CHAPTER - VI

SUGAR CO-OPERATIVES AND INFRASTRUCTURAL FACILITIES

- Infrastructural Facilities
- Co-operative Spirit and Social Participation
The crisis of infrastructure is in a sense, the crisis of growth and infrastructural facilities which provide an altogether new impulse for rural growth. The massive investments made in the creation of infrastructural facilities are positive investment. These facilities provide a necessary threshold for the long term economic growth.

"Infrastructure refers to those economic activities which enhance directly or indirectly output levels in production. Essential elements are systems of transportation, power generation, communications, banking, educational and health facilities, and a well ordered Government and political structure.

Economists differentiate infrastructure from the more traditional uses of private capital accumulation for plants and equipments. However, once established it is viewed as facilitating increases in private investment. It thus represents a necessary, although not sufficient condition for development.

The important feature of economic infrastructure is its high initial fixed cost. But its variable cost of operation is relatively low. "As its benefits accrue to numerous diverse groups, its value is often difficult
to measure. Precisely with high fixed and declining marginal costs, and with the difficulties of pricing and capturing its pecuniary reward, the infrastructure does not conform to normal market investment analysis.

The infrastructure development is usually regulated by the Government agencies. Development-Economists sometimes use the term "social overhead capital". It is synonymous for infrastructure. Social overhead capital or economic investment whose output provides services for a number of industries. This has been divided into overhead capital and social capital. Overhead capital includes the capital accumulation for roads, power, telecommunications etc. Whereas the social capital includes investments in services as education, health, police, fire etc. For economic development, infrastructure is viewed as providing the output and services necessary to generate higher levels of national output.

Economic development involves an optimum utilization of natural and human resources for the maximization of social welfare on a continuing basis. This, in turn, implies not only savings, investment and capital formation but also the creation and maintenance of an infrastructure. And such an infrastructure has to be
adequate in volume, appropriate in its mix and coordination and be accompanied by an efficient system of maintenance, repairs, replacements and extensions.

The most important point to note about investment in infrastructure is that it is generally the sphere for public sector rather than the private sector. Most of the infrastructure ingredients need heavy investments, having relatively long gestation period. Besides the long gestation period, in the case of developing economies, the infrastructure enterprises involve also an initial period of operational losses or very low level of profits.

In case of India, relatively large investments on creating the basic framework of public utilities have been necessary to enable greater development of industry and agriculture.

BASIC FACTORS IN INFRASTRUCTURE:

"The basic factors that constitute the infrastructure needed for economic development pertain to both individual factors of production as well as to the process of combining them in total production. Thus ensuring the supply of water through irrigation brings about an increase in the productivity of land and an
increase in agricultural production. But the operation of irrigated agriculture also requires a number of other inputs. Energy is required for operating pumpsets. High yielding varieties of seeds, a certain degree of mechanization, fertilizers and pesticides, provision for storage, extension services, credit, marketing, price support and transport facilities—all these are required for increasing agricultural production and making it available for both rural and for industrial production.

The important function of infrastructure is to release latent productivity in the factors of production.

Rural Development and Infrastructure Facilities:

It was noticed that lack of communication to adopt modern irrigated agriculture, storage and marketing and agricultural extension was the main handicap. As proper infrastructure was not developed, optimum benefits could not be availed. So it is necessary that, "Improving rural infrastructure is necessary for accelerating rural development. Without proper infrastructure, physical and social fruits of development do not reach the target groups, the weaker and the deprived. In an unequal society, those who have easy access to infrastructure, benefit most. Those who do not have equal get by-passed
in the process of economic development ... Seizable funds are allocable to programmes of rural development, but for want of proper infrastructure, optimum benefits are not availed. This results in loss of resources".

