CHAPTER – V

DEVELOPMENT OF SMALL, MEDIUM AND LARGE SCALE INDUSTRIES IN DHARWAD DISTRICT
DEVELOPMENT OF SMALL, MEDIUM AND LARGE SCALE INDUSTRIES IN DHARWAD DISTRICT

In the emerging industrial structure, there is a need for proper integration of different sectors of the industry, viz. large-medium and small scale industries instead of promoting different sectors each operating independently and hostile to the other. Even small-scale units cannot remain small all the time. The idea that, once small always small is not true in real life as the units also grow into medium and large units gradually. The basic guidelines should be to promote integration of these industries and their functioning in a harmonious manner.

About 70 percent of Indians live in villages. But due to the lack of proper attention towards the development of rural and backward areas, the necessary share of development has not gone to these parts of the country. As a result there persists unemployment and under-employment on a very large scale in these areas, particularly in Navalagund, Kundgol and Kalaghatagi. The standard of living is very low due to the poor purchasing power of these people. Naturally, through the industrial development of this region problems can be overcome to a greater extent. This is possible only by
encouraging the development of cottage and small-scale industries in backward regions.

To that effect the Government of India has taken right steps for the formation of small-scale and cottage industries and a provision made in every Five Year Plan from the Second Plan onwards. The government has provided various policies and incentive schemes for forming small-scale and cottage industries in village areas. This has proved to be very successful in starting small-scale and village industries. These small and cottage industrial units can absorb more persons by investing comparatively less capital and can add substantially to the volume of production and also to the purchasing power of the people. Even though India has passed through and is still passing through a period of industrial transition, the role played by the small-scale industries since Independence, more particularly since 1961, is remarkable in the country's economic development.

But many a time these small-scale industries do not become economically viable, technically feasible and commercially efficient and hence cannot become successful small-scale units. This is because of their inherent limitations. They have limited capital, limited production, limited expertise and technical know-how, limited managerial abilities, limited market to cover, and a number of
difficulties in marketing of their products. These factors decide their success or failure. Naturally, one has to think of the development of medium-scale and large-scale industries along with the development of small industries in the country.

1. The features of Small, Medium and Large Scale Industrial Undertakings:

1. Most of the large scale industries are capital intensive in nature. Hence, one argument generally advanced against large-scale industries is that they are not labour-intensive. This is true in the case of some industries. But in modern times this argument has been proved to be wrong by many industries. With increased specialisation and division of labour, new employment opportunities have been provided by these industries. The example of Murudeshwar Ceramics can be taken here. The total staff of the unit is more than 3240 workers at the end of 1999. Textile and oil mill is the best agro industry with immense potential for transforming rural economy into a self generating one and for developing centres of industrial development, wealth and prosperity through agro-based complexes and providing employment opportunities to hundreds of workers. For example, there exists two textile mills in
the district that have provided direct employment to about 2073 persons. Naturally, one can say that some large-scale industries are both capital and labour intensive in nature.

2. Certain large-scale industries encourage the development of ancillary as well as small-scale units. For example, the engineering industry promotes the development of foundries, engineering workshops and other units, the electrical industry assists the growth of some small units engaged in the manufacture of electrical accessories; the automobile industry encourages the establishment of ancillary units manufacturing the required components, etc. Therefore, many large-scale industries directly and indirectly help the country in its rapid industrialisation by providing scope for the development of small and ancillary industries in the nearby region, and through the development of such ancillary and small units provide more employment opportunities. One large-scale industry like Mysore, Kirloskar may encourage the establishment of about 200 to 250 ancillary and small-scale units providing employment to over 4000 persons. Apart from direct employment, the large-scale units also provide a large number of indirect employment. One
textile mill may provide about 500 persons with direct employment and over 1500 persons with indirect employment. Indirect employment involves workers engaged in picking up, loading, unloading and transportation of cotton, etc. This indirect impact of the large-scale industries should not be ignored and given secondary importance at the time of evaluating their importance in the economic development of the country. In Japan all components are manufactured in small and ancillary units, and only assembling work is undertaken in large units. The same procedure may be adopted in India to achieve speedy industrial development and to become an industrially advanced country of the world.

3. There are certain products the production of which can be undertaken only by large-scale sector. For the formation of a large scale unit huge capital investment becomes imperative. Such large units may be like textile oil mill, automobile industry, engineering industry, etc.

4. In the export trade, large scale industries contribute a major share of the production. These industries handle export trade very effectively by maintaining their own export houses. India is badly in need of
foreign exchange for maintaining balance of payments at higher level. This can be achieved by promoting exportation. Uptill now large-scale industries have played an important role in this respect. The contribution of small-scale industry in promoting exportation was 28.8 percent (Rs. 4,535 crores) in 1997-98. This shows that the major responsibility of export promotion rests on large-scale industries. In addition to this, these industries are not only engaged in export trading, but have undertaken export of new items such as most sophisticated articles.

5. Large-scale industries employ upto-date technical knowhow in their production activity, use most modern methods of management and marketing and try to manage their activity very effectively. All these aspects are essential for the efficient and successful working of any large-scale industry. Naturally, they set their own example before other small-scale industries in that region and add to their efficency too. Particularly, ancillary units attach more importance to quality aspect, try to keep up delivery dates and to improve their efficiency and productivity because of the influence of these large-scale industries. In brief, the very existence of a few large-scale units in any
region has an impact on the general efficiency and productivity of the small units, particularly ancillary units. This provides stability and scope for further growth. This is by no means a small contribution.

6. Lastly, the important feature of large and medium scale industries is that, the creation of white-collar job is possible only in these large-scale industries. The modern management implies specialisation and division of labour. In recent times, financial management, personnel management, marketing management and other branches of management and management subjects have been very important in the successful operation of any medium and large-scale industry. This specialisation results in the creation of employment opportunities in various administrative departments. It appears that now-a-days a young man with high ambition, has greater opportunity in large-scale industries than he has in the government or semi-government departments.

2. Economies of Large-Scale Operations

The important motivation underlying the combination movement is the desire to secure increased economies of production and distribution arising from the expansion in the scale of production. An increase in the scale of output generally leads to reduction in cost of production per unit
of the product, because a large-scale organisation can employ the latest scientific technique of production and engage efficient and well-paid sales staff to cultivate and expand the market. While the degree of integration differs from industry to industry, some degree of integration is a must in all the industries. These are—

i) Economies of the large firm with a single plant and single line of product: The specific advantage of this type of integration includes increased production and division of labour and increased use of specialised machinery. In industries like cement, the representative association can be helpful in the process of realizing the economies.

ii) Economies of large firm with several plants making the same lines of production on a large-scale: The economies of this type of integration include production at less costly locations and exchange of cost information between plants.

iii) Economies of the large firm making a large line of product: These include saving in selling cost and meeting all orders.

iv) Economies of the large firm with several plants making different lines of product: These include economies of procurement, distribution and vertical integration.
v) Economies of the large firm making a number of products: These include insurance against risk and satisfying demands for different qualities of goods.

vi) Economies of the large firm: They include the higher level of efficiency of production and application of technical and market research, distribution of skill among a variety of jobs according to capacity.

vii) Economies of the large plants: These refer to coordination, manufacture of by-products, fuller use of variable skill and machinery. The representative association can impress on their members about the indispensability of appropriate type of integration and evolve the measures to solve the technical and financial problems concerned.

In the following pages and attempt has been made to highlight some of the prominent industries such as -

1. Engineering Industries.
2. Textile Industry.
3. Agro-Industries.

Waking in Dharwad district with their historical background present position, problems and suggestions.

3. Engineering Industries

The engineering industry on the national scene is a very significant sector. It covers nearly one-third of all
factories, all labour employed, total production value of all industries in the country. Karnataka has a big share of this and occupies a predominant position in the industrial sector in India. According to the 1992-93 survey of industries, Karnataka accounts for 19.7 per cent of the total number of engineering factories in the country. Karnataka’s share in the invested capital was 17.6 per cent, number of employees was 19.8 per cent, total wages were 23.3 per cent and net value added was 23.5 per cent. This is Karnataka’s position vis-a-vis the engineering industry in the country as a whole. Within the State also the engineering industry has occupied a leading position covering the number of factories, invested capital, number of employees, total wages and production value of all industries within the State.

The entire industrial structure of the Dharwad based on engineering, and textile S.C.Railway Workshop, Mysore Kirloskar, and Kirloskar Electric Company (KEC) is the most important manufacturing company which has played an important role in the development of engineering industries in the region. The major engineering products are machinery spare-parts, tools, centrifugal pumps, fabricators, steel furniture, agricultural implements, etc. There are at present about 109 engineering units in the region.
The industries are classified as foundry, machine tools, engineering, steel rolling mills, aluminum casting etc.. Detailed discussion of these industries is given below:

i) Foundry Industry (Ferrous):

With the rapid development of engineering industry, the importance of foundry has been realised as a basic industrial need for the large industries. It is known as a subsidiary industry to many large-scale industries, such as automobile, oil engine industry, cotton industry etc.

