CHAPTER VI

INDUSTRIES
CHAPTER-VI

INDUSTRIES

6.1 INTRODUCTION:

"Industrialisation is a process of Economic Development in which a growing part of national resources is mobilised to develop a technically up-to-date diversified domestic economic structure characterised by a dynamic manufacturing sector having and producing means of production and consumer goods and capable of assuring a higher rate of growth for the economy as a whole and of achieving economic and Social changes. Hence, industrialisation has a broader spectrum which does not simply mean establishment of manufacturing industry but involves a change in the whole economy and the social structure of a region. Though India now ranks as the tenth most industrialised country of the World, Orissa is one of the most backward state in the country in terms of industrial development. The present region understudy (Western Orissa) with its vast natural resources trailing far behind in the industrial sector. The three districts of the region, Balangir-Kalahandi-Phulbani - are declared as the districts without industries by the government and special incentives are given to the new enterpreneurs to start small and
medium industrial units. But due to various factors the industrial development is quite discouraging in the region in spite of its vast resource potential. In this chapter an attempt has been made to highlight the state aid to the industries, the status of existing industries and their problems and the industrial possibilities of the area under study.

6.2 STATE AID TO INDUSTRIES :

6.2.1 Finance :

The State Government has been providing aid in various forms to the local industries in this area as elsewhere in the State. These include provision of loan, training facilities and sale of power, water and land at concessional rates. Between 1989-90 loans amounting to Rs.6.44 lakhs were sanctioned. However these loans are mainly for fixed capital. Several units experience difficulties in obtaining adequate working capital and a few units even closed down for this reason.

6.2.2 Technical Training :

To provide technical facilities, one Industrial Training Institute is opened in Bhawanipatna. There is also a training cum production centre at Junagarh (Kalahandi) run by the tribal welfare department, mainly meant for scheduled tribes and castes. In addition a number of trainees are sponsored for technical training in various industrial training institutes in the state.

From the industry side, it is complained that there is shortage of skilled workers but an examination of the working of the above
training institutions reveals that the response for admission in them is poor. The capacity of these institutions is not fully utilised. It is further observed that even most of the trainees coming for training are attracted by the stipends rather than by any genuine desire for training. This shows that the nature and quality of training imparted in these institutions is not oriented to the requirements of the industry. This calls for a thorough scrutiny of the training programme.

6.2.3 Power:

Though power consumption in these districts is much lower than that in the state, shortage of power has not been a major deterrent for industrial development except in a few isolated cases. Bolangir and major part of Kalahandi are already connected to the state grid and the remaining area will also soon be connected likewise. This should remove the power handicap of the area fully.

6.2.4 Land and Water:

According to the Industrial Development policy of Orissa Government Resolution of February 1986, land in these districts would be made available at concessional rate (one third of the market rate) to units investing not less than Rs.2 lakhs. It is also provided that water for industrial use will be supplied on no profit no loss basis.

6.3 EXISTING INDUSTRIES:

In the economy of these districts the role of industries has been extremely limited. There are no large and medium scale
The only industries that exist in this area are of small scale type providing employment to about 0.2 percent of total working population of the area. A list of the important units in the group is given in Appendix-IV.

The concentration of existing industrial units is in Bolangir which has 117 units out of a total of 182 in the area, while Kalahandi has 46 and Phulbani only 19. Within the districts, the units are concentrated in a few towns. In Bolangir district, the towns of Bolangir, Titlagarh and Kantabanji have 89 units (76%). In Kalahandi district the towns of Kesinga, Bhawanipatna and Khariar road have 25 units (55%) and in Phulbani district, Baudh and Phulbani have seven units (37%) (Fig.6.3.2).

