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CONTENTS

IMPORTANCE OF INVENTORY CONTROL AND MANAGEMENT FOR A SMALL SCALE INDUSTRY

B. K. Mohapatra

Operational efficiency and continued commercial viability of a small industry project will depend upon proper resource management. Resource management in small scale sector may have different aspects, *viz.* materials management, financial management, personnel management, marketing management etc . Of these, inventory management occupies a significant position. Profitability of a project will largely hinge on acquisition of materials and holding of a particular level of stock, be it raw-materials or finished goods. The management must have effective control on inventory to ensure that an adequate but not excessive bank of materials is on hand at all times to meet operative requirements. A small scale industry must initiate effective inventory control with the twin objectives of maintaining a "safety stocks" of materials and secondly, inventories should permit the company to operate with its disconnected process in the manufacturing and distribution cycles. This is because for many small scale industries efficiency is best achieved by progressing from material suppliers to product customers in a series of jumps interspersed with resting points. Were it not for inventories at these resting points, "interruptible" process would not be feasible and resultant scheduling hardships and inherent delays would cause costs to soar.

In industry a major portion of working capital is locked up in inventory. Inventories in a modern small scale industry are stocks which can be classified as under :—

(i) Raw-materials and purchase parts;

(ii) Stores and spare parts for maintenance;

(iii) Work in process or processed stocks;

(iv) Finished goods.

Inventories involve acquisition cost and holding cost since they tie up a sizeable part of capital. On an average, the cost studies undertaken reveal that the annual costs of carrying inventories vary between 15-25% of the total value of inventory.

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Not withstanding the fact that inventories are idle investments costing money to keep them, there are enough reasons why they are held.

Raw materials are to be acquired and held because they ensure :

(i) Economies of bulk purchasing;

(ii) A protective buffer against transportation delays and production rate changes;

(iii) Seasonal fluctuations.

Secondly work in process provides for :

i) Liquid stock to cater to flexibility in production level shorten manufacturing cycle;

ii) A protective buffer;

iii) Economic lot production.

On the other hand, thirdly inventories in the shape of finished goods serve to provide for :

i) Self delivery;

ii) Protective buffer catering for economic production lots and absorption of sales rate changes;

iii) Seasonal accumulation, allowing stabilisation of level of production and employment;

iv) Sales promotion accumulation; and

v) Consolidated shipping accumulation.

The basic question lies before a small scale industry about why it should have inventories ? An industry maintains a level of inventory both in form of raw-materials and finished goods, because it helps in economisation of operating by quantities beyond current requirements; it helps to maintain surplus stocks while replacing stocks are in transit; it enables to level out production cycles by producing through inventory and it helps the unit to carry a reserve in order to prevent stock-outs or cost sales.

The problem before the industry is that whether it will maintain inventories of materials consisting of hundreds and thousand of parts. Will it be necessary to have some type of control on each and every item ? The answer to this question is given by managerial economics experts through the A. B. C. analysis of inventory items. The A. B. C. analysis may be explained traditionally as follows :

i) Determine unit cost of each item;

ii) Estimate the expected usages of each item in process over a month, a quarter or a year;

iii) Multiply the unit cost by the estimated usage to establish the net value over a particular period;

iv) Arrange the items in descending order by total value over the selected period;

v) The number of items and their cost are accumulated on a percentage basis;

Fig. No. 1 explains the ABC analyis.

It is observed from the diagram that an industry may lack some control over 'C' items, even to the extent of disposing of inventory records. In respect of 'A' items, productive stocks are held to an absolute minimum whereas 'B' items receive close attention except that deliveries are scheduled in reasonable quantities with a normal allowance of projection.

Inventories as stated earlier involve costs. The costs are (i) Buying or procurement cost, (ii) Inventory carrying cost, (iii) Stock out cost.

The cost of ordering or buying or procurement includes the costs of requisitioning, calling quotations, processing the tenders, placing the orders receiving, inspecting, paying of freights, verifying invoices, settling payment etc.

The inventories carrying cost consists of all costs which result from having the stock. This cost may include the cost of interest, taxes, insurance, obsolescence, deterioration and warehousing.

The basic question before the small scale industries is to maintain a particular level of inventory to serve as safety stock which would provide short term insurance against fluctuations in supply, manufacturing or sales and on the other hand, minimising the cost of inventories, which would in effect mean that holding inventories of a sizeable quantity should not be a drag on available capital of the project. Therefore, a small scale industry must strive at determining the economic order quantity (EOQ).

The EOQ will depend upon the two costs—buying cost and inventory carrying cost. On the other hand, the industry has to maintain an economic manufacturing quantity (EMQ). There are several inventory control techniques. A simple inventory model is reflected in Fig. 2.

The position explained In Fig. 2 is consistent only within ideal conditions. Such an ideal condition is never experienced by a small

scale industry, since there are certain external factors which effect the production planning, material management, financial management, sales management and all these four are interconnected. Further, either the lead time (time lapse from indenting to receiving shipment) or usage during lead time or both can very *i. e.* new order would arrive ahead of need of some of the items and after need sometimes. In fact, this is the experience of a modern small scale industry to have such variations. Therefore, it would be unwise to use a reorder point that is exactly equal to lead time usage. Thus there should be a buffer of a safety stock which reduces the stock out chances. The average inventory may be equal to safety stock plus half of the order quantity. The two important factors to be decided for controlling the inventories as we can see are "how much to order" and "when to order". Once we determine the safety stock and know the delivery lead time, the reordering point can be found out in the following manner.

Reordering point=("Lead time × Usage rate) + Safety stock.
The position is explained in Fig. 3.

Coming to the cost of inventories again the analysis of which is a very important consideration for any modern small scale industry, it can be pointed out that the cost of possession and of acquisition operate at cross purposes to each other. Low cost or possession points to the ordering smaller quantities at more frequent intervals. Low costs of acquisition mean larger quantities per order and hence less frequent order. Economic lot quantity formulae establish mathematically that quantity to order for which the possession and acquisition costs added together are at a minimum. Fig. 4 explains the positions :

But actually in any situation, there is not one but a family of economic lot curves which take into consideration the item value and its activity. The fast-moving items are revealed as those for which inventories should be kept low with more frequent orders. Slower-moving items, on the other hand, can have higher stocks and less frequent orders. The net result can be no over-all increase in inventories compared with the traditional method in use by many industries of "across-the-border ordering", ordering for all items, regardless of value or activity, 3 months' requirement at each purchase.

The inventories have a definite relationship with the volume of sales. It is logical to expect a business to carry an inventory of merchandise which is a reasonable proportion to the sale volume. An enterprise with sales of a million rupess per annum will usally require a larger inventory

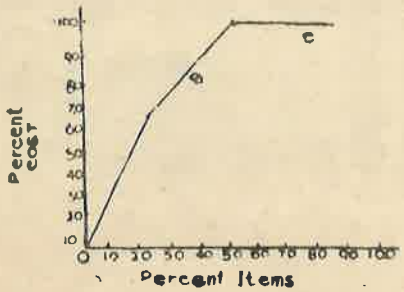

Fig 1

A : items 8% equal 75% of cost.
B : items 25% equal 20% of cost,
C : items 67% equal to 5% cost.

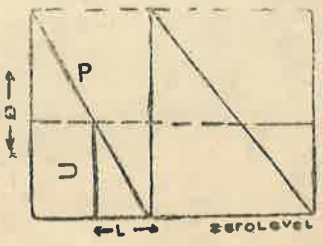

Fig 2

Q=Order Quantity
L=Lead Time
U=Uaage during lead time
P=Reorder point.
Maximum Stock=Q
Minimum Stock=O
Average Inventory $\frac{Q}{2}$

A B=Econ. Order Quantity
D B=Saftey stock
D F=Lead TIme
D C=Usage during lead time
C=Reorder Point
=Lead usage time+safety stock.

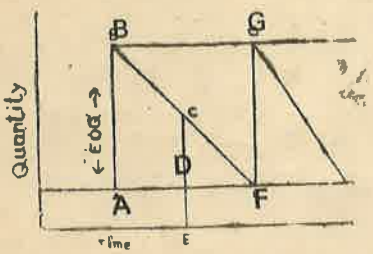

Fig 3

Total variable cost to be added to the Fixed unit cost.

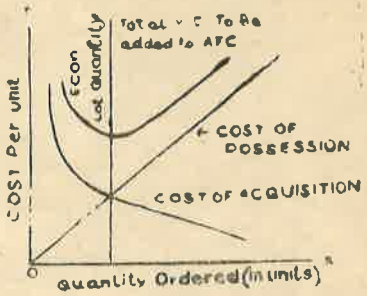

Fig 4

than one in the same line of business with sales of Rs. 10000 per annum, However, in order to judge whether the inventory is normal, it is necessary to be familiar with the requirements of the type of business under consideration. Control of the inventory is one of the most difficult problems of management, the inventory must be large enough to meet the demands on the business, but it also must not be too large, since over-stocking results in increasing such expenses as warehousing and interest on borrowed funds and prevents the flow of cash into the business through sales. Also there is a danger that the goods will deteriorate. Merchandising efficiency will depend on the capability of the merchant to have the smallest possible inventory that will efficiently take care of all demands on it. The higher the size of inventories, the larger is the requirement of working capital. To add to this if the marketing system is peculiar, if the availability of raw materials is irregular, there is delay in payments and there are sudden changes in policy decisions, the inventories pose a tremendous problem to an industry. The production planning cannot be adhered to if sufficient raw materials are not procured. The frequency of direct sales, on the other hand, affect production planning. Sometimes, small industries experience a difficult situation when the scarce raw materials are imported. Delivery schedules of imported raw materials make difficult situation for meeting working capital requirements. It is an experience particularly with reference to Orissa that many small scale industries are engaged in manufacturing of items required by the Govt. departments or autonomous bodies. From such a group of institutional consumers, the orders for a particular product/products come only towards the end of the financial year. In order to execute the volume of orders placed by a department in the last part of the year with a specification of quick delivery schedule, the small industry experiences a very tight position because of difficulties in procurement of raw materials, holding inventories, arrangement of adequate finance and other factors.

Further in between the execution of orders, the payment system is so injurious that working capital management becomes a difficult problem for a small scale industry. The manufacturing cycle, inventory management and financial management become very much painful. Sometimes a sudden change in the policy decisions of the Govt. both in regard to raw materials, taxes etc., the small scale industries are concerned. With the objective of having a minimum investment on inventory, the small scale industries may adopt a policy of frequent procurement of raw materials or take a longer time to procure materials since the order from the Govt. departments is likely to come only towards the last part of the year. But all on a sudden if there is a change in the raw material and fiscal policies, the inventory control and management become practically difficult. It

becomes difficult on the part of the small scale industry to withstand these exogenous shocks and their effect, the whole production, sales, financial and inventory planning get disrupted.

Many small scale industries do not know the methods of inventory control and management. Very often the entrepreneurs are dragged to a situation where the higher magnitude of inventories involves huge costs which are directly reflected in low profitability. Unscientific inventory management results in irregularity of accounts with the Banks. Once the account becomes irregular, the flow of working capital becomes tightened which has a spiral effect on production planning, sales planning and financial management. The ultimate consequence is that the unit is incapable of generating enough cash surplus which is the beginning of the emergence of a situation of sickness. In the absence of sufficient liquid funds the small scale industry becomes dependant on external sources of funds. The dependance on external sources of fund and continuous losses bring out sickness. The sickness becomes precipitated and ultimately the unit is closed down. Lack of knowledge and experience on inventory control and management result in poor financial management.