The rural transport sector is an integral part of the production and distribution system. It is an essential infrastructure for the economic growth of the rural India. The development of rural linkages has great significance from the point of view of all-sided development of the rural poor. "The rural roads also provide an easy access to markets which can absorb the surplus agricultural produce, not only from products but outputs of agro-based rural and cottage industries like poultry and dairy. Such easy market accessibility provides an added incentive to the farmers to increase their farm production and set up rural industries, since it gives them immediate and noticeable economic cash benefits. Even an ordinary link road from a village to a nearby weekly market town is seen to transform the village economy substantially. The voluntary Government and commercial agencies which operate in the fields of farm technology, credit and marketing have an easy access to the whole farming community, thereby providing them with desired farm services".
A study indicates that easy adoption of improved farm techniques result in lower cost of production and distribution in road side villages than in isolated villages. The road network enables the application of modern agricultural inputs like improved seeds, fertilizers and pesticides and facilitates the use of mechanized farming. In particular the agricultural productivity increases substantially in areas where there is an assured water supply on account of irrigation project in the vicinity and which are well served by a road system. So it is said that the rural transportation is an integral part of the production and distribution system as an essential infrastructure for the economic growth of the rural sector.

It is against these points, in the present chapter, an attempt is made to examine the access and development of infrastructural facilities as a consequence of the sugar co-operatives under reference. The term infrastructural facilities have been used in a wide sense. They include all the facilities, arrangements by which sugarcane growers and allied activities get a firm economic base to go ahead in respect of sugarcane production and other agro-products.
THE NANDYAL SUGAR CO-OPERATIVES LTD., AND INFRASTRUCTURAL FACILITIES:

The role played by the sugar co-operative in Kurnool district in the development of infrastructural facilities is vivid. It has played an important role in socio-economic development of the area.

The co-operative sugar factory in Nandyal experienced difficulties and trouble due to the absence of infrastructural facilities in the initial stages of their location. They overcame the difficulties in due course of time realising the significance of infrastructural facilities in the economic development of a region. It led to infrastructural facilities like training, banks, irrigation facilities etc., as a result of which, they now enjoy the honour of growth centres in their respective regions.

The sugar co-operative has benefited the region in two ways: (i) It has benefited the rural population, producer members, workers directly and they have created infrastructural facilities, (ii) The co-operative sugar factory has itself become focal point both for economic and social development — (a) technological change in agricultural operations, (b) development in capital formation. They have implemented new schemes for
modernizing agriculture which resulted in increase in the output, and has changed the entire outlook of the farmers.

A subsistence farmer has now started looking at his operations from the commercial point of view. This, in other words, has transformed the farming community from the traditional way of thinking in terms of values, ideas, to a modern way of thinking and evaluating their activities in terms of costs and output. They have become conscious of costs and benefits.

Agricultural Development and Cane Production:

Intensified and vigorous cane development programmes were important so it is necessary to rely much more on intensive cultivation. Along with the increasing of yields, there is also the question of sucrose content of cane recoverable in the process. Productivity problem has thus a quantitative and qualitative facet. It is only just a question of maximizing the utility of the land as well as of growing better varieties of sugarcane.

The Nandyal Sugar Co-operatives has undertaken a number of measures for increasing the cane production in their areas of operation. These measures include —
Seed Programme:

More cane and better cane is the objective of cane development programme. For achieving this objective, distribution of better quality seeds to the members is very essential. In order to ensure purity and guard against any seed transmissible disease, the sugar factory undertook its own seed plantation plots. In addition to that it has also started sugarcane nursery schemes in some of the important villages in their areas of operation. The members who used to participate in such schemes are given subsidy by the sugar factories. This subsidy varies from Rs. 250/- to Rs. 1000/- per acre. The demonstration plots for seed programme are also undertaken by the sugar factory.

The sugar factory adopted three-tier nursery programmes by which they have raised foundation seed in cane farm and distributed to the cane growers for raising primary nurseries and then secondary nurseries. Under the seed selection and distribution campaign pure and disease free seed is raised at the factory farm and is supplied to the leading cultivators who in turn supply seed to other member farmers. Cane plots are selected for seed purpose and the seed is supplied to the members from those plots. This has helped to
check the spread of grassy shoot disease, moth and other such diseases. Most of the sugar co-operatives provide new varieties of seeds like Co-7219, Co-7527, Co-071, Co-7704, Co-740 etc., to the members.