In Bolangir and Kalahandi district the industries are mostly located in town served by the railway line. The eight towns mentioned above, accounting for 67 percent of total units, have electric supply. As is expected, the industries have tended to concentrate in places with facilities of railway transport and electric power. Even of the small number of industries existing in this area most of them are of recent origin. Thus out of 182 units in the area, 59 units commenced production in 1960 or before (32%), 87 units commenced production in the five-year period 1961 to 1965 (48%) and 36 units started production in 1966 or thereafter (20%). This shows that nearly half of the units were started during 1979-80. Districtwise position is given in the following table.
TABLE 6.3.2
Number of Industrial Units in Western Orissa

<table>
<thead>
<tr>
<th>District</th>
<th>Before 1970</th>
<th>1979-80</th>
<th>1989-90</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolangir</td>
<td>46</td>
<td>53</td>
<td>18</td>
<td>117</td>
</tr>
<tr>
<td>Kalahandi</td>
<td>11</td>
<td>26</td>
<td>9</td>
<td>46</td>
</tr>
<tr>
<td>Phulbani</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>59</strong></td>
<td><strong>87</strong></td>
<td><strong>86</strong></td>
<td><strong>182</strong></td>
</tr>
</tbody>
</table>

Source: Directorate of Industries, Orissa, Cuttack.

With regard to the type of agro-industries are the most important single group with 52 percent of total employment next in importance is forest-based industry group with 12 percent of the employment. The details of industries by type employment investment capacity and production in 1989-90 are given in (Table No.6.3.3). The total investment in the industries is little over Rs.70 lakhs.

6.3.1 Agro-based Industries:

Rice and oil mills constitute the largest number in this group. These mills mostly process paddy and oilseeds produced locally. The large size mills are situated near the railway lines and the milled rice is sent out of the districts in years of surplus. The oil mills in Bolangir are working at much below the capacity because of inadequate availability of raw materials. There is no oil mill in Kalahandi and two units have just been set up in Phulbani district.
Gudakhu, a preparation from tobacco and molasses is another local industry.

6.3.2 Forest based Industries:

The main forest industry in the area is saw milling (18 units). Most of the saw mills are located at railheads and majority of sawn timber is sent out of the area by railway line. Railway sleeper is the most important product of these mills. Phulbani district, though has two forest divisions has no saw mill. All the timber from Phulbani is sent out in logs either to Bhanjanagar (Ganjam) district or to Koraput district. There are a few carpentry units making constructional timber, door frames, door, windows and furniture of ordinary quality.

6.3.3 Livestock-based Industries:

Under this group, there are two tanneries in the area, at Titlagarh and Baudh - both are Government units under the Directorate of Industries. Titlagarh units is bigger one with a capacity of 200 hides per day (both vegetable and chrome tanning). The Baudh unit has only vegetable tanning with capacity of 40 hides per day. Both the units are working much below capacity due to poor collection of raw hides and skins.

6.3.4 Mineral-based Industries:

This group has only four units in the area. Of these the State Graphite Mining Co. making graphite crucibles, with an investment of Rs.14 lakhs and employment of 300, is the largest industrial unit in the region.
6.3.5 Other Industries:

The remaining industries mostly make consumer products to meet the local needs. These include units manufacturing soap, medicines, agricultural implements, utensils, etc. A few of the engineering units are engaged in repair work. Handloom industry making sarees in Sonepur in Bolangir district is quite famous and sarees made there have good market in other parts of India.

6.4 PROBLEMS OF EXISTING INDUSTRIES:

Generally manufacturing activities are affected either directly or indirectly by agriculture, forestry, mining, transportation, marketing, finance etc. which support it in many ways. Therefore, any constraint in the above mentioned activities affects the development of industries. Here, the problems of the existing industries in Western Orissa are reviewed. The problems differ according to the involvement of interest of producers, consumers, workers and financing agencies etc. Since industrialisation is a major indicator of economic development, the objective will be to discuss the nature and dimension of the problems of existing industries in Western Orissa particularly from the perspective of integrated economic development of the region. The problems can be grouped into following categories.

6.4.1 Lack of Sectoral Integration:

The industrial units of Western Orissa do not have any sectoral interlinks because they lack in their backward and forward linkage. The agriculture sector that engage 77.2% of labour force has hardly
any contribution towards the industrial development. Similarly the livestock and forest resources are virtually untapped from industrial point of view. Thus, each sector of economy is functioning more or less in an isolated manner. That is why, the concentration of industrial units is only found only in a few centres. From the point of view of regional development. The links between the various sectors must be developed in order to provide a viable growth of industries.

6.4.2 Lack of Infrastructural facilities:

From the study of the infrastructures of economy, it is revealed that, the infrastructural facilities needed for the development of industries are inadequate, so the expected progress in industrial sector could not be achieved in spite the potentialities of the region.