The bankers or the financial institutions have a definite role to assist the small scale sector particularly where the entrepreneurs are devoid of knowledge in modern techniques of inventory control, financial management, sales management and production planning. They have to adopt constructive role in helping the entrepreneurs in adopting suitable strategy for inventory control and financial management in particular. They can provide timely signal to the entrepreneurs to take care of the areas of weakness and take suitable and timely remedial measures for avoiding losses. The lead banks or financial institutions should not only guide their customers but they should conduct periodic programmes amongst the existing industries and disseminate the applied knowledge of inventory control and management which will facilitate scientific financial management and thereby help the industries to attain the continuous operational efficiency and commercial viability.

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RURAL INDUSTRIALISATION— A CASE STUDY OF KORAPUT DIRTRICT

Dr. S. C. Patnaik
P. C. Mohapatra

This paper is divided into four parts. The first part deals with the background and economic backwardness of the district. The second part deals with the economic base of the district. The third part deals with the importance of rural industries, its present position and structure, followed by an attempt to discuss the block-wise potentialities of the rural industries.

PART—I

A Background of Koraput District :

Koraput is the largest district in Orissa and one of the biggest in the country, covering an area of 27,020 Sq Kilometres. It has the highest number of tribal population among all the districts of the State, containing more than one fifth of the total tribal population (i.e. 11.51 lakhs out of 50.71 lakhs in the State). The percentage of Scheduled Tribe population in the district is 56.34 percent. The presence of such large number of tribal population, both in terms of number as well as in terms of percentage, greatly influences the economy of the district.

80.40 percent of the villages in the district are small having less than 500 population in each. Taking into consideration the fact that a census village may contain two or more habitations separated by considerable distances, a large number of villages out of these small ones are also not compact villages, but are scattered into a number of habitations. Such dotting of small villages in the district make communication and integration difficult and increase the problem of locational planning and cost of development in each sector.[1]

The district is sparsely populated with an average density of only 76 persons per square kilo-metre. The density of population of Motu Taluk is as low as 25 percent per square kilo-metre and 50% of the Taluks in the district have less than the average density of the district.

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Economic Backwardness :

The eleven selected indicators presented in table–1 below bring out the extent of social and economic backwardness of the district as compared to that of the State. The first five indicators reveal that there is a higher participation rate (both in case of males and females) and there is a tremendous pressure on agriculture. The low dependency ratio in the district indicates that it becomes necessary for many of the persons including adolescents and old people to work just to fulfil their minimum needs of food. These indicators also reveal that diversification of the economic activities in the non-agricultural sphere is yet to take place. The last six indicators show that the population is highly rural, the communication system is grossly inadequate, the social facilities provided are at a low level and the per-capita income is substantially less.

TABLE—I

Backwardness of the district (Koraput) as shown by the selected socio-economic indicators.

Socio-Economic Indicators	Koraput	Orissa
1. Worker : Non-Worker participation for total population	35.09:64.91	31.22:68.78
2. Worker : Non-Worker participation for males	60.21:39.79	55.32:44.68
3. Worker : Non-Worker participation for females	9.46:90.54	6.81:93.19
4. Percentage of workers engaged in agriculture to total population	82.42	77.44
5. Percentage of workers engaged in manufacturing, processing & servicing.		
a) House-hold industries	2.16	3.63
b) Other than House-hold industries	1.37	2.30
6. Percentage of Urban population	8.19	8.41
7. Percentage of Literacy	10.58	26.18
8. Density of road per 100 sq. km	22.39 Km	34.29 Km(75-76)
9. No. of villages electrified	4.3%	13.7% (72-73)
10. No. of medical beds per lakh of population.	24	26 (75-76)
11. Per-Capita Income	Rs. 371/-	Rs. 584/- (72-73)

Sources : 1) B. Tripathy : A Portrait of population, Orissa— Census of India-1971-Series. 16-1973.

PART—II

The Economic Base of the District :

Since a major percentage of workers derive their livelihood from agriculture, as shown in Table–1, it is the main stay of the population. But the presence of hills and undulating terrains, the practice of shifting cultivation in steep slopes and heavy rainfall leading to soil erosion act as the main obstacles to improved methods of cultivation. The net sown area in the district constitutes only 31.13 percent of the total geographical area and the percentage of irrigated area to net sown area is only 4.4 percent[2]. Thus the entire district is mostly one crop economy, which provides employment opportunities only for about six months in a year to the workers engaged in this sector. The average crop yields per acre are poor and an estimate shows that the income derived from this main source of living is only 27.1 percent of the total income in the district (Appendix-A).

Under the circumstances, the economic strength of the district mainly lies in its rich forest and mineral resources. Forest constitute an important source of livelihood of its people, next only to agriculture and provides about 13.3 percent of the total income (Appendix—A). There are large number of wood species in the forests which covers an area of 15210 Sq Kms or about 56.29 percent of the total geographical area of the district. The exploitation of major forest produce and minor forest products besides yielding substantial revenue to the government provides an important source of livelihood to the people.

The district is endowed with a wide abundance of mineral deposits. Iron ore, manganese ore, china clay, dolomite, lime stone, quartzites are some of the important minerals. The number of mines in the district was 17 in 1976[3].

PART—III

The concept and objective of Rural Industrialization :

Rulal industrialisation connotes dispersal of industries into rural areas with a view to providing subsidiary employment opportunities to the people of the locality and utilizing local raw materials into processed articles. It also includes within its scope the extension of market of the local products. It aims at providing the basic requirements and services needed for agriculture, animal husbandry and forestry. It has been rightly said that, "Rural Industrialisation is not a problem of mere location of industries or of providing supplementary industries to the broad masses....It implies a

widely decentralised growth of industries with as high an employment potential as it is compatible with an efficient technique and the requirements of the process of development. In other words it seeks to transfuse modern industry into the life of the people of a particular locality by emphasising area development and maximisation of local skill and resources[4].

The progress and working of Rural Industrialisation programme in Koraput District :

Prior to the Third Plan rural industrialisation was more or less expressed in terms of village and small scale industries. The programme of rural industrialisation was conceived in Orissa in the year 1961-62, when it was decided to make each Panchayet Samiti and Gram Panchayet headquarters a nucleus for the development of rural Industries. The Panchayet Industries programme (P. I. P.) actually started during the year 1962-63 and out of 48 Panchayet Industries sanctioned in the state 3 were selected purely on the basis of economic factors like availability of raw materials, man-power etc.

But in order to evoke better public participation in rural areas, the government decided that those industries should be located in Gram Panchayet areas and a new scheme of prize competition was started. Under the scheme, 1st and 2nd prizes of Rs. 50 000/- and Rs. 25 000/- respectively were awarded to 34 successful Gram Panchayets (17 first and 17 second) every year according to the over all performance of the competing Gram Panchayets in the State[5]. Prizes were awarded for three subsequent years; but due to emergency the prize scheme was suspended during year 1965-66 and no further prizes were declared.

The industries established under the programme were mainly of two categories, *i. e.* (i) Processing industries of agricultural produce and (ii) Industries which seek to provide for better skills and improved equipment to the local artisans and workers.

By the year 1965-66, 147 industrial units had been sanctioned out of which 150 units had gone into production in the state. But during the year 1976-77 only 75 units were running in the state out of which 12 units belonged to Koraput district. During the year 1977-78 out of these 12 units only 6 were working units, 2 were defunct, 1 was under liquidation and the rest 3 were incomplete units. Thus it is evident that the performance of rural industrialisation scheme in the district was a complete failure as it could not achieve the goals for which its was launched.

Growth Rate and Present Position of Small Industries :

In order to examine the importance of rural industries in terms of creation of additional income and employment opportunities in the district, it is necessary to highlight the growth rate and present position of the small industries. As per 1971 census 2.16 percent of the workers in the district are engaged in the household industries and the income accruing from this activity is more than Rs. 97 lakhs. There are 5876 units (including repair) providing employment to nearly 11,000 persons. Among the traditional house hold industries cotton textiles (weaving & spinning) non-metallic mineral products (pottery) wood and wood products are the important ones in the district. Weaving is the most important among them which constitutes about 40 percent of the units and provides more than 36 percent of the employment[6].

Time series data are not available on the growth rate of small scale industries in the district. But estimate made by different organizations throw some light on the subject. An estimate was made by the operations research group, Baroda on the new units started in different categories of small industries to assess the trend of growth in this sector between 1959 and 1973, as shown in table-II below.

TABLE.—II

Estimated number of new Small Industries

Category	1953-63	1964-68	1969-73	Total 1959-73
Food products	37	58	77	172
Beverages, tobacco & tobacco products	10	32	3	45
Textile products	22	76	96	194
Wood products	17	10	19	46
Leather & leather products	1	2	2	5
Metal products & parts	—	9	9	18
Misc. manufacturing	25	14	65	104
Repair of cycles	26	29	64	119
Repair of Watches, clock & Jewellery	17	10	10	37
Rapair of electrical goods	—	5	16	21
Other repairs	—	5	—	5
Total	155	250	361	766

Another estimate made on the number of small units added in each year in the district beginning from the year 1973-74 has been made by the Director of Industries Orissa, as indicated in Table—III.

Source : Lead Bank Scheme, Koraput-Vol-I-District Profile-Study of Policy Oriented Lending & Deposit potential made by Operations Research Group, Baroda, Mimographed, 1976-p. 17.

Both the tables given indicate that there is a steady increase in the number of small industries in the district. Table—III indicates that the number of new small scale units added, the employment created and the total amount of money invested by the end of March, 1977 were respectively 446, 3232 and Rs. 222.04 lakhs. Thus the average investment needed per unit of employment was about Rs. 700/-.

An estimate made by the Operations Research Group, Baroda, indicates that out of the total small scale units located in the district during the year 1972-73, 855 were unregistered units and only 19 were registered units. The study further revealed that, "Total productive capital invested in these units (excluding big units) during 1972-73 was around 1.3 crores... In terms of their income generation, value added by them was about one crore of rupees, which constitutes 1.3 percent of the district income. The unregistered sector predominates over the registered sector in term of its employment, capital turnover, profit and value added"[7].

The study made a number of important findings which will help us to determine the future potentialities of the growth of small scale industries in the district. They are as follows :

I. House hold industries like textile products, wood products and food products show a greater tendency to procure raw materials from local areas. As regards the marketing of the commodities, all industries excepting those engaged in manufacturing metal products and parts are having local bias.

II. The profit margin is very high in the district and the average net profit of small industries before tax as a percentage of sales is 31.5 percent. Industries producing beverages, tobacco and tobacco products, leather products and textile products show a higher profit margin.

III. Industries like food products and metal products and parts are found to be more capital intensive.

IV. About 55 percent of units in Koraput are operating below their capacity. Underutilization is quite high among all other units excepting textiles and leather. Lack of demand for the products followed by shortage of raw materials, power shortage and inadequate finance are the important factors responsible for such underutilization[8].

TABLE – III

No. of small industries added in each year in Koraput District

Year	Engineering & metal based	Chemical & allied	Glass & ceramics	Leather	Agro-based	Textiles	Forest-based	Electrical & electronics	Servicing & misc.	Total	Total employment	Total investment in rupees in thousands
*												
1973-74	34	15	7	4	105	10	40	—	44	259	2057	16,443
1974-75	14	9	4	—	31	3	8	3	2	74	503	1,748
1975-76	3	11	6	3	5	3	4	—	23	58	273	1,421
1976-77	8	6	7	1	17	9	3	1	3	55	399	2,592
1977-78 (To Nov. '77)	8	1	1	—	21	—	4	2	6	43	205	—
Total	67	42	25	8	179	25	59	6	78	489	3437	22,204

* Figures represent number of units till 1973-74

Source : Directorate of Industries, Orissa, Cuttack.