Foundry industry is classified as ferrous and non-ferrous foundries. And further, the ferrous foundries are classified into mild steel (M.S.) and Cast Iron (C.I.) foundries. Mild steel factories in the region are working as medium-scale factories as this type of foundry industry is mainly focused on cast iron (Ferrous).

There are twelve purely cast iron foundries working under small-scale sector in the region. Apart from these, about five units are working with other manufacturing activities. The development of foundry industry can be seen from the following:
Table No.5.1
Development of Foundries in the District

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Units</th>
<th>Number of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-98</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>1998-99</td>
<td>12</td>
<td>350</td>
</tr>
</tbody>
</table>

Source: KSSIDC Annual Reports.

Production:

These units produce different type of castings such as spare-parts of oil engines and textile machinery, centrifugal pumps, powerloom parts, man-hole covers, agricultural implements, railings etc.. The average production capacity per unit is 150 tonnes per annum. Ten units from Hubli located at Gokul and Tarihall are having manufacturing capacity of over 400 tonnes per annum per unit. The total production in 1998-99 was over 1,500 tonnes, costing Rs. 38.50 lakhs. The foundries are working at three-fourth capacity which is improper supply of raw material and frequent power-failure. These units are working in one shift only.

Raw Material:

These units require pig-iron, pig-iron-scrap, hardcore, coal, and sand etc., for their casting work. The total requirement of the material for these units is estimated at
2,000 tonnes a year. But they do not get adequate supply of both pig-iron and iron-scrap. This has affected adversely the working capacity of the units.

**Investment**:

The total investment of these twelve units is calculated at Rs. 90.23 lakhs consisting of 60.83 lakhs as fixed investment and Rs. 30.00 lakhs as working capital. These units require comparatively more amount as working capital for purchase of pig-iron, iron-scrap etc.

Among these units, three units are having 70 per cent of the total investment and produce about 75 per cent of the total production. Of these, one unit has a programme of further expansion of the production activity and has applied to KSFC for financial assistance.

**Labour**:

These units employ at present 350 workers and their annual wage bill for 1998-99 is estimated at Rs. 41.52 lakhs. These units require skilled and unskilled labour. But 2 to 3 units complain about non-availability of skilled labour and heavy labour turnover of skilled labour. Also there is imbalance between wage paid and output achieved from the unskilled labour, i.e., wages paid are more than the labour efficiency.
Problems:

The first and major problem is the inadequate supply of pig-iron and coke, which is affecting the production activity of these units. Naturally, they are forced to purchase these items in the open market at higher prices adding to their cost of production. Therefore, it is suggested that pig-iron and coke must be supplied in adequate quantities.

The second and equally grave problem is the shortage of long-term working capital. The financial institutions like KSFC, KSIIDC and Nationalised Banks must help these industries in providing working capital and long-term capital for their expansion. If they get financial arrangement from the government, they can think of proper production planning and increase production.

And lastly, the units are not receiving the payments collections at regular intervals from the large-scale industrialists. Only 2 to 3 units are engaged in casting, on a job-work basis, but the payments are not received at regular intervals. The payment of the job must be made by the respective organisations regularly and promptly, so that the foundry industry will not face the problems of shortage of working capital.
Scope:

Foundry industry has bright scope for its development in the district, since many new industries are coming up in this district. As foundry industry is termed as a basic industry for engineering development, it has a bright future. New foundry units may be started at Dharwad as there is ample scope for their development. The State Government should pay proper attention to the supply of adequate quantities of raw material and working capital to these small units.

ii) Foundry Industry (Non-Ferrous):

There are at present Nine foundries producing non-ferrous castings. No-ferrous castings include stainless steel, gunmetal and aluminium. Two units are producing castings of stainless steel, four aluminium and the remaining three gunmetal.

These units produce spare-parts of oil engines and centrifugal pumps. The total capital invested by these units is worked out at Rs. 66.93 lakhs of which working capital is Rs. 27.31 lakhs.

These units employ total 130 skilled as well as unskilled workers. The total wage bill during the year 1998-1999 was about Rs. 5.74 lakhs.
The raw material required for these units is aluminium scrap, C.I. and C.S. Casting, gunmetal, Steel, coke, and foundry sand etc.. The total purchase of raw material in 1998-99 was Rs. 80.13 lakhs. The required raw material is not easily available. Also these units are suffering from shortage of working capital. These are the two important problems, the units are facing. The State Trading Corporation must supply these units the raw material at regular intervals and the commercial banks must provide them the much needed working capital.

ii) Machine Tools :

At present, there are six tool manufacturing units working in the district, four of which are working at Dharwad and one at Industrial Estate. The units located at Dharwad are manufacturing purely tools and the remaining four are manufacturing other engineering products and tools also.

The total capital invested by these units worked out at Rs.35.15 lakhs, out of which working capital is Rs. 11.50 lakhs. The total production for the year 1998-99 was estimated at Rs. 36 lakhs.

These six units have employed 57 skilled and unskilled workers. Of these, few only workers are employed on a temporary basis. The wage bill for 1998-99 was Rs. 3.14 lakhs.
Raw materials required by these units are steel, carbide tips, spares, gunmetal, wires, cables etc... The required material is purchased in the local market and also purchased from Bombay market.

All these units are having good reputation in the market. Especially, drilling machines and knife grinding machines have much demand in market.

One of the important problems faced by these units is shortage of working capital. Two units having expansion programme of manufacturing electrical equipments have been waiting for financial assistance. KSFC and National Banks should provide the required finance for working capital and fixed capital for expansion programme.

The other problem is non-availability of technical labour according to the requirement. It is suggested that ITI should undertake to train workers in the particular trade on a large scale. These units are also giving on-job training to the employees in the probationary period.

With the increase of engineering industries, the demand for tool industry is also increasing. To meet the increasing demand, there is much scope for the forming of additional tool units.
iv) Steel Rolling Mills:

In the district, there are only three steel rolling mills. Namely Jaimatha Tor Steel Private Ltd. is located at Industrial Estate Tarhali (Hubli) and other two units Namely Viz. Southern Ferrow Ltd., and Aishens Steel Ltd. are located at Hubli. The total capacity of both the mills is 13 thousand tons per annum. Both the units produce steel rounds, bars, flats, angles etc..

The total capital invested by the units is Rs. 8 crores, out of which working capital is Rs. 5.50 crores. These Steel Rolling Industries require much amount as working capital. From the observations it is found that working capital is mainly required for the purchase of raw material.

The main raw material required is iron and steel, re-rolling scrap and chilled rollers. The other material required for production is furnace oil, oxygen gas, consumable stores, kerosene, coal, firewood, tools, grace etc..

These three units have employed total 450 workers. The workers required are both skilled and unskilled. Total wage bill for the year 1998-99 was Rs. 24 lakhs. All the units are having their own medical aid centres.
These units are having ample scope for expansion, but they face two main problems which are hurdles in their growth. The problems are, shortage of raw material and finance. In this connection, the government should supply raw material from the main products like the Tata Steel, Hindustan Steel Ltd., and Indian Iron and Steel Ltd. The supply would be both adequate and regular. This will help the unit to increase its production and to have fuller utilisation of production capacity. In turn, it will reduce the cost of production and enable the unit to face competition from Bombay and Pune units effectively.

To encourage such units of exceptional importance in the district, the government agencies and Department such as P.W.D. Central Warehousing Board, State Electricity Board etc. should place all these orders for re-rolling steel material.

Secondly, finance is also the major problem faced by the units. In this respect credit facilities should be made available to such units. Availability of adequate and timely finance will help them expand their production activity by utilising their production capacity on a large scale. In this respect the commercial banks and State Finance Corporation should provide loans for meeting long-term and short-term requirements.
v) Engineering Industries:

The engineering industries were started in India about 120 years ago and as such they are as old as the cotton and jute textile industries of the country. But in the beginning they were merely repair-shops. With the development of railway, engineering work-shops owned and operated by the railways themselves began to be established. Upto the beginning of the First World War, railway workshop represented the most predominant section of the engineering industry.

With the development of consumer goods industries like cotton, jute and sugar, repairing work of a varied nature began to arise and mechanical engineering industry began to expand. After the establishment of Tata Iron and Steel Company, structural, tin plates, galvanized sheets, wire nails etc., required by the engineering industries came into existence and producing sufficiently large quantities of them.