6.4.3 Lack of Enterprise:

In general, the large and varied resource base of Western Orissa has not attracted the attention of entrepreneurs for investing their capital in the region. The attempts through incentives by the Government failed due to lack of skilled manpower, infrastructural support, financial short comings, shortage of power and marketing facilities.

6.4.4 Lack of Raw Materials:

To existing industrial units the raw materials are not available through out the year either in adequate quantity or of standard quality. The problem is more acute for small scale units as they are unable to undertake bulk buying for which, these units are forced to take whatever quantity and quality available at a higher price.
As a result, these units often fail to produce goods of requisite quality and quantity at low manufacturing cost.

6.4.5 **Shortage of Finance:**

Under the present situation it is found that the credit facilities have not been organised in a very satisfactory manner for small producers despite various efforts made by the State Government during the past years. Of course, dealings with commercial banks have been on the increase since nationalisation of banks. Besides, the existing cooperative societies too have been largely concerned with agriculture. As a result, many small producers are handicapped for want of finance. This has adversely affected their production and marketing.

6.4.6 **Inferior Techniques of Production:**

Most of the industrial units of Western Orissa have old methods of production and low technological level. The entrepreneurs are neither able to buy new equipments for modernisation nor do they have scope for knowing about new method and technology. As a result the production cost increases and the goods could not be of competitive price in the market. For example, it can be stated here that rice milling which constitute one of the most important categories of small industries employ very old technology, leading to inefficient operation and wastage of by products. Same type of conditions prevail for other categories of industries also.

6.4.7 **Inadequate Marketing Facilities:**

The industrial units of Western Orissa do not have any marketing organisation to sell the products. The individual units
are handling their sell without any organisational support. So, they have to face stiff competition. Consequently, they are forced to sell their goods for whatever they can get in return.

6.4.8 Unused Capacity:

Under utilisation of rated capacity is a serious problem that is found with most of the small scale industries in Western Orissa. This problem is observed to be most acute in case of rice milling units of this region in which a substantial part of the milling capacity is lying idle and most of the units are operating at the rate of 30% to 40% of their rated capacity. However, the intensity of this problem varies from type to type of small scale industries in the region.

6.4.9 Other Problems:

Amongst the other problems faced by the existing industries in the region, lack of motivation among the workers, shortage of skilled labour force, adverse tax structure of the government, lack of efficient management etc. are most important.

Thus the existing industries of Western Orissa face different problems at various stages of their activities. This in turn keeps the entrepreneurs poor and their industries backward. In the following paragraphs attempts are made to bring out some findings and industrial possibilities of the region keeping in mind the discussed problems.

6.5 FINDINGS AND INDUSTRIAL POSSIBILITIES:

The principal findings that have been derived from the previous discussions are as follows:
(a) Despite having tremendous industrial potentialities Western Orissa is considered to be industrially most backward as compared to the state as a whole. However, this backwardness may be attributed to the high concentration of tribal population, low rate of exploitation of resources, lesser degree of accessibility and lack of supporting infrastructure.

(b) It is also evident from the analysis of prevailing growth trends of various categories of industries in Western Orissa that the dominance of industries under organised factory sector (small-scale) have been gradually increasing. Thus, it can be concluded that the development of small scale industries in Western Orissa should be taken as the basis for further development as it can generate maximum employment opportunity with minimum capital investment and also can utilise the available local resources.

(c) As regards the existing industrial problems it is found that lack of sectoral integration, lack of enterprise, shortage of finance, inadequate marketing and transport facilities, lack of adequate infrastructures are some of the important problems that stand as the bottleneck in the industrial progress.

(d) From the assessment of resource endowments it is found that Western Orissa is fortunately bestowed with vast natural resources like agricultural, mineral, forest and livestock as compared to other parts of the state. But, those resources are yet to be fully developed and tapped in such a manner so that the tempo of industrialisation can be geared up in the region.
(e) The availability of infrastructures for industries in this region is quite inadequate. The adverse physical terrain and low quality manpower with poverty and illiteracy could not encourage the development of industries in the region. So, there is an urgent need to develop the infrastructural facilities, so that the process of industrialisation can be enhanced quickly in future.