PART—IV

Potentialities :

A number of studies have been made by various organisations at different times to find out the industrial potentialities of Koraput district. A rapid survey of the existing industries and of the potential industrial resources of Orissa was carried out during the post-war period which has dealt with the possibilities of starting new industries in different regions of the district[9]. As per the suggestions made by Prof. P. C. Mohalnobis, in the National Sample Survey Programme Committee meeting a kind of industrial potential survey in and around the Sunabeda project area was made in 1966[10]. The study recommended the expansion of hand-loom and pottery industries, and saw mills and establishment of oil mills, dyeing industry and industries producing agricultural implements including nuts, bolts, machine screws etc[11]. The small industries service institute conducted a survey and as per its finding suggested the establishment of sixteen different types of small industries in different parts of the district[12]. Similar potential studies have been made by the N. C. A. E. R in their report 'Development of Dandakaranya' the small industries extension training institute and M/s Kirloskar Consulted Limited, for the district[13]. In a recent study made by the Directorate of Industries, Orissa, Cuttack, it has been suggested for the development of three growth centres in the district and potentialities of industries have been separately made for each of the growth centres[14]. But these studies do not deal with the block-wise industrial potentialities of the district.

In recent years when the need of multi-level planning and block level planning is increasingly felt it is desirable to conduct block-wise potentialities or rural industries in the country as a whole. Such a study has more justification for a programme of rural industrialization which aims at dispersal of industries to rural areas with a view to providing employment opportunities to the vast rural masses. In case of Koraput district, The Operations Research Group, Baroda in their attempt to analysize the block-wise credit plan have dealt with the blockwise potentialities of small scale industries in the district[15]. The capital requirements, employment potential and the expected amount of profit for each industry has also been calculated in the study[16]. Taking into consideration all these studies and other relevant factors like (i) supply of raw materials (ii) natural and human resources (iii) market for finished products (iv) profitability and (v) infra-structural facilities, a block-wise potentialities of small scale and cottage industries has been made by us[17].

If the potentiality develops and the local inhabitants are trained to participate in each of these industries suggested, it will create employment opportunities and increase the income earning activities of the local people most of whom are tribals. In addition to these industries suggested, processing industries like turmeric, powdering unit, tarmarind juice making unit etc. at suitable places will also increase the income earning opportunities. The blockwise potentialities of industries, may also need suitable alternations after proper survey of the resources are made for the development of industries.

In conclusion, it is relevant to point out that the development of any area whether in terms of agriculture and industry cannot be an isolated phenomenon on the periphery outside the urban centres, industrial areas and metropolitan centres which may exist away from the area of the study. The economic performance of the study area is linked in several ways in terms of sale and purchase, credit inflow and outflow, flow of skills etc., without changing the entire cross relationships it is difficult to visualise the development of Koraput district as a part of the higher spatial order.

Appendix—'A'

Percentage of Household Income by Different Sources.

Source	Rural	Urban	Total
Agriculture	31.4	8.0	27.1
Dairy	1.4	1.9	1.4
Fishery	0.3	0.2	0 3
Polutry	0.7	0 1	0.6
Piggery	(N)	(N)	(N)
Forestry	15.8	1.9	13.3
Household Industry	1.4	0.8	1.3
Other Industry	(N)	1.1	0.2
Trade & Commerce	5.0	12.9	6.5
Profession	1.6	6.4	2.5
Service/Labour	40.8	63.0	44 8
Other Sources	1.6	3.7	2.0
All Sources	100	100	100

Source : State Bank of India—Lead Bank Scheme, District Profile for Koraput, Orissa—Vol. I of Study of Policy Oriented Lending & Deposit potential—P. 5 (This estimate is based on a household survey).

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Impact of Electrification and the use of electricity on agricultural productivity in the village Dedar Nuapali (Jujumura Block) of Sambalpur district

Smt. Sasikala Patnaik

Introduction :

Rural electrification provides the most economical means of lifting water and irrigating lands. This results in increased agricultural productivity. Thus, electricity assumes the crucial role of an agricultural input along with the other inputs like improved variety of seeds, fertilizers, developed technology, pesticides etc.

In order to make a first hand assessment of the contribution of rural electrification in the enhancement of agricultural productivity, a survey was undertaken with the help of three students of Economics in the village Dedar Nuapali of Jujumura Block of Sambalpur district. Details of the survey are presented in Table-I. The reasons for choosing this particular village for the survey are as follows :

1. This village is in the Jujumura Block which was electrified only in the year 1978. Thus the study will help us to make a comparative study of agricultural productivity in this village before and after electrification (1978), more convenient'y.
2. All the farmers in this village are either small farmers with land holdings at more than $2\frac{1}{2}$ acres but less than 5 acres, or marginal farmers with less than $2\frac{1}{2}$ acres of land holding. Therefore, here lift irrigation is undertaken for the benefit of only small and marginal farmers.
3. All the farmers of this village belong to the backward and scheduled castes.
4. There are also L. I. Points in other villages of this Block numbering about 20, but all of them are private and are installed by individual large farmers for the benefit of their own farms.
5. There is a small rivulet called 'Malti Jhore' near the village but the farmers do not get any benefit from it because their lands are situated at a higher level than the rivulet. So, besides the uncertain monsoon, the only source of irrigation for them is Lift Irrigation.

Methodology :

This village Dedar Nuapali was electrified in 1978. Out of the total farmers of 35, selection of a sample was not necessary because all could not be interviewed. However, 25 of them were interviewed because others were not available for the purpose of interview. A questionnaire was prepared and three qualified enumerators conducted the survey with direct personal interview, so that first hand information could be obtained. The 25 farmers interviewed were classified into two groups according to their land holdings. Small farmers and Marginal farmers.

1. *Small farmers* are those whose land holdings are more than two and half acres but within 5 acres (two and half to five acres).

2. *Marginal farmers* are those whose land holdings are less than two and half acres. Such a classification was made as all the lands in the village are non-irrigated.

The Survey :

The survey was conducted on August 7th, 1979. The very purpose of the survey is to show electricity as an input to agriculture and its specific contribution towards increase of agricultural productivity. Out of the total 35 house holds, only 25 were actually available for interview. As the land holdings of these farmers are very small, they have cultivated the entire holdings for both the crops. As started earlier, uncertain monsoon was the only source of irrigation for them. So after the village was electrified in 1978, they started a co-operative Lift Irrigation Project on the bank of the rivulet 'Malati Jhore'. They got a loan of one lakh and thirty five thousand rupees from the Government for this project. The village is covered under the R. E. C. Scheme and is financed by it and the Orissa State Electricity Board (O. S. E. B.) has electried this village. Three Lift Irrigation pumps (2 of G. E. C. of 10 H. P. each and one Kirloskar pump of 7 H. P.) are installed and they irrigate an area of about 100 acres. With the help of these L. I. Pumps water is lifted from the river bed and is canalized through a more than 100 metres length pipe line to a reservoir from which individually water is taken to their lands through canals constructed by them. A comparison is made between the productivity of paddy cultivation before electrification and after. And on the basis of this and the total amount of land cultivated, per hectare productivity was calculated.

TABLE

Details of the survey showing per hectre productivity before electrification (1978) and after electrification

Classification of cultivator on the basis of land holdings (in hectare)	Nos of cultivators involved	Land holdings in hectares	Before Electrification				After Electrification			
			Khariff		Rabi		Kharilf		Rahi	
			Output in Quintals	Average productivity per hectare in qtls.			Output in Quintals	Average productivity per hectare in qtls.	Output in Quintal	Average productivity per Hectares.
Not more than Two & Half acres (Marginal farmers)	18	7.8 19.5 acres.	54.875	7.035	Not cultivated due to lack of irrigation.		171.75	22.01	138.00	17.692
More than Two & Half but less than 5 acres Two & Half to Five acres (Small Farmer)	7	9.0 22.5 acres.	32.250	3.583	-do-		220.50	24.50	107.251	11.917
Total	25	16.8	87.125	10.618			392.25	46.51	245.25	29.609

Findings of the survey :

1. Previously the farmers in this area were unable to cultivate the summer crop due to the lack of irrigation. But now they are able to cultivate the summer crop (Rabi) and the yield from the winter crop has also increased considerably, after installing L. I. Pumps.

2. Now the risk of drought is eliminated. As the winter crop was not harvested at the time of the survey, a follow up survey was again made on 22-2-80 to assess the progress made by these farmers in the winter crop. The results were satisfactory. Even at the time when the first survey was made, the farmers were very optimistic and were expecting a bumper winter crop, despite the spell of drought which over took the district of Sambalpur during the current year (1979).

3. As the problem of irrigation is solved, besides rice, these farmers started cultivating wheat.

4. Hitherto the farmers did not utilize fertilizers in their farms because of the risk to their crops from drought. But in the Rabi crop for the current year (1980) they utilized fertilizers and are expecting a still better harvest than before.

5. On the whole, the farmers of Dedar Nuapali have received major benefits in the form of increased productivity per acre. If a diesel pump is installed in place of the electric set, the cost would have been very great as the cost of the diesel is not only higher but also increasing. Further, in the current diesel shortage crises, the situation would have been very grave.

A Related Problem :

A survey of the Co-operative Lift Irrigation Project of Dedar Nuapali also provides a solution to another related problem in agriculture, that is, the slow progress made by this district in rural electrification. One of the major reasons attributed to this slow progress is lack of effective damand for electricity. There is a general lack of demand for electricity in rural areas from the small farmers, inspite of the low tariffs on agricultural consumers by the O.S.E.B. and a considerable liberalization in the process of electrification. This is mainly due to the age old problem of fragmentation and sub-division of holdings. Majority of the farmers of Sambalpur district are small and marginal farmers whose holdings are not only small but also fragmented. But, for installing an L. I. Pump of a minimum

One Horse Power at least 2 acres of land must be there in a compact block. That is why, farmers of this area are neither interested, to have nor the capacity to bear the cost of Lift Irrigation. In this respect, a possible remedy could be found in the form of Co-operative Lift Irrigation Project of the kind operating in the Dedar Nuapali. By this, the cost of the project could be shared by all and the benefits could be maximised. Further, Lift Irrigation could be undertaken even by the poor farmers with small and uneconomic holdings without the necessity of consolidating their holdings.

Conclusion :

Rural Electrification and Lift Irrigation have helped in increasing agricultural productivity in the village Dedar Nuapali.

RESOURCE MANAGEMENT BY SMALL SCALE INDUSTRIES.

P. K. Raj

Resource management is one of the crucial aspects of the study of economics of Small Industry.

A small scale industrial unit because of the very smallness of its size is perhaps in a most vulnerable position so far as resource management is concerned compared to a medium scale or large scale industrial unit. Resources like land, labour, machinery, money and materials are scarce by their very nature and hence it is necessary that there should be a proper or optimal use of these resources in any productive activity in which they are engaged. In this respect large and medium scale units are in advantageous position compared to smaller ones for the simple reason that a large sized unit can make use of managerial, technical and financial talents and modern cost control devices for the purpose. But by necessity a small scale industrial entrepreneur acts as a manager, financier and salesman of his own product. Hence it is of some interest to evaluate his activities, both managerial and financial, for the purpose of highlighting whether resource management by small scale industries has been satisfactory.