Dharwad region is also having good engineering heritage, since the formation of S.C.Railway Workshop in 1985, and Mysore Kirloskar, a large number of small engineering units grew up during that period. But the growth of the region for engineering industry was not as much as it was in the neighbouring region.

126
Production:

Major engineering production in the region involves pattern making, fabrication, workshop, oil engine spare-parts, centrifugal pumps and spares, flour mills, reflex valves, foot valves, tropiculture Valves, tool carrier, butterfly valves, testing machines etc.

The total production capacity in 1988 was estimated at Rs. 2,165 lakhs and the actual production was 1,080 lakhs. Since it is clear that these units are working at an average 50 per cent of the capacity, most of the units produce according to job orders only and so their machines remain highly under-utilised.

Raw material:

The raw material required is steel, iron casting, and sand etc. Major units are working on a job-work basis; hence, raw material required for those units is casting. Supply of casting patent to small units is very irregular.

a) Locomotive Carriage and Wagon Workshop at Hubli:

The Hubli workshop was established in 1885 under the southern Maratha Railway. In 1919 these workshops have come under the Madras and southern maratha Railway. It is situated on Gadag Road. It was the first engineering industry in Dharwad District.
After the independence and reorganisation of the Railways, Hubli workshops were brought under the Southern Railway of Indian Railways in 1951. The Southern Railway had remodeled the Hubli workshops between 1960 and 1966 at a cost of Rs. 1.55 crores by giving new complex for the steam locomotive repairs with EDT cranes and 100 tons traverser.

With the formation of South Central Railway from 2nd October 1969 Hubli workshop came under the South Central Railway. The meter gauge load of Lallagunda workshop was also transferred to these workshops during 1969 and the requirement of the complete meter gauge system was catered for by the Hubli workshop.

In 1969 Hubli workshop was declared as the "Best Unit" amongst the Railway workshops by the Railway Board for achieving more than 100% productivity in 100 days (from 1-1-1969 to 31-3-1969.)

By establishment of this workshop at Hubli, there has been a large scope for the development of ancillary industries with the help of waste or scrap materials sold by the workshop. Railway bogies are sold in open market by conducting bid and auction sales. These scrap materials are used as a raw material for various engineering industries, such as steel furnitures, safe lockers.
The main product of this workshop is Railway bogies. Total investment is 4.82 crores by the end of 1999 and providing employment to 4667 persons. All employees are appointed on permanent basis.

**Current Activities:**

The locomotive carriage and wagon workshop at Hubli undertakes the (P.O.H.) Periodical Over Hauleg and other repairs to the (M.G.) Metre gauge Locomotive carriage and wagon with central government policy of unigueage on the Indian Railways. This 100 years old workshop has also been included for gauge conversion during 1995-96 at the cost of Rs. 9.33 crores.

**Table No.5.2**  
Department wise Break-up of Cost  
(In lakhs)

<table>
<thead>
<tr>
<th>Departments</th>
<th>Capital</th>
<th>Depreciation Reserve Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mechanical Engineering Carriage &amp; Allied Shop</td>
<td>81.182</td>
<td>301.000</td>
<td>383.182</td>
</tr>
<tr>
<td>2. Civil engineering</td>
<td>312.755</td>
<td>159.480</td>
<td>472.231</td>
</tr>
<tr>
<td>3. Store Department</td>
<td>17.760</td>
<td>11.600</td>
<td>29.360</td>
</tr>
</tbody>
</table>

437.333  
415.810  
933.147

Hubli workshop has increased POH activity of HG coaches progressively from 40 nos. to 60 nos. per month with effect from 1998. 38 men have been transferred from mechanical department to electrical department to cope up with the POH of coaches including AC (electrical works).

The manpower requires through training and development. Due to lack of proper training, the manufacturing of bogies is reduced and some men are diverted to carriage POH activity by which Hubli workshop was able to achieve construction of 82 coaches during the month of January 1999 but target fixed is 120 bogies per month.

The ICF sub assemblies are being manufactured and supplied to ICF/chennai regularly. As per the CMC/SC's instructions the shop has enhanced manufacture of cattle guards from 20 to 40 nos, increased the manufacture of 120 nos. of suspension bearing. The staff of Hubli shop have personally collected 300 kgs., of copper of suitable grade 84 from LGDS which will be sufficient for only about 3 months.

However, gauzing, alignment and construction work is yet to be undertaken. In view of this the train lighting section has been shifted to shutter repair section, which was earlier used by MG plant.
b) Karnataka State Road Transport Corporation:

Karnataka State Road Transport Corporation is a government undertaking Semi Government Corporation established in the year 1956, in Gokul Road, Hubli. Its main manufacturing products are body building, accidental repairs and reconditioning of motors. The total investment of corporation is Rs. 2.5 crores.

Labour:

The corporation(KSRTC) was established in 1856 with only 815 workers at the outset.

There are 815 workers working in the corporation, including skilled and semiskilled workers. There are no temporary workers. But, today, the corporation provides training to 205 apprentices every year.

Production:

The KSRTC'S main activity is bus body building.

Table No.5.3
Position of the Production

<table>
<thead>
<tr>
<th>Year</th>
<th>Target Fixed for Production</th>
<th>Actual Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-97</td>
<td>496</td>
<td>566</td>
</tr>
<tr>
<td>1997-98</td>
<td>656</td>
<td>715</td>
</tr>
<tr>
<td>1998-99</td>
<td>744</td>
<td>749</td>
</tr>
</tbody>
</table>

Source: KSRTC Annual Reports.
Raw Material:

The chief raw material required for the KSRTC for its production is steel and aluminum.


The KSRTC gets its essential raw materials from within the district, state and from other states as well as from foreign countries.

The KSRTC follows the policy of yearly buying of raw materials. It purchases the machineries both from indigenous, and foreign country agents. It imports some of its machineries to use latest technology in its workshops.

Its marketing ranges from local to state level.

Finance:

The KSRTC gets financial assistance from government. It also receives technical help from A.T.U.I. In toto, the effects of government policy on its development is favourable.
Conclusion:

There are labour and trade unions like KSRTC employees union and AITUC SC/St. They are headed by workers themselves. There are no conflicts between management and labour unions.

KSRTC has not taken any membership of industries' association. There is too much urgency for the development of ancillary industries attached to KSRTC. There is neither export of its products nor a plan for such a thing at present.

There are number problems faced by the corporation, as regards to raw materials, labour, capital technical know­how, local disturbances and government policies.

c) AKay Industry Limited:

The famous AKay Industry Ltd is located on station Road Hubli since 1961, founded by Shri Arjun Khimaji with the main purpose of producing the pumps and valves required for chemical processing industries. Though the factory started in medium way, improvements were made from time to time. The computerised numerical controlled machines are installed during 1989-90 along with the conventional lathe machines. The total investment in machinery is Rs. 97,17,664 lakhs, by the end of March 1998.
The Company has about 210 skilled, 60 semi-skilled and 30 unskilled labourers. It provided training to 12 apprentices in 1996-97 and 11 apprentices in 1997-98. But the strength the workers was reduced considerable as shown below.

Table No. 5.4  
Showing the Strength of Workers

<table>
<thead>
<tr>
<th>Type of Workers</th>
<th>1996-97</th>
<th>1997-98</th>
<th>1998-99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled</td>
<td>210</td>
<td>200</td>
<td>185</td>
</tr>
<tr>
<td>Semi Skilled</td>
<td>60</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>Unskilled</td>
<td>30</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>Total...</td>
<td>300</td>
<td>280</td>
<td>237</td>
</tr>
</tbody>
</table>

Source: Annual Reports.

Raw Material:

The main raw materials are casting and bar sheets. The company purchases these raw materials from private concerns in Karnataka and from other states. The amount spent for the raw materials is as shown below -

Table No.5.5  
Amount Spent for Raw Material

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount Spent (in Rupee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-97</td>
<td>6 Crores 45 Lakhs</td>
</tr>
<tr>
<td>1997-98</td>
<td>5 Crores 92 Lakhs</td>
</tr>
<tr>
<td>1998-99</td>
<td>5 Crores 10 Lakhs</td>
</tr>
</tbody>
</table>

Source: Annual Reports
Problem of Raw Material:

Though adequate sufficient raw materials are available, the company has been facing financial problem. They are unable to pay the bills regularly, due to delayed payment, suppliers do not supply the raw materials in time. So that shortage of raw material is the main causes for decrease in production and incurring the losses.