6.5.1 Industrial Possibilities:

An examination of the potential for industrial development of these areas both from the availability of local resources as well as from the demand points of view reveals that the main lines of development will be in the field of processing industries. These could be based on the local supplies of raw materials from the agriculture, forests and livestock fields. Since the envisaged output in the agricultural field involves large addition to the current levels, it is possible to send out the sizeable surplus of processed products outside these districts. The agricultural development would also create demand for implements as well as for consumer goods and this could be met by setting up capacities in the suitable market-oriented industries. The possible lines of such development are discussed below in detail.

Agro-based Industries:

(a) Rice Mills:

The projected production of rice in the three districts in 1993-94 is of the order of 876,000 tonnes against the current level of 649,000 tonnes. According to Annual surveys of Industry, 1988-1989, about 13 percent of total rice production is milled in organised
rice mills in India, the percentage for this state also being the same. At this rate, the required milling capacity at the expected level of rice output in 1993-94 will be of the order of 28,000 tonnes. However, the existing capacity for rice milling in the area is over 80,000 tonnes. This is far in surplus of the required capacity at the end of the Eighth plan and no expansion or new units are called for. However in spite of the overall surplus in the area, there are a few pockets in Phulbani district where a few hullers may be set up.

(b) **Flour Mills:**

Bolangir and Kalahandi are self-sufficient in flour mills but there is no flour mill in Phulbani. There is scope for two small flour mills (Chakkies) in Phulbani area.

(c) **Rice Bran Oil:**

The total availability of rice bran in the area will be around 50,000 tonnes but this is spread all over the area. Since the bran contains a lipolytic enzyme that causes rapid development of free fatty acidity, it needs to be treated promptly to halt the process. This, in other words requires quick collection of rice bran from mills to the bran oil unit. Therefore, the total availability of bran in the area is not relevant. For locating a bran oil unit only the places with concentration of rice mills are to be taken into account. The minimum economic size of bran oil unit by oil solvent extraction process is 10 tonnes a day of bran. The only place where this quantity of bran may be available is Kantabanji. The mills in the
area are of huller type milling parboiled rice. The bran should be dried as early as possibly to have minimum rancidity in the period from rice mill to bran oil unit. On this basis there is scope for one unit for rice bran oil with a capacity of 10 tonnes of bran per day at Kantabanji.

(d) Straw Boards:

Rice Straw and stock are used for making straw boards cotton and paper waste and sawai grass could also conveniently be utilised for making such boards. All these materials are available in sufficient quantities in this area. It is learnt that one joint stock company is being promoted in Bolangir for manufacture of board. The capacity of the plant is likely to be 2,000 tonnes a year. There is no scope for additional capacity.

(e) Oils Mills:

Oil seeds growth in the area are groundnut linseed, rape and mustard, sesamum and castor seed. The likely production of total oilseeds at the end of the Fourth plan in these districts will be 90,000 tonnes. In 1966, there were 2,248 oil ghannies and 11 oil mills in the area. Since there is already excess capacity in oil mills there is no scope of any large or medium size oil mill in the area. A few small oilseed crushers may come up during the Fourth Plan.

(f) Fruit Preservation and Canning:

Till recently not much attention was paid to grow fruits in the area on organised basis. Possibilities of extending areas under
fruit cultivation have been discussed in Chapter-3. With growing of fruits in selected areas, there is distinct possibility of setting up three units for preservation and canning of fruits—mainly pineapple to begin with. The likely location are Harishankar, Thusmal Rampur and G. Udayagiri or Phiringia. As the availability of fruits will be seasonal, these units could take up the manufacture of candy during the lean season. The capacity of each unit could be about Rs.2 lakhs worth production.

(g) Sisal Fibres and Ropes:

Sisal is being successfully grown in the area under the soil conservation scheme. This scheme plans to have 1,215 hectares in Bolangir district, 810 hectares in Kalahandi and 400 hectares in Phulbani district under sisal cultivation. This may take about 12 years. By the end of the Fourth Plan Karlakhman Sisal Estate is planned to cover over 500 hectares. In addition to sisal, some jute and mesta is also grown in the area but its potential is limited.