With the above objective in view we have considered the financial statements of 24 industrial units for the accounting year 1977–78, of Cuttack district. Cuttack district has been selected as it happens to be one of the advanced districts of Orissa with the largest number of industrial units. Industry-wise break up of the units is as follows:

Food products	4	Non-metallic	
Wood products	3	Mineral products	3
Metal products	12	Hosiery & Readymade garments	2

The above units are SIDO Units and are known as modern small scale industrial units. While making use of the financial statements we are aware of their limitations. Neverthless it is hoped that with the help of these statements our objective can be satisfied in a better and more comprehensive manner.

Composition of Assets :

Our computation of the composition of total assets for the five industries stated above indicates that the percentage of net fixed assets to total assets is as high as 76.35% in case of non-metallic mineral products where as it is as low as 14.28% in case of wood products. In other cases percentage of net fixed assets is moderate varying from 54.61% in Hosiery & Readymade garments to 35.01% in Metal products and 33.94% in Food products. Percentage of net fixed assets for all industries is 39.73%.

Percentage of current assets to total assets for all industries is 57.39 But it is as high as 85% for Wood products, 64.22% for Food products and 60.47% for Metal products. This percentage for non-metallic mineral products is as low as 22.24.

The percentage of other assets and investments is very low in all cases.

Composition of Liabilities :

Composition of total liabilities shows that the percentage of equity for all industries is 49.50. It is 61.55% for Hosiery & Readymade garments, 57.52% for Metal products, 50.26% for non-metallic mineral products, and 32.19% for Wood products.

All industries percentage of long and medium term loan is only 16.15. In respect of individual industry we find that it is still lower, 5.50 per cent in Metal products. Non-metallic mineral products industry shows a higher percentage of long and medium term loan, it being 39.15%. In other cases such percentage is a little higher than 18.

Short term loan as a percentage of total liabilities shows that for all industries it is 34.35%. In individual cases it is 18.29% for non-metallic mineral products and 20.06% for Hosiety & Readymade garments.

Taking into consideration the distribution of long and medium term loans by sources, we find that the commercial banks dominate in the field of all industries. Their share is as high as 80.37% whereas co-operative banks do not provide any such loan. All industries percentage for Government and State Financial Corporation are 2.93 and 11.54 respectively. These figures being on the low side show that the industrial units have not taken advantage of the loans provided by the above agencies at a lower rate of interest.

Distribution of short term loans by sources shows that at all industries level, 80.76% of loans is provided by 'others'. These 'others' are the trade creditors or in other words, the suppliers of raw materials and components in the open market. A higher percentage of such type of loan may be taken as an index of financial weakness of the units. Next in order of importance are commercial banks who have met 26.87% of total requirements. Share of friends and relatives is only 19.24%.

Co-operative banks and indigenous banks have not contributed anything to the short term loans of the industrial units.

Composition of Output :

In the composition of total output, the value of basic raw materials at the level of all industries, is very high. It is 68.06% of the value of the total output whereas wages and salaries constitute 8.29% and profit only 7.35%. Percentage of rent is as low as 0,41 and interest 1.77. This shows that in the five industries under study productive activities are carried on with much less use of rented houses, machines and borrowed funds.

Industrywise verification of data reveals that basic raw materials component of Metal products is highest, 70.85%. In case of Food and Wood products it is 68.23% and 68.27% respectively. Wages and salaries component is highest in case of Hosiery & Readymade garments, it being 13.02% of the total. 10 87% is the next higher percentage in the case of non-metallic mineral products. Profit is 20.96% in case of H. and R. garment products of 17.03% in case of wood products and 13.06% in case of Food products. Rent and interest are low almost in all cases.

An analysis of certain ratios.

Here we may take under consideration certain ratios for the purpose of understanding the resource management by small scale industry—whether it is good, bad or indifferent. A ratio is easy to follow and possible to work out against the information avaliable from the small units. It helps us in understanding the financial health and strength of the small units..

Net Worth to Total Assets Ratio :

It shows the proportion of net worth to total assets and would be equal to 100 if there were no outside liabilities. The higher the ratio and closer it is to 100% the stronger becomes the financial position of the industrial unit and more satisfactory is the financial structure from the point of view of creditors. Thus the ratio is a test of credit strength of the industrial units.

Our computation of this ratio indicates that for all industries it is 47.97%. Of all industries, Hosiery & Readymade garments have the highest percentage, 60 55. Next is metal products industry with 57.52%. Wood products industry has a lower ratio 32.19% only followed by non-metallic mineral products with a ratio of 42.56%. In case of Food products this ratio is neither too high nor too low, in other words 'indifferent', the ratio being 50.26%.

Thus we find that the financial structure of Metal products and Hosiery & Readymade garments industries from the point of view of creditors is 'good'. For Wood products and non-metallic mineral products it is bad' and for Food products 'indifferent'.

Net Block to Net Worth Ratio :

When this ratio is lese than 100 it means that the net block is less than net worth implying thereby that a part of working capital is financed out of equity capital. When this ratio is more than hundred, creditors obligations finance a part of fixed and, all other assets.

Our data show that in case of Wood products industry the ratio is 44.38% and in case of non-metallic mineral products industry it is 179.40%. A low ratio in case of Wood products means that a large part of the working capital is financed out of equity capital. This should not have been done, on the other hand 179.40% is quite a stratling figure in case of non-metalic mineral products. This is unduly high,

However the above ratio signifies a greater dependence of the concern on outside finance and its successful working is contigent on profitable trading and quick collection of debts,

Here also we find that the performance of Wood products and non-metallic mineral product industries is 'bad'.

Current Ratio :

This ratio indicates how far current assets would cover current liabilities. In general the current ratio of 2:1 is considered good for any industry to ensure financial soundness. This ratio of 2:1 is considered a safe margin of solvency due to the fact that if the current assets are reduced to half *i. e.* 1 instead of 2, then also creditors will be able to get their payments in full. Thus this ratio determines short term financial strength of a concern.

Computation of this shows that for all industries it is 2.31. But for non-metallic mineral products it is 1.32 and for Hosiery and Readymade garments it is 2.80. Neither a high current ratio nor a low current ratio is a sign of good management of current assets and liabilities. A low current ratio may indicate inadequate working capital or it may mean high liquidity of current assets on the other hand a high current ratio will indicate either surplus of cash or its equivalent in relation to current needs. Consequently we may say that the short term solvency and financial strength of the above two industries are 'bad'.

In rest of the cases the ratio being 2.63 for metal products, 2.33 for food products and 2.32 for wood products, it may be said that the short term financial strength and solvency position of these industries are 'indifferent'.

Quick Ratio :

A quick ratio of 1:1 indicates that the industrial unit has good short term financial strength and that it can pay off all its current liabilities at short notice.

Our data show that at all industries level quick ratio is 0.76. It is as low as 0.06 in case of non-metallic mineral products. In metal products the position seems to be a little comfortable with a ratio of 1.25. But here again it all depends on how liquid are the liquid assets. Though the ratio reflects good liquidity position it is necessary to remember that trade debts may not be relatively so liquid.

Quick ratio for Food products, Wood products and Hosiery and Readmady garments is 0.52, 0.41 and 0.34 respectively. For all these industries the liquid assets position is 'bad'.

Thus we find that except for metal products the liquidity position of other industries is bad.

Net Sales to Total Assets Ratio :

This ratio measures the relationship between the amount invested in assets and the results occurring in terms of sales. It indicates the utilisation of assets by the industrial unit. The ratio may show whether there is a tendency towards over investment in assets. Over investment in total assets burdens the industrial unit with heavy operational, maintenance and interest charges.

We find that for all industries this ratio is 1.95. In Food products it is more than 3 times the total assets (3.26) and in Metal products it is more than 2 times the total assets (2,29). But non-metallic mineral products industry has the lowest ratio of 0,70 followed by Wood products industry with a ratio of 1.20. Thus we find that the position of these two industries is 'bad'. Hosiery & Readymade garments industry with a ratio of 1.50 is in an 'indifferent' position.

Conclusion :

Now let us pull all the threads together.

Our study of Food products, Wood products., Metal products, Non-metallic mineral products and Hosiery & Readymade garments industries, 24 units in all, of Cuttack district, high lights that.—

At these industries level, the percentage of long and medium term loan is only 16.15 to total liabilities. 80.37% of long and medium term loan is provided by the commercial banks. Co-operative banks have not provided any such loan. Small scale industrial units have not taken advantage of loans provided by the Government and State Financial Corporation at a lower rate of interest. With respect to short term loans it was found that trade creditors meet a higher percentage of the loan requirements. This is an index of financial weakness of the industries. Lastly in the value of total output the share of interest and rent is very low in all the industries.

Coming to our analysis of certain ratios we have found that the financial structure of the Wood products and non-metallic mineral products industries is 'bad' from the point of view of creditors. For Food products it is 'indifferent' and 'good' for Metal products and Hosiery & Readymade garments. In Wood products a large part of the working capital is financed out of equity capital and Non-metallic mineral products industry has a greater dependence on outside finance. Hence their resource management is 'bad'. The short term financial strength and solvency position of non-metallic mineral products and Hosiery & Ready-made garments is bad. In rest of the cases it is 'indifferent' except for metal products the liquid assets position of all other industries is 'bad'. As regards the efficiency in the utilisation of the assets it is found that food products and metal products industries are in good position. But the position of non-metallic mineral products and Wood products is 'bad'. Hosiery & Readymade garments industry is in an 'indifferent' position.

Thus we find that resource management by Metal products industry is most satisfactory of all the industries we have studied followed by Food products industry. Resource management is least satisfactory in case of non-metallic mineral products industry followed by Wood products industry. Resource management is not so satisfactory in case of Hosiery & Readymade garments industry.

However the above conclusion should be accepted with the following caution :

We have studied only 24 units belonging to 5 industry categories. Consequently it would not be appropriate to say that this is the state of affair with regard to resource management for the entire district without further investigation. Again, ratios are not the exact measures as the financial results are affected by a number of factors. They are merely the symptoms like the blood pressure or temperature of an individual. We have used them only to obtain certain signals of the weakness of the industrial units with respect to resource management.

'FINANCING OF BIO-GAS PLANTS BY COMMERCIAL BANKS' —A CASE STUDY IN ORISSA CONDITION

Satyabadi Misra & Shaikh Amin

In the advent of energy crisis more specifically by the increase of price made by the oil producing west Asian countries, the importance of traditional source of energy for its utilisation in commercial purpose is felt in India. Govt. of India has launched several feasible schemes to find out proper economic utilisation of the traditional source of energy like cow-dung in the villages. The dung is utilised for the production of the methane gas to be utilised for cooking and lighting purposes while gobar gas scheme has become very much popular in the state of Punjab, Haryana, Tamilnadu and Gujarat. It has also made-remarkable progress in Orissa, This study is made to follow up the finances to Gobar gas plant in Chhatia area of Cuttack district. All the gas plants in the area were financed by Union Bank of India, Cuttack. The objective of the study was:

1. To study the procedural norms regarding the bank advances to gas plants financed in Chhatia,
2. To have a feed back on progress, performance and troubles experienced by the gas plant owners.
3. To study the techno-economic aspect of bio-gas utilisation in rural area.
4. To appraise the cost and benefit factors from the gas plants.
5. To find out the amount disbursed and amount recovered and locate the problem of overdue,

Methodology :— The information was collected through questionnaire designed in consultation with the financing banker and the KVIC. The personal interview method was followed all through the collection of information. The researcher contacted each one of the 28 beneficiaries under this scheme and found out the responses by filling up of the questionnaires :

The major points on which the questions were asked were :

1. Gap of time elapsed in sanction and disbursement of loans.
2. Objective behind the installation.
3. Size preference.
4. Delay in procurement of the necessary appliances.
5. Behaviour of the vendor / supplier,
6. Adequacy of loan.
7. Requirement of technical guidance.
8. Defects after installation.
9. Position of the over due and
10. Benefits in form of savings towards the fuel cost.

