the basic facilities to promote the welfare of its employees.

Operational Efficiency:

The factory has been always alert in maintaining its technical efficiency. Continuous efforts are made to keep the working of plant and machinery at its highest efficiency. For maintaining efficiency, the company adopts various developed techniques in the factory, such as, the factory was the first in India to install a Foxboro weighing machine for weighing of juice. By using this machine, the factory has an efficient control over its manufacturing process. Secondly, the factory is again the pioneer in India in putting up one of the most efficient boilers manufactured by the Combustion Engineering Company of the USA, fitted with spreader stokers for bagasse burning. Thirdly, one shift chemist had invented a continuous liming device. It was manufactured in the workshop of the factory.

The technical efficiency indicator in sugar industry is the recovery rate, viz. the weight of sugar produced from a tonne of sugarcane, expressed in terms of percentage. The average recovery rate of the Ugar Sugar Works is 11.35 per cent, with the highest recovery rate of 13.46 per cent recorded in the year 1946-47.

The following Table shows the sugar recovery of the Ugar Sugar Works from 1942-43 to 1990-91.

Table 4.12  
Recovery of sugar of Ugar Sugar Works

Year	Recovery in percentage
1942-43	8.51
1950-51	12.13
1960-61	12.14
1970-71	11.44
1980-81	11.04
1990-91	11.32

Source: Annual Reports of Ugar Sugar Works Limited.

Capacity utilization is another measure of technical efficiency. From the following Table, it is seen that the factory has been operating at 90.73 percent of the installed capacity, the highest being 118.25% in the year 1961-62.

Table 4.13  
Capacity utilization at Ugar Sugar Works Ltd.

Year	Avg.cane crushed per day(in MTs)	Installed cane crushing capacity	%-age of capacity utilization
1940-41	-	500	-
1950-51	409.60	500	81.92
1960-61	870.73	800	108.84
1970-71	1948.02	2000	97.40
1980-81	2501.49	3000	83.71
1990-91	4088.89	5000	81.77

Source: Annual Reports of Ugar Sugar Works Ltd.

The following statistical table shows the progress made by the factory in the last five decades. The table itself explains and reveals how the factory has acquired

a sound position over the years.

Distillery:

One more unit started by the Ugar sugar factory is the distillery. With a view to manufacture by-products, the factory has set up a distillery to produce industrial alcohol and potable alcohol from molasses. This is a sub-unit of the sugar factory.

The distillery was started in April 1963 with an installed capacity of manufacturing 5,000 gallons of industrial alcohol per day. The plant has been set up at a total cost of Rs.11,71,000/-. The building has been constructed at a cost of Rs.4,51,000/-. The distillery had manufactured 1,08,69,000 litres of industrial alcohol, 12,00,000 litres of denatured spirit, 60,30,000 litres of potable alcohol in the year 1990-91.

contd. on next page.

Table 4.14  
Growth profile of the Ugar Sugar Works Limited

Particulars	1940-41	1950-51	1960-61	1970-71	1980-81	1990-91
1. Capital assets	80,000	44,94,000	70,68,000	1,81,06,000	2,13,62,000	7,37,07,000
2. Current assets	na.	na.	na.	2,69,25,000	8,88,15,000	1,42,61,000
3. Total assets	-	-	-	4,50,31,000	11,01,77,000	8,79,68,000
4. Reserves & Surplus	-	17,47,000	35,96,000	51,69,000	40,78,000	3,13,62,000
5. Capital	1,49,775	22,28,000	40,00,000	84,01,750	1,00,89,600	2,00,00,000
6. Dividend Paid	-	8.6%	19%	14%	-	20% proposed
7. Cane crushed in MTs.	-	40,143	1,43,670	3,09,150	3,77,724	8,98,218
8. Production of sugar (in quintals)	-	48,800	1,74,126	2,95,127	4,23,115	10,38,510
9. Cane price paid by factory (ex-field) in Rs.	-	48.81	55.12	137.86	297.42	425.00
10. Number of shares held	1,149	22,284	40,000	84,080	1,00,896	2,00,000

Source: Annual Reports of the factory  
for the respective years