Production:

The main products of the company are Pumps and Valves requiring for chemical process industries.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pumps</td>
<td>3438</td>
<td>3067</td>
<td>3438</td>
<td>1544</td>
</tr>
<tr>
<td>Bal Valves</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>613</td>
</tr>
<tr>
<td>Gate Valves</td>
<td>-</td>
<td>-</td>
<td>1500</td>
<td>-</td>
</tr>
<tr>
<td>Globe Valves</td>
<td>-</td>
<td>-</td>
<td>1500</td>
<td>-</td>
</tr>
<tr>
<td>Dalphray Valves</td>
<td>-</td>
<td>-</td>
<td>1200</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Annual Reports.

There is a continuous harmony between the management and workers. The management consults the workers at times of necessity. Moreover the company has adopted the open door
policy. The workers of this company have two workers organisations namely AKay Industries employees union and AKay Industries Staff and Workers Union.

d) BDK Groups

Khimji’s first manufacturing plant, established in 1961, broke new ground for providing a high-quality alternative to import of Valves and Pumps, while assuring availability of spare parts and excellent service.

Keeping pace with industrial growth, the BDK Group founded in 1978 by Bharat B. Khimji, the Rs. 600 million (US$ 14 million) Group has been building on a heritage of initiative and innovation at the service of industry, offering - along with its ten associate companies - a wide spectrum of Industrial Valves and Process Pumps designed for the needs of chemical and petrochemical industries. For more than two decades, BDK products have enjoyed sustained and lasting reputation in both domestic and global markets. Today, ten groups companies synergize their strengths to form one of India’s largest and most progressive manufacturers in this field. With its heritage of excellence, and its resources of expertise and experience, the Group is poised to realise its destiny - as a world leader in manufacturing and marketing of Industrial Valves and Pumps. At present there are two units of BDK Groups in Hubli. viz.,
1) BDK Process Controls Private Ltd. and
2) BDK Engineering Industrial Ltd.

- BDK Process Controls Private Ltd. :

BDK Process Controls Pvt. Ltd. (BDKPC) which is one of the units of BDK Groups of Companies, is situated on Gokul Road in Hubli (Karnataka State) opposite to Airport, 5 km. off the Pune-Banglore NH-4. Hubli is about 410 km. by road from Bangalore and is connected by road, rail and air. This plant commenced its commercial production in the year 1978.

It is housed in a lush green area of 17.50 acres, currently employing 230 personnel. BDKPC designs and manufactures Diaphragm Valves, Butterfly Valves, Plug Valves, 'B' Series Check Valves, Rubber Lined Items and Mouldings. The company caters to the needs of major sectors like water treatment plants, sewage, effluent treatment plants, rayon manufacturing plants, chemical and fertilizer plants, refineries, nuclear power plants etc., and exports its products to Australia, Newzealand, Malaysia, Thailand, Indonesia, Middle East, Italy Germany and UK.

Investment :

The total subscribed and paid up capital of the company is Rs. 96.45 lakhs with production capacity of 60000 Valves + 200 Rubber processing.
Labour:

The company has 230 workers during 1998-99 consisting of:

- Managerial: 03
- Technical Staff: 29
- Non Technical Staff: 53
- Workers: 145

Total: 230

The company had paid wages to the workers as shown below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-1998</td>
<td>74.00 lakhs</td>
</tr>
<tr>
<td>1998-1999</td>
<td>84.56 lakhs</td>
</tr>
<tr>
<td>1999-2000</td>
<td>85.00 lakhs</td>
</tr>
</tbody>
</table>

Production:

Table No. 5.7

<table>
<thead>
<tr>
<th>Name of the Product</th>
<th>No of units produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Diaphragm Valve S &amp; G series</td>
<td>28000</td>
</tr>
<tr>
<td>2. Pneumatic Actuated Diaphragm Valve</td>
<td>2000</td>
</tr>
<tr>
<td>3. Lubricated Plug Valve</td>
<td>3600</td>
</tr>
<tr>
<td>4. Teflon Sleeved Plug Valve</td>
<td>3600</td>
</tr>
<tr>
<td>5. Butterfly Valves</td>
<td>12000</td>
</tr>
<tr>
<td>6. 'B' Series Check Valves</td>
<td>1200</td>
</tr>
</tbody>
</table>

Sales:

Table No. 5.8
Showing Sales in Terms of Rupees

<table>
<thead>
<tr>
<th>Years</th>
<th>Sales (in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-95</td>
<td>790.00 lakhs</td>
</tr>
<tr>
<td>1995-96</td>
<td>765.00 lakhs</td>
</tr>
<tr>
<td>1996-97</td>
<td>900.89 lakhs</td>
</tr>
<tr>
<td>1997-98</td>
<td>873.66 lakhs</td>
</tr>
<tr>
<td>1998-99</td>
<td>917.00 lakhs</td>
</tr>
</tbody>
</table>

Source: Annual Reports.

Raw Material:

Different type of raw materials required by the company are Carbon Steel and Alloy Steel Casting, Cast Iron Castings, Ductile Iron, Gun Metal, Castings Forged flanges, Natural Rubber. The company purchase these raw material from Hubli, Belgaum and Bangalore.

- BDK Engineering Industries Ltd. :

BDK Engineering Industries Ltd. (BDKEI) which is one of the units of BDK Groups of companies, is situated on Gokul Road in Hubli (Karnataka State) opposite to Airport, 5 km. off the Pune-Bangalore NH-4. Hubli is about 410 km. by road from Bangalore and is connected by road, rail and air. This plant commenced its commercial production in the year 1984.

It is housed in a lush green area of 5.25 acres, currently employing 143 personnel. BDKEI designs and
manufactures Gate Valves, Water Check Valves, Bar Stock Needle Valves, Non-slam Check Valves & Dual plate Check Valves.

The company caters to the needs of major sectors like Chemical and Fertilizer Plants, Oil Refineries, The Thermal Power Plants, Nuclear Power Plants etc., and exports its products to Australia, New Zealand, Malaysia, Thailand, Middle East, and Italy.

Investment:

The total investment made in this company is Rs. 92.52 lakhs.

Labour:

In 1984, when the factory went into production the number of workers engaged was only 60. In 1990 the number of employees rose up to 90 and at present in 1998-99 there are 143 workers in the factory consisting of

- Managerial: 03
- Technical Staff: 32
- Non Technical Staff: 22
- Skilled & Semiskilled Workers: 69
- Unskilled Workers: 17

Total: 143
The company has paid wages and other employee benefits as shown below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-97</td>
<td>49.00 lakhs</td>
</tr>
<tr>
<td>1997-98</td>
<td>66.06 lakhs</td>
</tr>
<tr>
<td>1998-99</td>
<td>62.00 lakhs</td>
</tr>
</tbody>
</table>

Source: Annual Reports.
Production:

Table No. 5.9
Showing the Company’s Product

<table>
<thead>
<tr>
<th>Name of the Valves</th>
<th>No of units produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forged Gate, Globe &amp; Lift Check Valves</td>
<td>12000</td>
</tr>
<tr>
<td>2. Needle Valves</td>
<td>6000</td>
</tr>
<tr>
<td>3. Galv Valves</td>
<td>4800</td>
</tr>
<tr>
<td>4. Globe Valves</td>
<td>6000</td>
</tr>
<tr>
<td>5. Swing Check Valves</td>
<td>1200</td>
</tr>
<tr>
<td>6. Cast Lift Check Valves</td>
<td>1200</td>
</tr>
<tr>
<td>7. Check Valves</td>
<td>5000</td>
</tr>
<tr>
<td>(Nonslam, Dual Plats &amp; Wafer)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Annual Reports.

Sales:

Table No. 5.10
Showing Company’s Sale in Terms of Rupees

<table>
<thead>
<tr>
<th>Years</th>
<th>Sales (in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-95</td>
<td>763 lakhs</td>
</tr>
<tr>
<td>1995-96</td>
<td>799 lakhs</td>
</tr>
<tr>
<td>1996-97</td>
<td>848 lakhs</td>
</tr>
<tr>
<td>1997-98</td>
<td>892 lakhs</td>
</tr>
<tr>
<td>1998-99</td>
<td>1625 lakhs</td>
</tr>
</tbody>
</table>

Source: Annual Reports.
Raw Material:
The main raw materials are carbon steel, Alloy Steel Casings and SS Castings. Other raw materials are Cast Iron, Gun Metal, Castings, Bar steels. These raw materials are purchased from Hubli, Bangalore, Coimbatore and Mumbai.

e) Extract Engineering Works

The famous Extract Engineering Industry is founded by Shri Jagadish Gudagunti in 1984. It is located at Belur Industrial Estate on NH-4, Pune-Bangalore Road. Ms. Extract Engineering Works Pvt. Ltd., Dharwad are leading, well qualified and latest Designers, Manufacturers, Suppliers and erectors of machinery required for Sugar, Paper, Cement, Chemicals and Distilleries and allied industries. They are also Designers and Manufacturers of material handling equipments and systems, Project Engineers and Technical Consultants for the same since 20 years.