Findings :-

The study revealed that the gas plant scheme is popular and with in a span of one year about 24 plants have been constructed. Out of disbursements made in 28 cases, four have reported to have misutilised the loan but other 24 have utilised the loan and established the plants. The bank was particular about the sanction of the loan in time and in twenty two cases the delay was only for one to two months whereas in 8 cases this was upto 4 months. Mainly the gas was utilised for cooking purpose and only three were having light points. No other uses of gases have been noticed,

The size preference of the plants in the area was 2 to 6 cubic metres.

The 33% of the beneficiaries complained that there was delay in supply of appliances and 80% of the beneficiaries were satisfied with the behaviour of the vendor in supplying the accessories for the gas plants.

Almost all the beneficiaries complained that the loan which is sanctioned by the bank on the basis of the guidance of the KVIC was not sufficient. This is because the increase in the price of the material cost which has gone up to the extent of thousand rupees for a medium type gas plant.

The beneficiaries under this scheme expressed their satisfaction regarding the technical guidance provided by the KVIC. The KVIC was the pioneering authority in this regard. KVIB and Bank have also helped in providing technical guidances.

In 71% cases the gas plants were running without any trouble where as in 26% plants there was partial trouble or persistent trouble.

The repayment was quite satisfactory as within a period of one and half years. Out of 24 effective (excluding & all misutilised) accounts, 10 accounts were closed and in 14 cases, the repayment was good.

Majority of the beneficiaries used to save about Rs. 600 to 1000 per year towards the fuel cost after the use of gobar gas.

A comparative statement of the loans sanctioned and the extent of over-dues are given below.

As on December 1979

Beneficiaries No.	Loans taken in (Rs)	Repayment in (Rs)	Overdues in (Rs)
1	4175.00	4175.00	—
2	3175.00	2652.00	467.85
3	3028.00	3028.00	—
4	4011.00	1500.00	2511.00
5	3913.95	3913.95	—
6	4175.00	600.00	3575 00
7	4170.00	300.00	3830.00
8	2850.00	285.00	—
9	4175.00	4175.00	—
10	3401.00	1070.00	2331.00
11	3340.00	1084.30	2265.70
12	4185.00	100.00	4085.00
13	2850.00	200.00	2650.00
14	3948.00	—	3948.00
15	4011 20	500.00	3511.20
16	3100.00	3100.00	—
17	3800.00	3800.00	—
18	4175.00	—	4175.00
19	2000.00	—	2000.00
20	2700.00	2700.00	—
21	1252.00	—	1252.00
22	4175.00	2900.00	1275.00
23	2120.00	2120.00	—
24	3860.00	—	3860.00

25	4510.00	—	4510.00
26	1152.00	—	1152.00
27	900.00	900.00	—
28	700.00	600.00	100
Total	89803.15	42268.40 (47.2%)	47534.75 (52.8%)

Source : Collection from bank Records.

Suggestions :

1. The interest rate should be lowered than the prescribed rate of 13%.
2. The bank should verify the actual possession of the required number of animals by the farmers who want to have the plant.
3. The KVIC should advise the bank to sanction 100% of the requirements and the scale of finance should be raised if there is increase in material cost, *viz* steel, brick and cement etc.
4. The commercial bank providing under this scheme should get instant refinances and discounting facilities from ARDC.
6. Beside financing the gas plants, the bank should finance modelled bullock carts for disposal of slurry from the gas plant to the fields.
6. KVIC should release the subsidy quickly to the bank in favour of the account of the loanee.

Limitations of the Study :

1. The selected area cannot be taken as the representative area for the whole Orissa condition as most of the beneficiaries who have installed the plants used to come under the medium group of farmers and some of them are also the well-to-do farmers possessing improved agricultural implements like tractors, tillers, water pumps etc.
2. The information collected can be generalised in Orissa condition except with constraints.
3. As the gas plants financed by the particular banker has been included in the study, this study cannot focus the attitude of other bankers for financing the scheme whereas other bankers have not done financing in this urgently needed scheme. The Union Bank of India has done commendable work in the popularisation of the scheme in villages.

Conclusion :

Though from the face of it, this scheme seems infeasible for the marginal farmers and small farmers, yet they can also be enrolled in this scheme as the beneficiaries if low cost material can be used for construction of the plant. Wherever these farmers cannot establish the plant individually, they can easily go for the community plant for a group of them combined to establish a community gas plant. In Orissa this scheme has not been made so popular and this can be made potentially viable in the rural area. The banks and the KVIC officials should locate the individual cases and should motivate them to come forward for such plants.

FISHERY RESOURCES OF ORISSA AND THEIR INDUSTRIAL POTENTIALITIES

Sanatan Mohanty

Fish is an important protein food. More than 80 percent of the population of Orissa are fish eaters and in the backward districts the fish eating population is nearly 100 percent.[1] Per capita annual availability of fish for the fish eating population of Orissa was estimated in 1959 to be 5.3 lbs. as against 9.5 lbs. in the country as a whole.[2] According to another estimate by NCAER in 1968 the per capita availability of fish for the fish eating population of Orissa was only 4.8 lbs (2.4 Kg.) as against 8.6 lbs (4.3 Kg) per capita for the country as a whole.[3] Out of Orissa's contribution of Rs. 937.33 crores to the national income, income from fisheries has been estimated at Rs. 6.51 crores which works out to 0.69 percent only.[4]

Orissa coast covers 266 miles of the 3000 miles of India's coastal line. Out of this, river mouths cover 16 miles. Besides the marine source of fish, there are also rivers, streams, canals, estuaries, irrigation reservoirs, tanks, ponds etc. where fishing is done. Fisheries not only provide nutritious food to the people, but also offer employment to many. Fisheries have also the potentialities of industrial development.

The draft five year plan for 1978–83 prepared by the Planning Commission attaches great importance to the development of fisheries as it is one of the sectors eminently suited to assist a large mass of economically weaker and backward sections of the rural community. Fisheries offer a large scope to fulfil the basic objective of production-cum-full employment envisaged in the plan.[5]

FISHERY RESOURCES OF THE STATE

There are broadly two types of fishing in Orissa— marine and inland. Fishing in Chilka lake, though treated as a part or marine fishing, is a type by itself. It has unique features.

MARINE FISHING

The potentialities existing in marine fisheries have not been properly exploited. Orissa does not compare favourable in the all India

field. The techno-economic survey of Orissa reveals that the catch of fish per craft and per fisherman is much lower in Orissa than the all-India average so far as coastal fishing is concerned.[6]

Marine fishing is again subdivided into four zones, e.g. (a) indigenous fishing zone, (b) mechanised fishing zone, (c) off shore travelling zone and (d) deep sea fishing. The classification is on the basis of the capacity of exploitation of the crafts in operation.

a) Indigenous Fishing Zone.

The area covered up to the depth of five fathoms (a fathom measures approximately 6 feet) is called the indigenous fishing zone. Such a limit has been kept because the nets used for fishing have a depth of five fathoms. The fishable area in this zone, excluding the river mouths, is 850 sq. miles. The catch per sq. mile in this zone of Orissa coast was 7.79 tonnes of fish per annum (1964-66 average) as against 95.35 tonnes in Andhra Pradesh and 72.97 tonnes in Madras (Tamilnadu). In fact the per capita production of marine fish in Orissa is the lowest in India.

This fishing zone is commercially very important. Because an estimated 90% of sea fish production comes from coastal fishing in areas up to 5 miles from shore which mostly covers the indigenous fishing zone[7].

Taking advantage of the backward fishing condition and the vast potentialities in the Orissa coast, fishermen from Andhra Pradesh and Kerala migrate in thousands to Orissa coast during the fishing season with their boats, nets and equipment. Migrating colonies of fishermen have been established adjoining Praradip, Puri and Gopalpur.

According to an estimate the potentialities of this zone if properly exploited, can lead to atleast 30 tonnes of catch per sq. mile as against 8 tonnes at present and the annual landing is expected to be of the order of 25,500 tonnes[8]. But there are various difficulties to achieve the target.

The fishermen in remote villages of Orissa do not make use of nylon twines due to ignorance and superstition. The special wood required for building fishing crafts is not readily available. Ice is not available in most of the fishing villages. Marketing is a problem due to inadequate approach roads. The fishermen lead a very poor life. They engage in fishing in unfavourable fishing conditions. Middlemen traders pose another problem. Taking advantage of their poverty the traders exploit the fishermen, who

are deprived of economic price for their catch. It becomes difficult to organise cooperative societies as the fishermen are illiterate and people are not available to manage the societies.

(b) **Mechanised Fishing Zone :**

The extent of mechanised fishing zone (5 to 20 fathoms) in Orissa is estimated to be 3600 sq. miles. Mechanised fishing using trawlers has developed in Paradeep. The catch consists of shrimp and shark. Experimental trawling has been started in Rushikulya mouth in Ganjam district. Gill netting is also being conducted from Paradeep as well as from Chandipur, Chudamani and Kirtania in Balasore district. Development of this zone for purposes of fishing depends on the development of few fishing harbours and the establishment of processing units on the shore.

(c) **Off shore trawling zone :**

The area is estimated to be 1300 sq. miles and the stock of fish may be 3 tonnes per sq. mile [9]. Preliminary studies reveal that this zone can not be exploited without Government subsidy, besides the development of harbour and repair facilities.

(d) **Deep Sea Fishing :**

Data regarding fish population of this zone is meagre. The belt of 40 to 100 fathoms should be properly surveyed and feasibility studies made for the commercial exploitation of this zone.

INLAND FISHERIES

Unutilised and under utilised resources exist to a great extent in this sector. As in case of marine fishing, there is lack of reliable statistics in case of inland fishing also. Proper methodology of estimating fish production from inland waters has not yet been evolved. The development of inland fishieries is mostly for consumption in Orissa and in some adjoining areas of the neighbouring States.

(a) Rivers and Canals :—Tentative estimates put the area of this sector as 600 sq. miles. The Mahanadi, Brahmani and Subarnarekha river systems are the traditional sources of fish and fish seed in the State. But no statistics is available regarding the annual catch of fish and the potentialities of the river system.

Construction of dams across the rivers Mananadi and Salandi has led to the decline of fish production in the rivers downstream below the dams though fishing has improved in the reservoirs. The quality of spawn is poorer than that collected from the Ganges in West Bengal and Koshi in Bihar. Spawn collection has also declined. Highest priority should be given for improving the quality and production of spawn.

(b) Tanks and Ponds : The area of this sector is estimated to be of the order of 65,825 acres. Tank fishing is mostly done by Gram Panchayets in Panchayet tanks. Panchayet fishing is wide spread in Ganjam district. Individual fish farmers also do this type of fishing with greater initiative and care in the coastal districts of Cuttack, Puri and Balasore.

A case study made in two Gram Panchayets of Digapahandi and Podamari in Ganjam district reveals that there is no perceptible increase of yield by the use of improved methods over some years due to the following reasons :— (a) Tanks cannot be manured as they are being used for bathing and in some cases for drinking water also, (b) supply of fish seed is insufficient, (c) There is lack of capital to repair and renovate tanks [10].