It was found that the sugar recovery and average yield of sugarcane per acre is decreasing in Andhra Pradesh. As a result of this, Andhra Pradesh Government has started a 'Pilot Project Scheme' from 1976-77. The main purpose of this scheme is to show the better results of new varieties of seeds. Further the cane growers were to give guidance in respect of proper use of chemical and compost fertilizers. Under this programme members were advised to make use of pesticides and insecticides.

Use of Insecticides and Pesticides:

Various insecticides are stocked at the factory site and are supplied to the members. Most of the factories distribute B.H.C. powder free of charge in their areas of operation. Hand-operated sprayers and dusters are supplied to the members at 25 per cent subsidized rates, whereas in some cases spray pumps are supplied at 50 per cent subsidized rates. But more emphasis is laid on the clean cultivation of the crop
and the adoption of mechanical means to control the pest in the early stages of development.

**Access to Infrastructural Facilities:**

Earlier 95 per cent of the respondents used to experience difficulty in transporting their products, and did not have access to proper road communication. After the advent of the sugar co-operative, transport facilities and access to them now the farmer community under reference enjoy better transport facilities and access to road communication. The change in this regard is evident from the fact of increase in expenditure. With reference to transport, prior to 1981 the farmers (N=160) under references incurred an expenditure of Rs. 25,650 and as against this now during 1991, they incurred an expenditure of Rs. 67,850 with regard to transportation of their products. The percentage of change in the expenditure on transport is found to be 164.52 per cent.

Another important development to easy access is to credit facilities. The farmers in backward region is always handicapped with lack of required capital resources to undertake and adopt modern farm technology which is imperative for remunerative and commercial cropping. The constraints and the lack of access to
avail easy and sufficient credit owing to the paucity of institutional credit services push these farmers into the wide grip of money lenders.

Before the advent of the sugar co-operative, only 22 per cent of the farmers under reference had access to institutional credit services. After the advent of the sugar co-operative and due to its facilitatives, now all the farmers have easy access to institutional credit services from banks and co-operatives to meet their capital needs for adoption of modern farm technology such as energisation of wells, purchase of chemical fertilizers, insecticides, farm equipment, and better seed. The changes in the farm technology and increased inputs such as chemical fertilizers, farm equipment, improved agricultural practices testifies the access and availability of institutional credit services.

**Acquisition of Skills:**

The adoption of modern farm technology to improve productivity and make farming viable requires attitudinal changes and skills on the part of the farmers. This calls for motivational campaigns and training & extension services. The sugar co-operative under reference has undertaken this laudable task of
human resource development to benefit the farmers community, in particular sugarcane growers.

The respondents revealed that the factory has conducted as many as twenty training sessions; nine demonstrations; and as many as 90 and above lectures to enlighten and equip the farmers with the skills of modern farm technology. The changes in the farming practices and the yield in various crops testify the impact of these trainings.

Co-operative Spirit:

All the sugarcane growers under reference have become members and shareholders in the sugar co-operative promoted by the Nandyal Co-operative Sugars Limited. Here an attempt is made to understand whether the members i.e., sugarcane growers are aware of the co-operative principles. For this purpose, three points were put-forth: One member one vote; each for all, all for each, equitable distribution of profits. The respondents have clarified that they are aware of these principles.