The import of sisal fibre in India for the last three years is given below. There was no import of sisal cardage and ropes.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity (in tonnes)</th>
<th>Value (in Rs.000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-87</td>
<td>4,619</td>
<td>6,149</td>
</tr>
<tr>
<td>1987-88</td>
<td>2,866</td>
<td>2,978</td>
</tr>
<tr>
<td>1988-89</td>
<td>3,985</td>
<td>5,727</td>
</tr>
</tbody>
</table>

Source: Monthly Statistics of the Foreign Trade, Govt. of India.
Sisal ropes are considered superior to other fibre-ropes due to their superior strength specially under saline conditions and are widely used in ships. With increase in tonnage in tonnage of ships in India, the demand for sisal ropes will increase. Sisal ropes are also required in construction works along with manila ropes.

In Karlakhaman Sisal Estate (Bolangir), the average yield of fibre is 394 kgs, per hectare per year on 10 year life cycle. Five hundred hectares of plantation at the end of the seventh plan will yield 197 tonnes of fibre. This is sufficient to sustain a mechanical sisal fibre extraction and rope-making unit. The value of production at present prices will be around Rs.8 lakhs. On this basis there is scope for setting up one unit at Karlakhaman with an initial capacity of 200 tonnes of ropes per year. Later on two such units may be set up one each in Sunabeda (Kalahandi) and Kantamal (Phulbani) area.

(h) Cattle and Poultry Feed :

Good feed is an essential part of an animal husbandry programme. The total cattle and buffaloes in the area were 1,951,187 and poultry was 1,337,905 as per 1938 Census. There is no large organised feed mixing unit in the area. One unit was sanctioned but the same could not be started probably due to lack of finance. This unit was to serve Bolangir, Kalahandi, Phulbani, district and part of Sambalpur district. It could now be set up for making premixed poultry and cattle feed.
Livestock-based Industries:

(a) Tanneries:

The livestock population in the districts of Bolangir, Kalahandi and Phulbani according to Livestock Census of 1966 is given in Chapter 3. In spite of the large number of cattle population there are only two dairy farms in the area—Bolangir (170 animals) and in Phulbani district (36 animals). There is no large or medium size slaughter house. There are only a few meat shops slaughtering animals as and when required.

Taking an average figure of 10 percent as mortality rate of cattle, buffalo, goat and sheep the theoretical availability of hides and skins will be 274,000 per year. But as the animals are scattered all over the area and there is no economic slaughtering programme, the availability of hides is reduced due to collection difficulties. At present about 54,000 hides and skins per year are collected and brought to Government Tanneries at Titlagarh and Boudh which are supposed to have monopoly collection rights. It is learnt that in addition, a large number of hides/skins (approximately 135,000 nos) are collected and sent to other areas every year.

The present price of raw hide is Rs. 70 for cow and Rs. 91.50 for buffalo white the tanned leather is sold at a rate of Rs. 36 per kg. for vegetable tanning and Rs. 12.50 per square foot for chrome tanning. It will be much advantageous to tan the leather and then sell it rather than to sell the raw hides and skins. It is obvious that if collection of raw hides and skins is well organised the two existing tanneries at Titlagarh and Baudh can be expanded to tan
400 hides and skins and 100 hides and skins per day respectively.

(b) **Bone Meal**:

There is no bone meal unit in the area. Some small bone crushers were set up under the panchayat to supply bone-fertiliser but due to poor maintenance and mismanagement, it is learnt, none of these is working now. The importance of bone-fertilizer need not be emphasised. It has been estimated that 5,000 tonnes of bones will be available per year. Steamed bone meal contains about 2.5 percent of nitrogen and 38 per cent phosphate. About 60 percent of this phosphate is assimilated by the soil quite readily and remaining 40 per cent is taken up slowly. The ordinary crushed bone contains phosphate of low solubility and full phosphatic contents cannot be fully utilised. Therefore, the steamed bone meal is always preferred. Hence it is suggested that one unit for steamed bone meal be set up at Titlagarh. Alternatively, the unit can go for production of gelatine and glue.

(c) **Shoes, Leather-gloves, Aprons etc**:

There is no mechanised or semi-mechanised unit for producing leather articles in the area. The tanned leather from Titlagarh and Baudh is, at present going to Government shoe factory at Cuttack and Rourkela Steel Plant.

Due to limited urban population, the demand for modern shoes will be small. On this basis, no mechanised unit can come up in this area in near future. The production of indigenous country type chappals and shoes could continue in the household sector.
Forest-based Industries:

Districts of Bolangir, Kalahandi and Phulbani have 43 percent of the total geographical area under forest. The forest products can be best utilised by the following industrial units.