The small fish farmers in remote villages are also handicapped as they are not in a position to maintain fishing note, soil analysis equipments and pumping sets to dewater tanks. These facilities and other extension services should be diffused to the rural areas and the farmers should be helped to get bank and Government loans.

(c) Reservoirs :— Culture fishing in reservoirs include the Hirakud Reservoir and the reservoirs of the medium and minor irrigation projects. The present area is estimated to be of the order of 6.5 million acres.

This sector has great potentialities in Orissa because a large number of major, medium and minor irrigation projects are either under construction or are proposed to be constructed. Fish culture in the proposed reservoirs should be planned in advance.

(d) Derelict Waters :— Derelict waters are swamps and low lying areas, mostly found in coastal districts which could be reclaimed for profitable fishing. According to an estimate in 1966 the area of derelict waters which could be reclaimed for profitable fishing was of the order of 2 lakh acres [11]. There are difficulties in reclaiming the swamps. Costly equipment are necessary to clear the woods. Private parties cannot do this job. Government should take the initiative and explore possibilities.

(e) Estuaries :— Water spread areas in the estuaries of Mahanadi, Brahmani and Subarnarekha river systems offer scope for brackish water fishing. This sector has not yet been developed in Orissa due to obvious difficulties of lack of survey, communication, transport and provision of ice etc. Government initiative alone can improve this sector.

CHILKA LAKE

Chilka is a pear-shaped lagoon about 40 miles long and about 12 miles broad in the north and 5 miles in the south. It has a narrow opening to the sea. Situated in Ganjam and Puri districts, it has an approximate area of 350 sq. miles in summer and about 420 sq. miles during the rainy season. It is fed both by fresh as well as saline water because the estuarine area of Daya and Bhargavi of the Mahanadi river system forms part of the lake. So it has both fresh water and marine fish. It has fresh water zone during the rains and brackish water in the rest. Fish consists of prawn (about 30%), mullets (about 21%), cat fish (about 16.4%) and clupceids (about 10.5%).[17]

The NCAER (1961) were of opinion that the production of fish in Chilka was adequate and that there was risk of depletion of resources if production increased. But subsequent experience shows that production could be increased.[18] Fishing in Chilka could increase substantially if the opening of the mouth to the sea it depnds on seed from the sea. A fishing harbour is necessary at Chilka.

OTHER RESOURCES

Other fishing resources include the edible varieties of sheel fish, oysters, frogs etc. Shell fishes are available along the coast of south Orissa. People of poorer classes eat the flesh. The shell is used for making lime as a cottage industry. These is some scope for the sterilisation and canning of oysters for the sophisticated consumers. Frog legs have good export market. It is a good foreign exchange earner like the prawns.

INDUSTRIAL POTENTIALITIES OF FISHERIES

There is very good scope for establishing a number of industries along the Orissa coast utilising the voluminous catch of marine fish. A number of ancillary industries can also be started to meet the requirements of fishery development. Of course, some such industries have been started in Puri, Paradeep aud Chilka area. But these are inadequate compared to the vast potentialities that exist.

(a) Fish canning and freezing plants :— According to survey of State Fisheries Department, 4500 M. T. of prawns and lobsters can be available from Orissa coast including Chilka. Recently a few shrimo freezing factories have been established in the Chilka lake area, Puri and Paradeep, all in the private sector. Processed frozen shrimos have a good market over-seas. Since the existing freezing factories are inadequate, outside parties from Calcutta and Madras are procuring their requirements of prawns from Orissa coast. In view of the increasing number of trawlers in operation and the anticipated rise in catch, there are potentialities of establishing a few more freezing and fish canning units of different capacity in Paradeep, Puri, Astarang, Gopalpur and Dhamara-Chandbali areas, depending on the volume of catch [14].

(b) Fish Meal Factories :— About 40 percent of the fish caught at Paradeep are of inferior quality. Similar cheaper varieties of fish are also caught in other fishing centres. Such varieties of fish, head of prawns and scales of crab etc. may be collected for manufacturing fish meal. Plants may be set up in the fishing centres of Paradeep, Puri, Gopalpur, Dhamara and Chandipur. Fish meal is ideal as cattle and poultry feed as well as fertiliser.

(c) Mechanised fish curing units :— A lot of uneconomic varieties of available sea fish can be used for fish curing and preserving dry. A few such units may be started at different places.

(d) Shark liver oil :— A shark liver oil manufacturing unit which had been started by the State Government has been discontinued due to dearth of raw materials. But situations have changed now. Catch of shark has increased considerably and is likely to increase further. Shark liver oil extraction units may be started at places like Balugaon, Puri and Paradeep.

(e) Lime from sea shells :— One unit manufacturing lime from sea shells exists in Puri. A few small units can be started in Puri and Ganjam districts.

(f) Nylon Fishing Nets :— Nylon nets are being gradually introduced in fishing and the fishermen are now realising their efficiency in fishing. One unit manufacturing nylon fishing nets is coming up at Dhenkanal. A few others may be started in a small scale. Action plan for industrial development prepared by the Directorate of Industries, Orissa

on the basis of techno-economic survey of the districts of Orissa envisages the starting of such units at Paradeep and in some places of Balasore district.

(g) Boat Building :— Boat building is another ancillary which needs development. A large number of applications are pending for operating trawlers and in course of the sixth five year plan, the number of such power trawlers is likely to increase tremendously. There are two to three boat building units at Cuttack and Paradeep. Production is erratic and inadequate. A few fishing trawler manufacturing units can be encouraged to be established, preferably at the proposed fishing harbours. Since private initiative is not encouraging, units may be started by Government initiative. There is scope for starting a small fishing boat building industry at Hirakud.

(h) Boat Repairing Units :— A number of boat repairing units may be started near the fishing centres.

(i) Ice Factories :— Production of ice by the existing ice factories does not cope with the increasing demand. A number of ice factories can be started at different centres.

(j) Marine paints and varnishes :— Special type antirust paints are required for ships and boats which are not manufactured in Orissa. Action plan for industrial development for Cuttack district envisages the establishment of a unit at Paradeep.

EMPLOYMENT POTENTIALITIES OF FISHERIES

As has been stated earlier, there has been no intensive survey of the fishery resources of the State. Consequently no correct estimate of their employment potential can be made. However, if the schemes included in the draft sixth five year plan of the State are implemented, then these are expected to generate self-employment for 1197 traditional inland and marine fishermen and pisciculturists and 654 unemployed educated persons. Besides self-employment, these schemes would also generate additional employment to 3501 fishermen workers in country boats and 3270 workers in mechanized boats for sea fishing.[15]

In the name of exploitation of fisher resources of the State the genuine interests of the poor fishermen should not be lost sight of. There are many fishermen in the State both inland and marine for whom fisheries offer either part-time employment or seasonal employment for parts of the year. In any case there is widespread under-employment in this sector

as in case of agriculture. There should be utilisation of resources of this sector with a view to providing full employment to the large mass of fishermen in rural areas and improving their socio-economic condition, besides generating employment for other workers through the ancillary and subsidiary industries. Indiscriminate use of modern technology and mechanisation in marine fisheries may affect the interest of the traditional fishermen adversely. The interests of such fishermen using country boats in the traditional marine fishing zone should be safeguarded by reserving such areas exclusively for them. In fact there are complaints by the fishermen regarding encroachment of their areas by mechanised boats. There should be regular patrolling by government agencies to ensure that there is no such encroachment.

SUMMARY AND RECOMMENDATIONS

The draft plan of Orissa for 1978-83 gave special emphasis on family based labour intensive inland and braskish water fisheries and improving the harvest from marine fisheries. The planners expect that by the end of the plan fish production will go up to 107,000 tons against the present level of 56,000 tons [16]. But the targets can be achieved only if there are positive policy formulations. We do not have a complete and accurate picture of the nature of the resources. Hence the future plans of development should be based on survey of the fishing areas and research and feasibility studies regarding their potentialities.

Development of Fisheries and welfare of fishermen :

Marine fisheries has great potentiality for industrial development. They have also potentiality for earning foreign exchange. However, there are many constraints in the exploitation of marine fisheries in the State which should be removed. Providing infrastructure should be the responsibility of the State. Construction of harbours should get topmost priority. Fishing harbours should be developed at Paradeep, Chilka mouth, Astarang and Gopalpur besides the completion of Dhamra harbour. Boat building yards should be established by Government as the private enterprise is inadequate. Workshops tele-communications and other shore establishments should be installed and strengthened.

As has been mentioned earlier, the fishermen constitute one of the weaker sections in the society. They are poor, illiterate and are exposed to exploitation by traders and financiers. A package of programme is necessary to improve the situation. Major fishing villages should be taken

up for such a programme of development. Their socio-economic, commercial and fishing conditions should be studied in detail and development should be planned accordingly. The fishermen should be organised to form cooperatives. It should be the responsibility of Government to provide funds for infrastructural development, *e. g.* providing approach roads, establishing ice factories and cold storage etc. Government guarantee should also be there for institutional credit for acquiring modern fishing crafts and for marketing fish. The policy should be such as to maximise the production of fish, as well as bring in maximum employment and welfare for the poor fishermen.

Industrial Development :

Constraints in establishing fishery based industries are no less. Apart from the provision of infra-structure, there are the constraints of finance, marketing and entrepreneurship. The administrative and bureaucratic hurdles in helping out the small entrepreneurs are also there [17]. Now that the District Industries Centres have been established, primarily with a view to promoting decentralise industrial growth, the hurdles ought to be removed through their good offices. If the resources endowed by nature are properly exploited then the same is sure to generate more of employment and income in the rural sector through the development of small scale industries, besides providing protein food to the poor people and bringing in more of foreign exchange through increased exports.

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RESTRUCTURING OF SMALL SCALE AND COTTAGE INDUSTRIES

Satchidananda Patnaik

The restructuring of small scale and cottage industries needs specific attention in the context of the Indian economy because of acute poverty, unemployment and unequal distribution of income which have been the by products of nearly three decades of planning in our country. With a rapidly growing population and agricultural stagnation, the gap between the rich and the poor instead of narrowing has indeed become considerable. So the main objective of planning now should be to bridge this gap by providing opportunities of employment to the evergrowing surplus labour force, and at the same time meeting the increased demand for consumer goods to hold the price line in check. The simultaneous achievement of these two objectives which is akin to the Chinese concept of "walking on two legs" depends to a great extent on the development of the small scale and cottage industries. Being a labour-surplus and capital-scarce economy, the most appropriate technique of production for India is that which is labour-intensive and capital-saving. The importance of these industries has been realised long back. This is clear from the Third Plan which clearly points out that "the objectives of the programmes for these industries.....are to create immediate and permanent employment on a large scale at relatively small capital cost, meet a substantial part of the increased demand for consumer goods and simple producers' goods, facilitate mobilisation of resources of capital and skill which might otherwise remain inadequately utilised and bring about integration of the development of these industries with the rural economy on the one hand and large-scale industry on the other. They also offer a method of ensuring more equitable distribution of national income and avoiding some of the problems that unplanned urbanisation tends to create."

In order to analyse the problems of small scale industries, we can divide them according to their characteristics. In India, as the Sixth Plan document has pointed out, the village and small industries sector consists broadly of : (1) traditional cottage and household industries located in the villages or semi-urban areas, using local raw materials, employing

little or no hired labour, involving lower levels of investment and technology and selling their products mostly in the local market, and (2) modern small scale industries located mostly in urban areas and having investment up to Rs. 10 lakhs in plant and machinery and Rs. 15 lakhs in the case of ancillary industries. These firms use modern techniques to produce modern products and cater to the needs of urban dwellers and even for exports also. They use hired labourers, power and even imported raw materials. They develop in and around areas where facilities for trade, communication and finance are available.