To understand to what extent the members have followed the spirit of co-operation, a few questions with regard to the activities concerned with sugarcane production were posed. The responses are analysed as follow: (Table 6.1).
## TABLE 6.1

SPIRIT OF CO-OPERATION

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>Sugarcane growers (N=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>1</td>
<td>Whether the seed material is brought collectively from distance places</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Plant protection operations are done collectively or individually</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>In irrigating the field whether they are following common procedures one after the other</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Agricultural operations are being attended collectively</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Harvest is done collectively or individually</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Whether transporting to sugar factory is done collectively or individually</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Whether the problems of the growers are posed to the factory collectively or not</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Field Survey.
Whenever seed material is required to be brought from distant places the sugarcane growers do so collectively. Similarly, in irrigating their fields, they follow the common procedures as recommended by the experts. These are the only collective efforts made by the sugarcane growers. Plant protection operations, agricultural operations, harvest in sugarcane, transporting sugarcane to the factory are being attended individually. More interestingly, even the problems faced by them are being met individually. This indicates the sugar co-operative as far as inculcating co-operative spirit and practice is concerned is not successful. The co-operative apparently has succeeded only to the extent of modernizing the farm-technology, facilitation in infrastructure. But, these efforts due to the lack of co-operative spirit and practice may not sustain and endure the difficult periods.

Social Participation:

To understand the impact made by sugar co-operative in terms of people's participation and promotion of new leadership a few questions have been raised with regard to respondents' participation in the activities of sugar co-operatives and other institutions like village panchayat. It is found that only 38.33 per cent
### TABLE 6.2
SOCIAL PARTICIPATION

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>One member one vote</td>
<td>100.00</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Each for all - All for each</td>
<td>100.00</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Equitable distribution of profits</td>
<td>100.00</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Do you attend the general body meeting regularly</td>
<td>38.33</td>
<td>61.67</td>
</tr>
<tr>
<td>3.</td>
<td>Have you participated in the general body meetings and discussions</td>
<td>87.50</td>
<td>12.50</td>
</tr>
<tr>
<td>4.</td>
<td>Do/Did you hold any position in the Executive Body of the Society?</td>
<td>3.33</td>
<td>96.67</td>
</tr>
<tr>
<td>5.</td>
<td>Does any one consult you?</td>
<td>81.67</td>
<td>18.33</td>
</tr>
<tr>
<td>6.</td>
<td>Are you satisfied with the function of Nandyal Co-operative Sugars Ltd</td>
<td>29.17</td>
<td>70.83</td>
</tr>
</tbody>
</table>

Source: Field Survey.
of the shareholders under reference attended a General Body meeting or any other meetings called by co-operative regularly. However, 87.5 per cent of the shareholders have said that they do discuss the outcome of the above said meeting. Only 3.33 per cent of the sugarcane growers have held executive position in the sugar co-operative. And only 29.17 per cent of the sugarcane growers are satisfied with the functioning of the Nandyal Co-operative Sugar Factory. On the positive side, the respondents revealed that people do consult them with reference to adoption of modern farm technology, the knowledge of which they gained by being members of the sugar co-operative (See Table 6.2).

SUMMING UP:

An analysis of the role of Nandyal Sugar Co-operative in the promotion of infrastructural facilities reveals the following trends:

The sugar co-operative has benefited the region in two ways; It has benefited the rural population, sugarcane producer members, other farmers and workers both directly and indirectly by way of facilitating and fostering infrastructural facilities such as institutionalised credit services, transport facilities, market
opportunities, supply of seed, fertilizer and pesticides and knowledge of modern farm technology.

Secondly, the sugar co-operative itself has become a focal point both for economic and social development by way of facilitating transition from traditional methods to modern farm technology, development in capital formation, adoption of innovations and market orientation thus paving way for equitable prosperity.

The sugar co-operative though successful enough in fostering changes in agricultural practices and the related attitudes yet it may be said that the sugar co-operative could not impress the people in instilling the co-operative spirit and practice and social participation, at least, on part of its producer members. However, on the positive side it also may be mentioned that a good majority of the producer members are sought after by the other farmers to learn and share their successful experiences.

Thus the Nandyal Sugar Co-operative has been appreciably successful in the facilitation of both social and economic infrastructure in these backward region under reference.