(a) Plywood:

In 1989 there were 65 units in the country for production of plywood-commercial and tea chests-with total annual capacity of 13.08 million sq. metres on single basis and production was 24.44 million square metres. The demand at the end of the 8th plan (1993-94) has been estimated at 40 million sq.metres. Thus there is still scope for new units to be set up. Plywood industry is a delicensed industry now.

The production of commercial plywood requires sound logs of 6 feet and above girth class. The common specials in the area suitable for production of plywood are: sahaj, teak asan, bija, mango, jamum, sissop and salai.

The capacity of plywood plant of minimum economic size is estimated at 200,000 sq.metres per year on single shift basis. The requirement of wood for this capacity will be about 5,000 tonnes ply logs. This quantity of ply logs of the species suitable for plying is available in the area. Thus there is clear scope for setting up a plant here.

Location of the unit depends on number of factors but the most important will be a central place for utilisation of resources.
of the whole region. Kesinga or Titlagarh appear to be most suitable from this point of view.

(b) **Wood Working Industry**:

There are only eight carpentry units in the area for making constructional timbers such as door frames, window frames and ordinary furniture for local needs. These units depend on orders from PWD. In the long run these units can survive only if they diversify their production—some of the items, which can be taken up with little additional investment, such as installation of wood working lathes, arc total handles, toys broom handles, door knobs, bed legs and frames. It is suggested that the existing carpentry units be diversified by providing wood working machines. The manufacture of bobbins can also be taken up from kendu wood.

(c) **Wood Seasoning**:

In the deciduous forest there are a number of species which can be better utilised after seasoning for furniture and quality structural articles like doors and windows. There is no wood seasoning unit in the area or in neighbouring districts. The nearest one is at Cuttack. With accent on quality the demand for seasoned wood is bound to increase. At present most of the sawn timber is sent out of the area. It will fetch better price if seasoned timber is sent out.

There is a scope for two small units of 200/300 c.ft. kiln capacity each one in Phulbani district near one of the proposed saw mills and other in Khariar Road, Harishankar or Kantabanji area.
(d) **Saw Mills** :

There are 20 saw mills in the area, all of these are in Bolangir and Kalahandi districts. These saw mills are able to meet total requirement of the districts and there is no scope for new units. In the case of Phulbani district all the logs are being sent to Ganjam or Koraput districts for sawing. It will be more profitable to sent and sawn timber instead of logs. On this basis three saw mills can be set up in Phulbani district. The suggested location are Charchak, G. Udayagiri and Balliguda.

(e) **Sal Seed Oil** :

Sal is the most important tree in the area, oil from sal seeds has been tested and found suitable for hydrogenation, soap-making, etc. The collection of seeds of sal has been leased out to a private contractor in 11 forest divisions outside these districts.

Sal forest are of natural self-regeneration type. If all the seeds are collected, the forest will be barren in a short time as no new sal trees will come up. Therefore before suggesting any plant for extraction of oil from sal seeds, the result of sal seed collection in other divisions should be watched. If the results are favourable, one unit can be set up in the area for extraction of sal seed oil. It has been estimated that about 0.1 tonne of sal seeds could be collected per hectare of pure sal forests. This should be sufficient to sustain one unit for oil.
Demand-based Industries:

(a) Agricultural Implements:

There is only one unit in the area manufacturing agricultural implements such as weeders, light iron ploughs, puddlers, trammers, etc. The capacity of this unit is about 50 tonnes of implements per year. The requirement for agricultural implements in the area served by Hirakud system both within Bolangir and adjoining districts is likely to be much larger than the present capacity.

The presently licensed capacity for agricultural implements in the country is 33,000 tonnes per year while the installed capacity is 31,500 tonnes per year, against an estimated demand of 66,000 tonnes per year at the end of the Fourth plan. In view of the fact that there exists a wide gap between the demand and capacity at the national level and also in this region, there is a definite possibility for setting up a unit for the manufacturer of agricultural implements. Its capacity could be around 600 tonnes per year. Suitable location could be either Titlagarh or Kisinga which would be near the rice area where intensive development is likely to take place.