The traditional cottage industries started deteriorating from the colonial period because of imported manufactures and, after independence, because of the local production of machine-made products. The demand for these products depends largely on the level of incomes in agriculture in rural India. But it has been seen in our country that any increase in rural agricultural income due to the impact of green revolution leads to shift in demand away from traditional goods to modern superior quality goods because of the demonstration effect. And such shift in demand is found in the case of the village rich and large farmers who constitute the buyers of such products leading to the destruction of village industries and expansion of the urban unregistered manufacturing industries. So the development of traditional industries calls for a drastic redistribution of increased income which in turn depends on an appropriate political power structure. An appropriate changing demand structure can be supported by the improvement of transport and communication facilities, development of skills of the craftsmen, rural electrification and improvement of the quality and the quantity of the traditional products, if these traditional village industries are to be placed on the road to their take-off. There are examples of several traditional industries whose products have a high demand inside the country as well as in foreign markets. These are Kashmir shawls, Banaras brocade, Mirzapur carpets, Moradabad brassware, woodwork and filigree materials and the textile goods of the district of Sambalpur.

The modern unregistered munufacturing industries could thrive in the face of foreign and domestic competition from large industries because of protection given to them in the form of subsidies, import restrictions and price preferences. Moreover, the goods produced in this sector constitute inputs for products in the traditional sector, such as farms and tools for improved agricultural technology. Goods having high income elasticity of demand like bicycles, radios, sewing machines, torches, umbrellas, which

are produced in the modern sector, find a very good market in the traditional sector. So an increase in agricultural income leads to a shift in demand in favour of the modern goods produced in these urban industries.

So far as employment generation is concerned (which is the main objective of small scale enterprise development), the number of persons employed in the principal traditional industries is estimated at 140 lakhs, including about 57 lakhs in the handloom industry and about 36 lakhs in sericulture. Much of the employment is neither full-time nor well-remunerative.[1] In contrast, the urban unregistered manufacturing sector provides full-time employment to about 28 lakh persons. In a study conducted by P. N. Dhar and H. F. Lydall, it has been pointed out that these modern factories are neither labour-using nor capital-saving. In fact, the study points out that factories using modern machinery employing upto 50 workers were more capital-intensive than the larger ones. In small enterprises employing less than 20 persons, the output-capital ratio is more favourable than factories employing more than 20 persons. This perverse situation can be attributed to unplanned 'dispersal' of industry and industrial estates and less than capacity utilization of production facilities. The second reason for this divergence in the employment generation of two sub-sectors of the small scale sector can be found out from the differences in technology adopted. The traditional sector utilises local unskilled labour at a cheap wage rate and in this sector there is greater scope for capital-labour substitution because of the technique of and employment conditions. The prevailing wage rate in the traditional sector permits utilisation of more labour and hence making the factory labour-intensive. Therefore, to achieve the objective of full-employment, policies are required to utilise more labour by removing the distortions in factor prices. Moreover, when capital is under-priced by such factors as subsidised credit arrangements, tax holidays and overvalued exchange rates, while labour cost, are pushed up by powerful unions operating in the industrial sector, there is a strong incentive to adopt capital intensive technologies, a case of good intentions resulting in self-defeating consequences. So inappropriateness of the market prices of factors stands in the way of expansion of small industries. Arthur Lewis referring to this point says, "if prices do not accurately reflect factor scarcities, desirable labour-intensive methods will not be able to compete with less desirable capital-intensive methods unless there is administrative protection" [2]. It can be shown that if the prices of factors correspond to their accounting prices, the possibility of achieving full employment of all resources in our economy can probably be ensured with emphasis on small and cottage industries.

The development of small scale industries will have greater spread effects than the large industries. The experience gained from working with machines in smaller industries and from managing them would be wider among the labour force. So this calls for a balanced development of both small-scale and large-scale industries. The small industries should constitute a layer below the big industries. This means that the development of ancillary industries should be encouraged to supplement the big industries. The big industries could subcontract to smaller units the production of components. repairing and other service units. In this way they can reap the advantages of economies of scale. On the other hand, the small units could depend on the big units for the materials they process into finished goods. The small units can provide markets for the products of the big units also. With a rapidly growing population the objective is not only to provide employment but also to satisfy the increased demand for goods at a cheaper rate which can only be met by large industries. Similarly, with increased income (even of rural households) people shift from products of small industries to the products of large industries. Moreover, the quality of the products of large industries is better than that of small industries which attract the urban consumers. For these reasons we can say, the small industries cannot survive without linkages with large industries. The steel industry, machine-tools and material-supplying industries, which enjoy economies of scale, have important links with small-scale units. The automobile industry, engineering industries, electronic and electrical industries provide enormous scope for the development of sub-contracts or ancillary industries. In India there has been development of ancillary industries with the growth of large industries. But this has not gone to the desired extent. Subcontracting has also got certain difficulties. These are, meeting the demands of large industries within scheduled time, and ensuring quality products. These difficulties become greater when the small or ancillary industries face input shortages, transport difficulties and labour unrest. So the big industries are put to disadvantageous positions in such circumstances. But "the greatest merit of subcontracting is the overall savings in the resources they make possible" [3]. In order to remove these difficulties, government intervention in the form of fiscal measures and supply of raw materials to the ancillary industries should be guaranteed.

In view of the non-availability of reliable data, it is difficult to make any estimate of progress of the small-scale industries over the preceding plan periods. But the fact remains that these industries continue to face the difficulties which they have been encountering before any specific

development programmes, with a notable exception in the case of export of the traditional products. The small-scale industries account for 35 per cent of industrial production and their share in exports is estimated at 17 per cent. India exported about 800 different small unit products to countries like the U.S.A., the U.K., the U.S.S.R. and Japan and also to other Asian and African countries. In 1976-77, out of a total increase in export of Rs. 1200 crores or 30.4 per cent, the export of small sector increased by 39.4 per cent. It is important to point out here that the export of non-traditional items constituted the bulk of the small industry export and its contribution was 40.96 per cent or the total non-traditional exports. The export of engineering and finished leather and leather manufactured goods increased considerably in 1976-77. The export of cotton garments increased by 735 per cent in 1976-77 as compared to 1975-76. Likewise, woolen hosiery exports rose five times in 1975-76 compared to 1974-75. The marine products increased two and a half times. plastic goods and processed foods moved up three times. However, export of lac, rayon and synthetic products suffered a decline. But all these point out, despite severe competition in international markets, the products of Indian small-scale industries have made a considerable headway. The Sixth Plan estimated that the production of this sector will increase from Rs. 6700 crores to Rs. 26,760 crores and correspondingly the relative share of their export is likely to go up from 17 percent in 1976-77 to 25 percent in 1982-83. There remains a considerable scope to exploit the export market by the small scale industries. The exports of this sector will not only meet sustained import requirements but also provide resources for overall economic development. The weakness in this direction of the small scale industries can be seen from the absence of any export houses. As these industries are of small means they lack the requisite strength and resources to undertake export marketing. Out of 267 eligible export courses, only 70 had exported products of small units in 1976- 7 and they accounted for only 23-24 percent of the exports of small scale sector. So the establishment of efficient export institutions for the small sector is an urgent need of the hour. Moreover the existing export houses should be given inducement in various forms to undertake this task.

The small-scale units face the serious difficulty in marketing their products. The rural markets for their products are very small. The Sixth Plan has made a provision for the testing, quality control, market intelligence and surveys and standardisation of products of small industries. The large firms are in a better position to make bulk deliveries and take advantage of economies of scale and spend huge amounts on advertisement

of products. But these selling costs of large industries are later on recovered from the consumers by charging them higher prices. The smaller industries exclusively depend on the Government for effective assistance in this respect. Moreover, the large industries produce goods according to the tastes of the buyers, where as the small scale units produce goods by themselves for obvious reasons and expect the consumers to develop tastes for their products which is unrealistic. For this, they depend upon the Govt. for subsidy, price preferences, tax-concessions and Govt. buying of their products which make them inefficient. Instead of only protecting the small scale industries the Govt. should try to protect and as well develop their capacity to compete effectively in the market.

So far as finance is concerned there is no doubt that need of the small industries is very large in this respect. As the basic goal of these industries is to provide employment to the rural unskilled labourers and the educated youth, the financing of such industries assumes very great importance. The establishment of District Industries Centres is a major step in this direction. The D. I. Cs. by providing all the facilities under one roof to an entrepreneur save his time and promote enthusiasm. At present there are several schemes to assist rural entrepreneurs and several Govt. corporations and banks are involved in implementing schemes such as seed money assistance scheme to educated unemployed, financial assistance to backward class entrepreneurs, central subsidy scheme and special capital incentive scheme. The rural based entrepreneurs are often unaware of such schemes and, even if they are aware of them, the requirement of approaching so many authorities and complicated procedures involved have been causing considerable frustration. The proliferation of so many agencies has led to confusion on the part of the rural and small entrepreneur as there is lack of co-ordination. The D. I. Cs. by co-ordination of these financial institutions have made it possible for the entrepreneurs to reap the full benefits of these schemes with the least delay. The D. I. Cs. have been conceived also as agencies to help reconstruction of small scale units which are afflicted by industrial sickness. The multi-dimensional role of D. I. Cs. to finance, to provide technical, managerial and other facilities is well-suited to the requirements of small scale industries in our country. But it is important to know that the D. I. Cs. only emphasize the production side of small industries. It will be better for D. I. Cs. to give special attention to the marketing side of these small industries, which is very crucial for the success of these industries.

in conclusion, we may summarise the steps to be taken for restructuring the cottage and small industries so that our objectives may be effectively realised.

The establishment D. I. Cs. is no doubt an important landmark in the restructuring of small scale and cottage industries. But their performance can be judged by the success of the units measured in terms of regular production, marketing, employment and profitability which implies a constant vigilance of the assisted units. Considering the fact the huge capital investment has been made in such industries, their weakness or sickness must be detected quickly and steps taken to rectify the same early. The D. I. Cs. should constitute experts in technical and managerial field to assist the small units.

Marketing is a very important side of small industries which the D. I Cs, have not emphasized. This may be done immediately. The size of local market is small and hence these industries sell goods outside tl rough middlemen. As a result, a large portion of the profit is appropriated by these middlemen. So marketing organisations must be developed to sell their products at better prices and free them from the clutches of the middlemen.

The scarce raw materials must be procured by D. I. Cs. to avoid delay in production and at times closing down of these units. Small units must be given priority in the supply of scarce raw matrials. Various controls and permits which encourage malpractices and cause delays should not be applied to small industries.

A proper link with the large industries is required for the development of ancillary industries. A simultaneous development of both is needed. In order to provide training in skill intensive industries like. electronic components, electrical goods, certain types of dyestuffs, miniature bulbs and so on, the D. I. Cs. should arrange training programmes at frequent intervals.

In order to develop industries in and around rural and semi-urban areas, licensing and other fiscal incentives should be given to achieve the same. Otherwise, the establishment of small industries will take place only in cities and urban areas, as has been the case so far.

So far as technology is concerned, it has to be labour-intensive as our aim is to absorb surplus labour. But the technology should be upgraded to improve the quality and design of the goods to cater to a wider market and bring better returns to the producers.