They have got their premises located at K.I.A.D.B., Belur Industrial Area, Dharwad Plot No. 137 workshop sheds with the following well equipped necessary modernised machineries.

- SHED NO. 2 : SIZE - AREA 396 Sq. Mtrs.
They have engaged about 20 workshop for their jobs under renewable lease agreement for every 5 years at Hubli and Dharwad Industrial Areas.

They have successfully designed, manufactured/fabricated, supplied, erected and commissioned various equipments, machineries for Sugar Factories in different states of Gujarat, Maharashtra, Goa, Andhra and Tamilnadu States.

List of Equipments Manufactured at Dharwad Unit:

1. Cane Handling Canes 7.5 Ton SWI.
2. Feeder Table Mtr x 7 Mtr with drive.
3. Mill House Crane with Gantry.
4. Cane Carriers and Cane Carrier Drive, Cane Kickers.
5. Cane Levelers & Cutters.
6. Fibrizer with Drives.
7. C.I. Heavy Duty Under Feed rollers complete with Drive Arrangement.
8. Rake Type Elevators with Donnelly Chutes.
9. Modified Reverse Cutter Hood for increasing cane Preparation.
10. Mill Inter Carriers and Mill parts.
12. Effective Imbibition system for milling Tandem.
13. Modification with Preparatory Devices and on Mill.
15. Return Bagasse Carriers and Elevators.
17. Juice Sulphiters.
18. Cane Juice Clarifiers & Filters.
19. Cane Juice Clarifiers & Filters.
22. Syrup Sulphitation Units.
23. Syrup and Molasses Storage Tanks.
25. Vacuum Crystallizers and Seed Crystallizers.
26. Air Cooled and Water Cooled Crystallizers.
27. Sugar Graders, Elevators, Hoppers and Belt Conveyors.
29. Sugar Melter and Molasses conditioners.
30. Bagasse Bailing Machines.
32. Vertical Crystallizers.
33. E.O.T.Cranes upto 50 MT. SWL. Capacity.
34. Rain Shower type condenser, Multijet Condenser.
35. Chimney for Boilers.
37. Hydropulper, beaters, coal crusher, conveyors, screens, rollers wets, Depithing Plants for paper plant.
38. Sugar Bagasse Carriers and Elevators.
40. Pressure reducing and superheating system.
41. Falling Film Evaporator.
42. Rising Film Evaporator.
43. Couplings & Spiders.
44. Boiling House Equipments.
45. Tanks for Co-generation Projects.
46. Belt Conveyors for Sugar bags conveying, stackers & loaders.
47. M.S. fabricated pipings for Sugar Project.

They have their own computer system with cad attachment for their office and Design Office use. They have well qualified and experienced manpower totalling 150 in 1997-98 and in 1998-99 the number increased to 210 workers of which the details are given below:

<table>
<thead>
<tr>
<th>Table No.5.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Showing Different Types of Workers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1997-98</th>
<th>1998-99</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Skilled</td>
<td>60</td>
<td>65</td>
</tr>
<tr>
<td>2 Semi Skilled</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>3 Unskilled</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>4 Khalsis</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Annual Reports
In addition to above Technical and Administration Staff they have got adequate office staff and Technical hands at shop floor and workshop to shoulder work responsibilities.

List of Few Sugar Factories to Whom Rendered Services:
1. Madurantakam Co-operative Sugar Factory, Padalam.
2. Kothari Sugars & Chemicals Ltd.; Lalgudi.
3. Dharmapuri Dist. Co-operative Sugar Factory, Dharmapuri
4. MAC Agro Industries Ltd., Villupuram.

Marketing:
From conception of a product to its ultimate consumption involves the integration of a number of activities that lead to profitable management.

As marketing is concerned with directing the movement of goods and services form the product to the consumer or the end user, it establishes an important link between production and consumption. Today the emphasis in marketing is on customer needs.
### Table No.5.12
Showing the Year Wise Turnover of the Company :
(Rs. in Crores)

<table>
<thead>
<tr>
<th>Years</th>
<th>Sales in Crores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992-93</td>
<td>0.56</td>
</tr>
<tr>
<td>1993-94</td>
<td>1.90</td>
</tr>
<tr>
<td>1994-95</td>
<td>2.09</td>
</tr>
<tr>
<td>1994-95</td>
<td>2.75</td>
</tr>
<tr>
<td>1996-97</td>
<td>2.06</td>
</tr>
<tr>
<td>1997-98</td>
<td>1.13</td>
</tr>
<tr>
<td>1998-99</td>
<td>3.14</td>
</tr>
<tr>
<td>1999-2000</td>
<td>11.95</td>
</tr>
</tbody>
</table>

Source : Annual Reports

f) Siddheshwar & Company Private Ltd.

Siddeshwar & Company Private Ltd., the pioneer Manufacturers of superior safes and steel furniture was established in 1918. Wonder to know that this company, has its origin in a small house of a contractor Shri Siddhappa, a smith in Rly Workshop, the other partners are Shri Channappa, & a carpenter Shri Neelakanthappa, in Bankapur street, Hubli.

The topsy-turvy situation during the World War I, when the import of treasuries was a dream, the people purchased the cheap quality treasuries manufactured by the Indians from Hyderabad and Bombay. The trio, through not qualified, yet competent enough to repair the treasuries. Siddhappa was a true businessman with an organising skill; Channappa with mathematical competence, could read any type of machine and
its system including merits and defects. No less was Neelakanthappa. He had the skill of producing the articles as per the maps and designs. These brothers earned the name only by repairing the treasuries specially the lock system, a major defect found in all the treasuries. They were pasting the photo of Lord Siddharameshwar of Solapur, the family deity. Hence, they named their company as Siddheshwar Company. However, they were waiting for better opportunity, that came on their way in a short span.

During those days, Kotur Shantaveerappa a renowned merchant from Dharwad, encouraged them with an advice to produce treasury all by themselves, also by being a guarantors for those three brothers to the deal in the raw material. The trio took up the challenge. With a little saved money as their initial investment, and the raw material bought on credit, started their company, and produced their first treasury, supplied to Kotur Shantveerappa. Next customers were Metal merchant Shri Devendrappa Deshmane and Jeweller Revankar. The rare gift three brothers, without proper technical knowledge, produced the treasuries of number 1 quality, which became popular in a short period.

The success story of the Siddeshwar Company developed rapidly. It was only their sole strength, confidence, courage and single mindedness made them to work day and night to
come up in the field, as we see now. They became experts without depending on others even in the construction of their own building.

The customers, once used, preferred only the products of this company, as the products were of special quality with a special lock system. Not only the founder member, Shri Neelkanthappa but also the workers challenge that, "none can open these treasuries". They not only constructed a showroom at Station Road in 1924, but also the factory building at Bankepur Chouk in 1956. Another feather added when Channappa manufactured a tin-cutting and roller machine of 50 tone power, in 1993-94. The sign of company's development is quite visible with the introduction of imported machines and the manpower to the tune of 600 to 700 workers. Gradually they started producing the steel cupboards of varied sizes. They opened a branch at Hyderabad to supply to the unending demands of the public.

The people preferred the steel treasuries/cupboards of this company though comparatively costlier. The reasons being 1. The quality of the goods. The lock system is incomparable, specially designed by the trio and being manufactured at Aligarh, with more levers.

Secondly, the treasuries are applied with special chemical-mix to be fire proof, to safeguard the valuables-
both riches and records in banks, shops etc. These treasuries are of three price products, with less joints and more safe. So the company has won the medals and certificates in various exhibitions for its distin features and being fire proof. Such a quality product needs no publicity of present kind. It was only through customers that the company, enjoyed the publicity.

Another reason is the products of the company, are as per the tastes, choice and need of the customers, with necessary internal adjustments. Such a freedom is not enjoyed by the customers of the other companies.

The nicety of the trasuries with the sizes ranging from 2' to 6' is only due to the use of imported machines for cutting, bending and plate layout. The company has a vast market spreading even upto the remote is lands of Andaman & Nicobar. These treasuries are mostly found in Banks, Temples for donation boxs, more so at all Kamath Hotels. Though some turned out employees started their own firms, yet they could not compete with Siddheshwar Company.

It is the company which has established all by itself, being uninfluenced with by capitalists or by politicians, neither the company supported them. May be for this reason the company has not been recognised or encouraged by the Government in any way.
A company, with such a historical background could have become the No. 1 in the country with number of branches all over. But, unfortunately, the company, suffers a loss due to purely domestic problem.