(b) Jobbing Shop:

At present, there is no foundry in the area. There is only one small machine shop undertaking jobbing orders. Consequently, the local jobbing requirements have to be done outside the area involving both delay and high cost. Rice mills at Kantabanji complained that even for small work they have to get repairs done at Raipur in Madhya Pradesh. There is definitely scope for one
foundary with a machine and blacksmith in the area to cater for jobbing work and production of miscellaneous articles.

(c) **Cold Storage:**

Potatoes are grown in large quantities in the area, the production at the end of the Fourth Plan is expected to be 70,000 tonnes in these districts. One cold storage is under construction in Kalinga (Phulbani) and tenders have been called for another to be put up in Bolangir. These two cold storages will be commissioned in the first year of the fourth plan and will be able to meet the long-felt need for storage. Later on more cold storages may be considered in Baudh and other potato-growing centres.

(d) **Soap:**

There are five units in the districts of Bolangir and Kalahandi for manufacture of washing soap. These units are working well and will be able to meet the local demand. However, Phulbani district has no unit. Hence to meet the local demand of this district one unit could come up.

(e) **Other Miscellaneous Industries:**

With the increases in schooling facilities and rise in agricultural incomes, the demand for several products will rise all over. These products could conveniently be manufactured in small scale units, some of these are Phenyle, ink, plastic toys, plastic combs, plastic household articles, candles, stationery articles, umbrellas, builders, hardware, buckets, trunks, pickles, chuda (beatan rice) and garments, etc.
Cottage Industries:

The occupational and industrial classification of persons at work other than cultivation in the districts of Bolangir, Kalahandi and Phulbani as per 1981 census are given in Table No.6.5.2. Total number of persons engaged in household industries in the group of manufacturing industries was 75,635. The distribution of these in various industrial groups is given below.

<table>
<thead>
<tr>
<th>Industrial groups</th>
<th>Number of persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foodstuffs</td>
<td>18,280</td>
</tr>
<tr>
<td>Beverages</td>
<td>104</td>
</tr>
<tr>
<td>Textiles-cotton</td>
<td>30,077</td>
</tr>
<tr>
<td>Textile-Jute</td>
<td>423</td>
</tr>
<tr>
<td>Textiles-miscellaneous</td>
<td>638</td>
</tr>
<tr>
<td>Wood and wood products</td>
<td>8,938</td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>528</td>
</tr>
<tr>
<td>Non-metallic mineral products</td>
<td>6,880</td>
</tr>
<tr>
<td>Basic metal &amp; basic metal products</td>
<td>5,855</td>
</tr>
<tr>
<td>Miscellaneous manufacturing industries</td>
<td>3,336</td>
</tr>
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</table>

As is the general pattern all over the country cotton textiles account for the largest number of persons in household industries followed by foodstuffs such as hand pounding of rice, preparation of sweetmeats, khoi, etc. These industries have the usual problems faced by similar industries elsewhere in the country, such as low productivity due to outdated production methods, poor quality, much wastage and primitive marketing techniques.

One method to improve the productivity and quality of these industries is through organising industrial co-operative societies.
These societies could arrange for raw materials and market the products. But in these districts the role of industrial co-operatives had been so far very limited (Table 6.5.3). In 1966-67, there were 148 village industrial co-operative societies in the area of which only 74 were working, the total membership being 5,585. The brass and bell metal work accounted for the largest membership - 2,081 followed by 996 in hand-pounding societies. The total sales amounted to Rs.7.21 lakhs. This gives the sale of only Rs.129 per member for the whole year. With such a low amount of business, the earnings are obviously meagre.

All the output of these cottage industries whether organised in village co-operatives or otherwise is for local consumption by sales at the village weekly markets. However two products of this area are very well known, namely, cotton textiles in Sonepur area and brass and bell metal utensils and silver and German silver jewelleries in Tarava area, both in Bolangir district. The quality of these products is high and these have a wide market. However it is necessary to organise the purchase of raw materials and marketing of finished products on more systematic lines preferably through co-operatives.

All other household industries are producing articles of poor quality for local consumption. These are being replaced by the items of better quality and lower prices coming from the organised sector. The village industries should strive for better and uniform quality
products by using modern methods of production. These industries could use electricity as and when transmission is taken to more villages. The industrial co-operatives should be organised in a way as to stand on their feet and play greater role in marketing finished products.

REFERENCES:


4. Industrial Survey of Orissa (1982), B.S.E, Govt. of Orissa Page.82.


6. Ibid. P.92.