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WORKING CAPITAL MANAGEMENT OF SMALL SCALE INDUSTRIES IN ORISSA

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Introduction :

The problem of working capital is the most important problem of the small scale industries in the State. If anybody analyses the growing sickness of industries in the State one will find that the shortages of working capital in appropriate quantity and at right time constitute a major cause of the sickness of the industries. In Orissa for the establishment of small scale industries the block capital is provided by the O. S. F. C. and other term lending institutions and the working capital is generally provided by the sponsoring banks. The entrepreneurs of the sick industry complain that the apathy of the sponsoring bank to augment working capital as an essential measure of nursing finance has greatly affected the rehabilitation of the sick-units in the State. Working capital is not only provided by the banks but by friends and relatives. Few micro studies made about small scale industries in the state reveal that those entrepreneurs who can procure working capital from their friends and relatives or even from the money lenders at the time of need are the successful ones and their enterprises have yielded profits. Industries and entrepreneurs who solely depended on banks and financial institutions have faced acute shortage of working capital and this has affected the growth rates of their industry. This clearly shows that even after a decade of bank nationalisation if persons who have greater financial standing are the successful entrepreneurs, then the objectives of bank nationalisation has yet to be fufilled. That a common man with the help of the banks cannot procure the amount of working capital required from the sponsoring bank to carry on his industrial enterprise is a sad testimony of the working nationalised banks.

The Concept of Working Capital :

Working capital is the capital required for the day to day operations of our industry. Some call it operative expenses and other define it as circulating capital. The circulation of working capital like circulation of blood should not be excess or less otherwise like body it will create high or low blood pressure in the life cycle of an industry. Working capital

may be gross or net. Gross working capital is equal to current assets of a business or an industry. Where as net working capital is the difference between current assets and current liabilities. If current assets are less than current liabilities, then there is a deficit of working capital. This deficit is very crucial for the growth and success of an industry. This necessarily calls for an examination of the causes for which there is a shortage of working capital in the industries of the State.

The viewpoints of the Entrepreneurs for the supply of working capital.

Appraisal :

(a) In the first place the entrepreneurs are of the opinion that the shortages of working capital is ingrained in the very system of financial appraisal. A small industrialist gets his financial feasibility report appraised by O. S. F. C. and S. I. S. I. and finally by the bankers. Everywhere they complain that growing scepticism is the rule rather than the exception. Therefore in the process the amount of working capital gets reduced. The shortage to the working capital results in two stages. In the first place there is delay in sanctioning of terms resulting delay in implementation of a project and as such the pre-operative expenses increase. Secondly because of the healthy scepticism and short sighted views of the bankers a project gets under financed even before attaining the break even level of production. Thirdly in this connection they complain that the Vide committee's recommendation for joint appraisal of a project by banks and other financial institutions has not been given effect to. But every D. I. C. is an innovation to cut-short the gestation period. In the credit section of D. I. C, there is a credit manager who is a manager or an officer of the sponsoring bank and even he himself makes the appraisal in D. I. C. the sponsoring bank does not believe its own officer. So there is great deal of delay in sanctioning the loan which increases the need of the working capital more and more.

(b) **Security and Guarantee :**

(a) The Security :—The industries in the small scale sector are basically weak in their financial bases. The financial institutions while granting loans insist on, collateral security, as a pre-condition towards the sanction of working capital loans. Such stringent provisions obstruct the growth of small scale industries in the State.

(b) Guarantee :—Most of the banks are insisting upon a total deposit of amount for which a bank guarantee is requested for. Beside every bank guarantee has to get the approval of their regional office which

except for State Bank and a few others, are located outside the State. Therefore the small scale units have to run to the banks for months together for getting their loan sanctioned. So delay of such nature only deteriorates the capital position of the industry.

(c) Working finance and the Concessions :

As per the directive of the R. B. I. the bankers are restricting their operations to those small scale industries whose working capital is limited within 10 lakhs. But suddenly when the units face some shortage of capital ask for a fresh loan the fresh loan is added, the total capital exceeds 10 lakhs and they are deprived of the benefit accruing to small scale industries particularly the concessional rate of interest. So small scale industries with high capital base raw materials like transformers, cables, offset press and such other units face enormous difficulties.

(d) Miscellaneous Factors :

i) Debt— Equity ratio :— Debt equity ratio of the industries is changing because of shortage of working capital. Fresh term loans adversely affect the debt-equity ratio. The ratio of debt becomes high to equity. Term loans carry higher rate of interest than the ordinary loans. Conversions of term loans to capital also change the capital structure and also make the financial cost of the industry very high.

ii) Enhancement of working capital :— The amount of working capital is always assessed in the beginning of the establishment of an industry. The loan is phased over several instalments to be disbursed. But before the final payment is made the costs of the raw materials and the equipment and machinery escalate. Therefore a subsequent increase in the amount of working capital is essential. But when the small entrepreneurs approach the branch managers of the banks, they plead their inability to increase the amount of working capital. Some times even though they are convinced about it, they have to write to their regional and divisional offices to get a fresh sanction. As a result, there is considerable delay in starting production and as such the financial cost of the industry becomes very high.

iii) Recycle of working capital :— The financing banker emphasises on the recycling of working capital. If the working capital provided is recycled after 90 days then the banks are willing to provide more of working capital because they think that the industry is running efficiently. Here the evaluation technique involved is debtor-sales ratio, which shows the number of sales per day that remains uncollected. This shows whether

the debts are collected on time or not. Conversion of raw materials and working capital into finished product and finished product into sales and collection of debts represent a cycle. But in case of Orissa in many small industries the Govt. and the semi-Govt. organisations are the purchasers. As a result the entrepreneurs could not collect their bills before the month of March. So how can they convince the sponsoring bank that they are recycling the working capital efficiently so as to get more and more of working capital.

The View Points of the Bankers

The view point of the bankers is of crucial importance for judicious and optimum use of the working capital resources.

(i) Lack of Documentation :—The bankers complain that lack of documentation is one of the most important reasons for the delay in sanctioning working capital. Sometimes it is not the lack of project report or profit or loss account but simply a registration certificate from the D. I. C. or a permission from the municipal area as regards the location of the unit which stands on the way of project appraisal and thus the delay in sanctioning and disbursing the loan.

(ii) Assessment of financial requirements :—While assessing financial requirements, the papers connected with it must be properly scrutinised, otherwise it may result in over-financing or under financing. Over financing will result in speculative tendency on the part of the borrower while under financing may result in starving of capital for the industry. As a result the enterpreneur will try to procure the funds from other alternative agencies. This will add to its increased financial cost.

Moreover, the entrepreneurs also need finances for working capital requirements, or for expansion of business or for establishing a new unit. In all these cases thorough scrutiny of various records are required indicating past trends, feasibility report and cost-study. Therefore unless the proper scrutiny is made, no banker is going to sanction funds as and when necessary.

iii) The case of sick-units and the enhancement of working capital:– Enhancement of working capital is essentially necessary to pump out more funds to revive a sick unit which is potentially viable. The entrepreneur who smells the trends of sickness in his business runs to the nearest branch manager of the financing bank to enhance the limit of the working capital. But the financing banker is not very sympathetic as he has a large number

of functions to attend to like credit and deposit mobilisation, advancing loan or financing agriculture. Financing sick industry is one of the aspects of industrial financing. Therefore he will inspect the unit at a suitable time and recommend for the enhancement of working capital and this causes delay.

iv) Diversion of Funds :— Diversion of funds for productive use has been a cause for reducing the working capital requirements of the small scale industry. The end use of funds for term loan can be known from the acquisition of fixed assets. "This can be ensured to a great extent by disbursing the money directly to the dealer and not to the borrower." But in the case of working capital advances where the purpose is to acquire current assets in course of time assuring end-use is comparatively difficult. In case of certain industries like rice shellars or sugar units the entrepreneurs do not pay for a long time to the supplier of raw materials though by that time they have realised the total money and also adjusted the bank credit. Such a practice generally starts due to the shortages of margin money and usually results in the diversion of funds into some other sister concern. To check this malpractice banks now insist that the current assets should be more than current liabilities including cash-credit borrowing from banks.

The Tandon Committee made a significant contribution for checking this undesirable diversion of funds to unproductive channels. According to them the borrowers have to provide projections for various items, including the credit to be received. At the end of the year, these projections should be compared to the actuals and diversions will be traceable. This will minimise the chances of diversion of bank money.

v) Double Financing :— Double financing is the method where goods bought on credit basis were being charged to commercial banks and the finance being available against them. Thus funds raised from such double financing were either diverted to unproductive cases or for raising the level of inventory.

Security and Tandon Committee :

The bankers are of the opinon that the traditional concept of giving loans against security has been replaced by purpose oriented approach. The Tandon Committee recommended that the security oriented approach can be replaced by prescribing a norm for inventory for each and every industry having due regard to differences in seasonal variations, locational differences and transport bottlenecks. No industry will be allowed to have excess of inventory after this norm and funds thus saved will be diverted

to the entrepreneurs having competence, skill and ability but no security will be provided for funds. In this connection they also discussed the concept of working capital gap. The gap is the difference between total current assets and total current liabilities, other than bank borrowing and bank finance a minimum of 75% of the gap. The balance is to come from long-terms funds, owned funds and term borrowings.

Suggestions to Improve the Position of Working Capital

(a) Feed Back System :—The dialogue and rapport between the bank and the borrower should be more frequent as a result an entrepreneur seeking nursing finance should not face delay in disbursement. Many people suggest that the Bank Advisory Com. at the district level under the Chairmanship the Collector of the district should meet frequently to finalise the finance to the sick industries.

(b) As we know every bank is based on a three tier system : the branch, the regional or divisional office and the head office. The regional office of all the major banks should be established in the State and the branch managers financing industries should be given more powers to sanction loans liberally without waiting for the head office.

The Technique of Supervision

Many people are of the opinion that the technique of supervision should be made effective so that all relevant and critical information is available about the concerned industrial unit and as such the bank can know whether its capital is being productively utilised or not ?

Normally supervision is not liked by anybody but if an industrialist is convinced that it is in their interest and for the continuance of funds then the concerned units will welcome supervision and inspection so that a good rapport is maintained between the bankers and the industrialists. The banker is not a policeman to look the culprit but he is there as friend, philosopher and guide to give wise counsel when-ever necessary. Prof. W. A. Lewis in his book 'The Theory of economic Growth' says that "Lending money to inexperienced small business people without supervision is often equivalent to pouring it down the drain. What these people need is first supervision and advice and only secondly capital and when money is lent its use should be supervised carefully. The officer of the institution should have power to enforce changes in managerial practice as a prior condition of the loan and to check unprofitable practices at least until the

loan has been repaid. So an effective follow up is essentially nec to cut-short the delay in providing timely financial assistance ar optimise the use of working capital.

Pumping of Additional Funds :—When additional funds are gra by the bank to nurse a sick industry it should be of adequate quality quantity. A lower dose may not cure the sickness and the larger d may result in wastage of funds. It will also increase the interest bu of the industry concerned. Sometimes high dose of finance may necessary to replace the old and obsolete plant and machinery. In connection it is observed that the bank should not charge any penal of interest and the recovery of over dues should be phased out.

Management information system

For better and optimum use of working capital in information sys has to built up. It will include timely meeting of the borrowers and industrialists to assess the progress of implementation and to evaluate working of the unit.

Monthly budgets of cash, sale, fund-flow and other statemen should be furnished so that the financing banker will not hava any dou on the integrity of the entrepreneur.

Joint appraisals and discussion should be made with other financi institutions who have provided funds for the industry at frequent interval Then only the working capital can be efficiently and optimally use Otherwise the cry for shortage of working capital for rehabilitating sic unit will be a cry in the wilderness.