After the death of Siddappa in 1935 and Channappa in 1953, the children in succession developed only distrust among themselves, that led Neelakanthappa to divide the factory. All 600 to 700 workers were scattered in the three independent blocks, Kummar Udyog (smithy section), Channeshwar Company and Siddheshwar and company. Less than 100 workers now work along with Neelakhanthappa, the owner, to have the turnover of just Rs. 50 to 60 lakhs.

Production And Assembly Section:

This Company has the units like manufacturing, and assembling, painting. Electro packing machine, sharing machine, Power press machine, Shaft leveling machine, Lathe machine, Drill machine, Arc welding machine, Pipe bending machine, Land bending machine, Gas welding machine, Chipping machine, Spot welding machines were used in this company.

Most of the machines available here are imported from foreign countries like Germany, England, and Denmark etc.
### Table No.5.13
Showing Actual Production of Various Safe Lockers

<table>
<thead>
<tr>
<th>Types of Locks</th>
<th>Actual Production Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Steel Strong Room Doors</td>
<td>6 to 10</td>
</tr>
<tr>
<td>2. Hotel Cash Table</td>
<td>25 to 30</td>
</tr>
<tr>
<td>3. Steel Tubular Cots with Steel Bedstand</td>
<td>100 to 120</td>
</tr>
<tr>
<td>4. Steel Tubular Chairs</td>
<td>1800 to 2000</td>
</tr>
<tr>
<td>5. Steel Office Tables</td>
<td>100 to 200</td>
</tr>
<tr>
<td>6. Steel Filing Cabinet</td>
<td>4 to 5</td>
</tr>
<tr>
<td>7. Steel Collapsible Door</td>
<td>Nil</td>
</tr>
<tr>
<td>8. Steel Safe Deposit Lockers</td>
<td>8 to 10</td>
</tr>
<tr>
<td>9. Air Ventilator for Strong Room</td>
<td>5 to 6</td>
</tr>
<tr>
<td>10. Steel Bluennck Cabinets</td>
<td>1200 to 1500</td>
</tr>
<tr>
<td>11. Steel Safe Cabinets</td>
<td>400 to 600</td>
</tr>
<tr>
<td>12. Steel Safety Cash Boxes with Detachable Bottom Plate.</td>
<td>150 to 200</td>
</tr>
<tr>
<td>13. Steel Safety Model Safes</td>
<td>10 to 15</td>
</tr>
<tr>
<td>14. Steel Temple Model Safes</td>
<td>25 to 30</td>
</tr>
<tr>
<td>15. Steel Fire &amp; Burglar Proof Safe</td>
<td>150 to 200</td>
</tr>
<tr>
<td>16. Steel Burglar Proof Safe</td>
<td>150 to 250</td>
</tr>
</tbody>
</table>

Source: Annual Reports

**Raw Materials:**

The raw materials required for the manufacture of Safes and Steel Furniture are being produced from the reputed dealers. This concern purchases the raw materials like M.S.Sheets, Tubes, Flats, Angles, Rods, M.S.Rivitem, Screws, Paints, Varnish, Patti, Nuts and Bolts, Hinges, Locks etc.
Table No.5.14
Showing The Purchase of Raw Materials

<table>
<thead>
<tr>
<th>Year</th>
<th>Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-96</td>
<td>3 Tones</td>
</tr>
<tr>
<td>1996-97</td>
<td>4 Tones</td>
</tr>
<tr>
<td>1997-98</td>
<td>6 Tones</td>
</tr>
<tr>
<td>1998-99</td>
<td>8 Tones</td>
</tr>
</tbody>
</table>

Source: Annual Reports.

Sales:

The sales section is controlled by M.D. himself by the way of supervision and assistance. He also takes orders over the Telephone, Letter, Telegraphic messages.

The sales are boosted by impressing the customers on quality of the products. This concern has more qualitative products and the customer would get satisfied surely after selling finished products.

Labour:

In this company all are permanent workers due to division of factory, the number of workers are reduced as shown below:
Table No.5.15
Showing The Number of Workers

<table>
<thead>
<tr>
<th>Years</th>
<th>No. of Workers</th>
<th>Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-96</td>
<td>250</td>
<td>600000</td>
</tr>
<tr>
<td>1996-97</td>
<td>200</td>
<td>720000</td>
</tr>
<tr>
<td>1997-98</td>
<td>150</td>
<td>900000</td>
</tr>
<tr>
<td>1998-99</td>
<td>120</td>
<td>1200000</td>
</tr>
</tbody>
</table>

Source: Annual Reports.

4. Cotton Textile Industries:

Cotton textile Industry is the premier national industry and it represents single largest enterprise in organised sector in our country. It is so because it employs the largest number of workers and is the largest exporter of traditional items. In terms of capital investment, it occupied till recently the top position. It contributes to the Government treasury several hundred crores of rupees annually in the form of taxes and other benefits. It must be remembered that clothing is next only of fooding.

So the cotton textile industry holds the premier position among all industries in India by virtue of both age and magnitude. It touches the lives and occupation of millions of our countrymen, be they the agriculturists engaged in the cotton cultivation, the workers employed in various sectors of the industry or the vast army of persons...
engaged in trade and transport of cotton to the consuming centres and the ultimate distribution of cloth and yarn to the far flung towns and villages in the country.

Dharwad district enjoys a special place in the field of textiles. Dharwad district has 76 textile industries, whereas Hubli city with its 31 textile industries enjoys the third place in the district. Hubli has 16 important ginning mills 7 compressor units, and 2 spinning mills.

Structure of Textile Industry

Cotton textile industries are divided in two sectors namely, well organised mill sector (i.e. textile mills) and un-organised sector (decentralised sector).

<table>
<thead>
<tr>
<th>Textile Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I) Organised Mill Sector</td>
</tr>
<tr>
<td>A) Purely spinning Mills (production yarn only)</td>
</tr>
<tr>
<td>B) Composite Mills (Spinning and Weaving)</td>
</tr>
<tr>
<td>C) Hosiery and Khadi units</td>
</tr>
<tr>
<td>D) Processing units</td>
</tr>
</tbody>
</table>

The present study is a case study of organised mill sector (i.e. purely spinning mills) in Dharwad District.
Origin and Expansion of Spinning Mills

Madav Cotton Textile Mill was established in 1942. It is the first textile mill in the Dharwad District, but it is closed since 1997.

Later on Gadag co-operative textile mill was established in 1970. (Now it is at Gadag District). Bhoruka a textile mill was established on 26-03-1981 at Sattur Industrial Estate (in between Hubli and Dharwad). Afterwards Krishna spinners Private Ltd. was established in 1985 at Hubli in Gokul Industrial Estate.

At present in Dharwad District two textile mills are working viz Bhoruka Textile Mill and Krishna Spinners Private Ltd.

a) Bhoruka Textile Mills

Bhoruka Textile Mills Ltd. was established on 26th March 1981. It is situated on Poona-Banglore road on Sattur, in between the two cities of Hubli-Dharwad. It was started with total investment of Rs. 2 crores and with an installed capacity of 19600 spindlers. But the actual production is 17024 spindles. The line of manufacture of the mill is synthetic blended yarn. A glance over the production, income, Gross profit operating profit, net profit and fixed assets of the mill gives a panaromic view of the establishment.
The mills production during the year 1992-93, was 17024 spindles i.e 2208 mega tonnes of yarn and it was 1955 tonnes of yarn during 1993-94.

Its' income is computed to be Rs. 26.36 lakh during the year 1992-93. and Rs. 21.97 lakh during 1993-94.

The gross profit of the mill is calculated at Rs. 2.501 lakhs during the year 1992-93 while it was Rs. 1.96 lakhs during 1993-94.

The operating profit of the mill during 1992-93 was Rs. 71 lakhs but again it was Rs. 59.13 lakhs during 1993-94.

The net profit of the mill during 1992-93 was Rs. 39.25 lakhs and as usual it was decreased to Rs. 24.57 lakhs during 1993-94.

Finally, the mill had the fixed assets of Rs. 196 lakhs during 1992-93 and the fixed assets of the mill was counted to be Rs. 117.79 lakhs. These various facts and figures are as given below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>2208 mega tonnes</td>
<td>1955 mega tonnes</td>
</tr>
<tr>
<td>Income</td>
<td>26.36 lakhs</td>
<td>21.97 lakhs</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>2.501 lakhs</td>
<td>1.96 lakhs</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>71 lakhs</td>
<td>59.13 lakhs</td>
</tr>
<tr>
<td>Net Profit</td>
<td>39.25 lakhs</td>
<td>24.57 lakhs</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td>196 lakhs</td>
<td>117.79 lakhs</td>
</tr>
</tbody>
</table>

b) Krishna Spinners

Krishna Spinners is a proprietorship factory, situated in the industrial estate at Gokul road, Hubli established in
1985. It is engaged in the manufacturing work of cotton and synthetic yarn. The annual installed capacity of the factory was 900 spindlers during 1994-95; 900 spindlers during 1995-96, 1000 spindlers during 1996-97 and it was 1200 spindlers during the year 1997-98. The factory requires 24,00,000 units (kilowatts) of electricity per year to bring forth its total production.

Krishna spinners was established in 1985 with 200 total number of workers at the outset and with a capacity of production of 1000 kg of yarn per day.

The factory has brought in a number of important changes and improvements within itself, from time to time. It has introduced most modern typical machines like Auto Cano Winding that costs Rs 75 lakhs; High Speed Carding Machine that costs Rs. 17 lakhs and Auto Draw Frame Machine costing Rs. 17 lakhs.

The specific information about the factory involves factors like investment amount, employment, production raw materials, etc. The factory has invested Rs. 3 crores as its total investment. The factory has provided employment to 100 labourers during 1994-95; 150 labourers during 1995-96; to 175 labourers during 1996-97; 200 labourers during 1997-98 and it has provided employment to 200 labourers during 1998-
At present, there are 100 skilled workers, 60 semiskilled and another 50 are unskilled workers in the factory.

The factory pays the wage bill of workers totalling Rs. 2,05,000 per month and that costs Rs. 24,60,000 annually. The factory also provides apprenticeship training to the candidates selected through government.

The production of the factory was 400 kgs of yarn during 1995-96; 800 kgs during 1996-97 and the production during 1997-98 was 1000 kgs of yarn.

The major raw material required for the factory for its production is cotton. The factory has used 1000 kgs of cotton per day in the year 1995-96.

In 1996-97, the factory needed 1200 kgs of cotton for its production and again during 1997-98, the factory required 1200 kgs of cotton for its production.

The sources of supply of cotton are available for the factory within the district, from the other neighboring districts of the state and also from other neighboring states.

The factory follows the raw material buying policy based on yearly and time to time buying policy.

The factory has purchased its essential machinery from indigenous agencies like schalfhort and Turmae of Ahmadbad and Laxmi Works of Coimbatore.
The nature of marketing of the products of the factory is at state level and national level in the places like Banahatti, Ichalkaranji, Bombay and Solapur. In the process of marketing its products, the factory follows direct and agency sales methods. The factory has established its public relations by the direct study of market and interaction between the customers and merchandise.

Though the Government policy towards the factory has not extended any encouragement, but the government has provided the factory with tax concession facility. The factory has received the financial assistance from KSSIDC. The factory has received manufacturing technical help from the government. In all, the government policy has been helping the factory for its development.

The factory has been the member of chamber of commerce, at Hubli.

The factory has been facing problems like rates of raw materials and absenteeism amongst more skilled workers in the field of labourers and non-availability of such labourers in the market. But however, as far as capital, technical know-how local disturbances and government policy, the factory does not face any problems.
5. **Agro Industries**

The problems of rural industrialization and rural unemployment are two sides of the same coin and while looking at one problem the other one is also to be kept in mind. On the one hand, because of pressure on land we are witnessing a rural exodus to the cities in search of gainful employment. On the other hand large waste lands are remaining unutilised, particularly when 80 percent of our waste lands are cultivable waste. The twin method of arresting this trend is taking up agroforestry, horticulture, sericulture and various such systems to make our wastelands productive and to establish industries in rural areas, particularly agro and agro processing industries.

There are many things which can be done in rural areas to overcome the economic disparity of urban and rural areas. Agro based industry is one of the solutions for it. Industries like oil mills, bakeries, Jaggery rice and Dal mills, confectionery, fruit processing, chilly powder processing etc. can be established at rural areas.

The National Bank for Agriculture and Rural Development (NBARD) is established on 12 July 1982, for providing credit for the promotion of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts and other allied economic activities in rural areas.
with a view to promoting integrated rural development and securing prosperity to rural areas. Since our 70 percent population is living in rural areas and main source for living is agriculture, it will be useful to consider the agro-industrial impact on it. An attempt is made here to ascertain the position of major industrial groups based on agriculture in Dharwad district.

i) Oil Mills:

Groundnut is an important commercial crop grown extensively in the district. The area under groundnut cultivation has increased progressively during the last 7 to 8 years. The production of groundnut during 1994-95 amounted to 44030 M.Tonnes and 1997-98 to 10195 M.Tonnes of which it is estimated that only about 75 percent is utilised locally by 5 oil mills and over 35 small oil Ghanas (oil crushers) in the district for oil extraction and the rest is sold out after decorfication. Besides, 15000 M.Tonnes of cotton seeds will also be available for oil extraction. The surrounding areas of the district (viz. Savadutti taluka, Gadag district) also contribute to the supply of oil seeds to Hubli market and Dharwad market.

The existing total number of oil mills 5 which include the largest oil mill established at Sidalingeshawar in Private sector.
Few years ago these seeds were crushed by bullock and buffalo-driven Ghana located at rural areas, since there was no power facility available in rural areas. About 70 percent of the Ghana were located in the villages. These were later on substituted by power-driven rotary mills. But even till today there are many Ghanas operating on bullocks by Ganager(Teli) community. But this process of extracting oil left about 15 percent oil in all cakes.

Oil waste by way of cake can be controlled by extraction of oil in mills. But in mills also 4 to 5 percent oil is left unextracted. The oil cakes are used as cattle feed.

In the last few years the number of oil mills has increased to a great extent. In 1994, there were only 2 mills in the district, which increased to 5 in 1998.

Investment

The total investment in plant, machinery, and building etc., amounts to Rs. 10 Crores in mills and about Rs. 80 lakhs in Ghanas. The total working capital is estimated at Rs. 15 Crores which is the medium amount of working capital required by mills. Groundnut being a seasonal crop, the mill owners have to invest big amount to purchase large Quantity of groundnut. On the contrary, Ghana owners usually extract oil from groundnuts supplied by customers as and when required. Hence they require less working capital.
Raw Materials

Groundnut is the main raw material and sunflower, cotton seed, are the other oil seeds which are also used for extraction of edible oil. These are grown in the surrounding area and are purchased in the market at Dharwad and Hubli. These markets purchase groundnut and other oil seeds from the neighbouring market such as savadatti and Gadag. The oil seeds are stocked by the mill owners during the harvest season when their prices are usually low.

Labour:

There are about 1000 persons employed in these 5 units. Apart from these about 35 oil seed crusher families are engaged in the oil extracting business. These units require usually unskilled labour for full and proper extraction of oil some semi-skilled and skilled labourers are also required. Only in a few units it seems, skilled labourers have been appointed. For testing oil cakes percentage of oil cost, expert chemists must be appointed.

Production:

Most of the mills use groundnut for extracting oil although some produce oil from sunflower and till etc. The production of 5 mills in 1994-95 was valued at Rs.200 crores when compared in 1990 the total production was valued at Rs. 80 crores. The total oil seeds crushed were 1,10,000 tonnes.
Apart from production of oil, oilcakes is obtained as the by product. It is used as a fertilizer and also for feeding the cattle. The oilcake yield depends on the quality of the seeds and the process of production.

Oil milling industry is virtually treated as a seasonal industry. As the seeds are grown in season, the manufactures have to purchase them in particular season only. Only 5 units have storing capacity for annual consumption, other units purchase the seeds as and when required. Also such units carry on crushing work only for 5 to 6 months. One of the other benefits of purchasing during cropping season is that they are available at a cheaper rate.

Finance:

Generally large mill owners purchase and store raw materials in the harvesting season. The owners of small units cannot avail themselves of this advantage due to shortage of funds. The availability of cheap credit in the busy season is the main requirement of small entrepreneurs of this industry.

Problems and Suggestions:

The main problem of this industry is uncertain supply of raw materials. Only 5 units having storing capacity, but these units also cannot store all raw materials required for the whole year of production due to shortage of funds. Due to
improper supply of raw materials the production capacity is under-utilised.

For utilisation of total production capacity, the supply position of raw materials must be improved. Warehouse may be constructed with the collective efforts of unit-holders and Government loan facilititees should provided for meeting working capital to these units for purchase of raw materials.

The other problem is continuous fluctuation of prices. The Reserve Bank of India has imposed certain restrictions on the sanctioning of loans and cash credit facilities against all seeds as they suffer from price fluctuation in the markets.

Scope:

The area under groundnut cultivation in 1997-98 was 25000 hectares, which decreased from 20000 hectares in 1971-72. This decrease was due to increase of other cropping area. Groundnut being grown as dry crop, areas left uncultivated can be brought under this cropping area and total area can be increased. Also new improved seeds must be used for more yield of groundnut. Considering these two facts total groundnut production can be increased.

On the other hand, at present only 25 percent of groundnut is used for oil extraction, which means there is
much scope for production of oil. And there is scope for establishing 6 more oil mills.

ii) Bakeries and Confectionery:
   a) Bakeries:

   India being the country of agriculturists, the main food taken for daily living is Roti (Prepared from Jawar flour or chapatis from wheat flour depending upon the availability of foodgrains and liking). The other prominent substitute for Roti is 'bread' produced in bakeries. The habit of taking readymade or canned food for daily living which is in existence in the western countries has not developed in this country. But the industrial workers and office employees prefer to have bakery food, especially bread, as it is readily available. But it is limited in urban areas. In the last 8-10 years due to increased transport facilities bakery products are being used in rural areas also. The products are consumed by both rich and poor alike.

Labour:

   Bakery industry requires skilled and unskilled labour. To work on Bhatti and mechenised machinery it requires skilled labour and for other work unskilled labour are helpful. But it is found that only a few industries have employed skilled labour.
The employees are paid on daily wage system. The rate of wage ranges from Rs. 30 to 40 a day. In rural areas wage rate is as low as Rs. 15 to 20 a day. In 1997-98 the total wage bills were estimated at Rs. 8 lakhs.

Production:

All these units produce bread, cakes, toasts, biscuits and other similar bakery products. Their total yearly production is estimated to be Rs. 50 lakhs.

The largest bakery industry viz, Spincer Bakery established at Hubli, produces all types of bakery products. A majority of the industries have arrangement with hotels and shops to sell the products. Some bakeries have opened their own sales-counters and these are located at the factory site itself.

Raw Material:

The raw material required for bakery products is wheat flour, maida, ghee, oil baking powder, yeast, ammonia, salt haps etc. The required material is purchased in the local market itself. But the industries which require the material in large quantities are purchasing it from Bombay market. Such material involves yeast, ammonia, haps, baking powder etc.
Problems and Suggestions:

The main problem facing the bakery industry is competition from well established and reputed brand products. Due to availability of Belgaum based reputed bakery products, the sales of rural bakery products have come down. Such products are available in various varieties and in attractive packings. Hence the customers are attracted towards such bakery products. On the contrary the local producers are unable to attract the customers due to financial problems, non-availability of advertising media etc. To avoid such competition production quality and variety should be increased.

Other problems involve non-availability of skilled labour and shortage of finance for the expansion of size and production of the unit.

Some short-term training should be introduced at the Industrial Training Institute for the bakery workers. This will go a long way in solving the problem of shortage of required skilled workers.

Financial institutions like KSFC and other financial institutions can help these units in the supply of long-term capital for their expansion and working capital.
Scope:

The trend to consuming readymade food on western lines is slowly and steadily developing in India and Hubli-Dharwad is no exception. The employed class people are generally preferring to have readymade food. They consume bread and biscuits on a very large scale and as such habits are developing in big cities. With the increase of industrialisation and migration of people, the demand for such food will go on increasing.

Also with the changing habit of middle class people the demand will further increase to a great extent. Hence, there is ample scope for the development of bakeries in the district.

b) Confectionery:

There are 90 units engaged in the production of confectionery of which 30 are located at Dharwad and the remaining 60 Hubli.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Units</th>
<th>No. of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>1980</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>1990</td>
<td>90</td>
<td>150</td>
</tr>
<tr>
<td>1998</td>
<td>90</td>
<td>260</td>
</tr>
</tbody>
</table>

Table No.5.16
Growth of Confectionery Units in the District : Increase of Units

Source: Annual Reports.
From the above, Table No. 5.16 it is seen that between 1970 and 1980 there has been an increase of 18 units and between 1990 and 98 there is an increase of just 20 units.

**Investment:**

The total capital invested by these 90 units comes to Rs. 60 lakhs of which 20 units are producing on power-driven machinery and the remaining are producing on hand-driven machinery. The investment in hand-driven machinery is comparatively very less.

**Production:**

The total value of production during the year 1997-98 amounted to Rs.160 lakhs (+ 5000 Tonnes) out of which about Rs.90 lakhs worth production (600 tonnes) has been achieved by two units.

**Raw Materials:**

The main raw material required is sugar, liquid glucose, food colour and essence. Sugar is purchased in the local market, but the other material is purchased from Bombay market.

**Labour:**

There are 260 workers in these units. The industry requires semi-skilled and unskilled labour. It is observed that about 80 percent employment is temporary and hence, this
industry is suffering from high labour turnover. High labour turnover and absenteeism have forced this industry for lower capacity utilisation.

Problems and Solutions:

Production of confectionery highly depends upon customers' choice and habits. With the change of customers' consumption habit production should be changed. But the small units do not have market surveying capacity and, therefore, change does not take place. They have to restrict their production to a certain extent. As a result the units are incapable of establishing large market surplus export and advertising media. A well established unit can only go in for advertisement on a large scale. The units established in the district are very small in nature; they are not in a position to spare much amount on advertisement. In fact, to be able to compete with the established units of national stature, the small regional units need better and more effective advertisement of their products, money for which can be provided by the commercial banks working in the district KSSIDC also can help for marketing the production.

The consumers are generally in the age group of 3 to 20 years which age is very well attracted to and influenced by advertising, attractive packing etc. This is not possible financially for the small units working in Dharwad district.
Mechanisation of agriculture implies the application of mechanical power in place of human and animal power, involving greater investment of capital in agriculture. It stands for the use of mechanical implements which may be power-driven, for various operations of agriculturists. Thus, the term mechanisation of agriculture includes all those operations where machine replaces human and bovine power. These operations may range from clearing of land cultivation to the marketing of agricultural produce, and can be divided into three categories, namely (I) land preparation (II) input application, and (III) output appropriation.

Agricultural implements involve plough both bullock-driven and tractor driven blade boring, pumps, shafts, pipes (both steel and PVC) flows, meter board, tractor trolly, tractor-driven razor and discs, chaff cutters, levelers, sugarcane crushers (bullock and power-driven) etc.

In the Dharwad district there are 40 agricultural implements manufacturing units.

One of which is of the great name of AIMS (Agricultural Implements Manufacturing System).

It manufactured all types of ploughs, chaff cutters, levellers, sugarcane crushers. Tractor trolly centrifugal pumps etc.
Investment:

The total investment of these 40 units is estimated at Rs.180 lakhs. Of the total capital investment 100 lakhs were consisted in land, building machinery etc. and the remaining 80 lakhs for working capital. The owners have to invest more amount for purchase of coal and coke, pig iron etc. compared to other manufacturing units. These units have longer period of working capital turnover.

Raw Material:

The main raw material required is pig iron and coal, and other raw material is scrap, sand etc. yearly requirement of pig iron is estimated at 500 tonnes.

This raw material is purchased through KSSIDC.

Labour:

Total labour engaged in the production of agricultural implements is 900. In 1997-98 the total wage bill was Rs.3 crores. Both skilled and semi-skilled labour is required for production. Apart from the productive labour, 80 office staff are engaged and the salary paid to them for the year comes to Rs. 5 lakhs.

Production:

Intensive cultivation is not possible without the use of better and improved agricultural implements. Till today outdated agricultural implements are being used by the agriculturists. Mostly wooden implements are in use, but this
trend should be changed and new improved implements should be
used to increase the agricultural production. Some 25 units
are contributing for agricultural production, with new and
improved techniques. Production includes plough disc plough
razor, leveller, drill plough, fertiliser sowing drill
plough, harrow centrifugal pumps, valves, reflex values,
tropiculture, and tractor trolley etc.

Scope:
Mechanization is possible because of the shortage of
labour and the overall development of engineering industries.
So far these two conditions are not existing in India. The
labour has been relatively cheap and the industries are more
or less underdeveloped. But on the contrary the farmers are
becoming aware of efficiently running a farm as a business.
They are calculating the inputs and the resultant production
and agriculture is no longer a way of subsistence of living.

One can have an idea of regional concentration by the
fact that Punjab, Haryana and Uttar Pradesh together account
for 60% percent of the tractors in the country, though they
account for only 18 percent of the cropped area. It means in
the agricultural conditions of India, well developed latest
implements may be used very well.

Mechanisation Benefits:
1. Mechanisation increases productivity of land, labour,
2. Better use of agricultural resources,
3. Multiple cropping,
4. Commercialisation of agriculture,
5. Mechanised farming increase the efficiency of workers,
6. Results in lower cost of work,
7. Releases manpower for non-agricultural purpose,
8. Technological improvement in agriculture, and
9. Mechanisation ultimately generates employment.

Considering these facts, it can be concluded that there is much scope for manufacturing agricultural implements. In Dharwad district at least one large scale and 8 to 10 small units may be started to meet the increased demand.