

## CHAPTER V

### INDUSTRIES

#### Introduction

THE industrial backwardness of the district of Gulbarga is apparent even to a superficial observer. Let alone the expert, even a lay man can find, from conditions in the market, that the district is considerably dependent on outside industries for even common utilities which are usually locally made in many other districts. Excepting Gulbarga town, where there are a few engineering units and a solitary large-scale textile mill and Shahabad, where there is a large cement unit, the process of industrial development has yet to begin in the other parts of the district. Modern factory-type small industries have yet to develop. Even the existing engineering units in Gulbarga town are not well-equipped and are dependent on job orders for their sustenance. It has been aptly pointed out that "the district has remained economically very backward in spite of two Five-Year Plans. The insolvency of the district's agriculture and the total lack of industrial enterprise, coupled with the absence of factors of production such as capital, individual initiative and technical skill, all point to the backwardness of the district and the need for immediate measures for initiating a process of economic development".\* In the course of this chapter, an attempt has been made to analyse the position of existing industries as also the district's resources which can be exploited for industrial purposes.

#### Industries in early days

There were no industries on a large-scale in the ancient days or during the medieval period. It was only in 1883 that a large-scale textile factory came into existence in Gulbarga town. In 1925, a large-scale cement factory was started at Shahabad. These two factories have withstood a variety of vicissitudes. Indigenous industries of a cottage type seem to have flourished in the district even during the days of the Rashtrakutas, their prosperity depending on the needs of the local population. Weaving was the prominent cottage industry providing employment to many. It has

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\*Report on Economic Survey of Gulbarga District by the Small Industries Service Institute, 1961, p. 3.

been said that, "In most of the common industries the rule was production for the local market ..... Spinning and weaving formed a major industry which occupied considerable numbers, and guilds of weavers were in a flourishing condition and took an active part in many local concerns."<sup>1</sup> Information on conditions pertaining to industry became more copious and precise after the foundation of the Vijayanagar and Bahmani kingdoms, thanks to the many interested foreigners who visited these kingdoms and left records of what they saw. Abdur Razzak (1445) described the kingdom of Vijayanagar as an area extremely large and thickly peopled, and its king as "possessing greatness and sovereignty to the highest degree, whose dominion extends from the frontiers of Serendib (Ceylon) to the extremities of the country of Kalbergah."<sup>2</sup> The Imperial Gazetteer of India published in 1908 throws a little light on the early industries and the relevant paragraphs are quoted below.

"The most important mineral found and worked extensively in the district is laminated limestone, which occurs at Shahabad on the Great Indian Peninsular Railway, Chittapur on the Nizam's Guaranteed State Railway and also in the Gulbarga and Seram taluks. The stone is known as Shahabad stone, from the name of the place where it was first quarried, and is employed largely in roofing and flooring.

"Among hand industries are the weaving of cotton and silk saris and cloth of gold and ordinary cotton cloth and cotton tweeds. In the Chincholi taluk, the shepherds make blankets of very superior quality valued at from Rs. 10 to Rs. 50, which are durable and water-proof. A large spinning and weaving mill, two miles west of Gulbarga, began working in 1886 ..... There is one ginning factory in the Seram taluk."

Next in importance to the above old-time industries were pottery, carpentry, goldsmithy and blacksmithy, which were a part of the old rural economy all over the district. Most of these industries were organised on a domestic or cottage basis and were in the hands of a class of hereditary artisans. Production was intended mainly for the requirements of the village and there was very little of export of the finished products to places outside the village. These industries, though found even now, are not as prosperous as they were in the early days. Two important causes which have brought about the decline of rural and cottage industries are firstly that machine-made goods have come into the market and secondly that the taste of people has changed as a result of contact with other regions. Hand-woven

1. "A History of South India from Pre-historic Times to the Fall of Vijayanagar" by Prof. K. A. Nilakanta Sastri 1955, pp. 316-17.

2. Ibid, p. 322

cloth gave place to mill-made cloth partly because the latter looked better but mainly because it was cheaper. A long list may be made of articles used in a house-hold which once were got from particular localities within the district but which now have been replaced by a different style of articles from outside but serving the same purpose. Large earthen pots with carvings on the top were used even in affluent households in the past for storing water. Earthen pots are not at all used by well-to-do families at present. The goldsmith, who used to make ornaments for all people—rich and poor—in the village, is now approached only by the poorer families. The more well-to-do buy jewels of finer workmanship in the large cities. Another cause for the decline of the rural industries may be attributed to their narrow specialisation and their confinement to particular castes. It is relevant to quote here: “If an industry is localised in small areas, or is confined to narrow sections of people, it is difficult to improve it or to arrest the course of its decay. If, on the contrary, it is widely practised and derives nothing from specially favourable conditions, it has great vitality and responds vigorously to stimulus.”<sup>1</sup> Again “Industries which have not petrified into caste occupations but have a relation to wide human wants and average aptitudes, have a greater chance of performance than those which have a history of narrow specialisation.”<sup>2</sup>

Large quantities of pure quartz are available in the Yadgir taluk. There are indications in some places that there were indigenous glass smelting centres in the area. In Shorapur taluk, at a place called Jamalpur, ancient furnaces and glass slags are still to be found, though at present glass is not smelted there. The most important cause for the decline of this industry might have been the importation of cheaper variety of bangles, whether of glass or lac. A population, the great mass of which was uneducated, and whose taste, such as it was, was formed by centuries of habit, was suddenly assailed by new products of a different civilisation and was unable to keep the old tastes unchanged, or to revert to them early after getting used to the new taste.

Another important industry which existed in the district from “time immemorial”<sup>3</sup> was salt manufacture. Edible and tanning salts were produced by methods of lixiviation of saline earth or by direct solar evaporation of brine from wells.

Yet another industry which has now decayed and which existed during the time of the Nizams was the manufacture of tassels for the fez caps. It has been estimated that nearly 500 women

1. Census of India, 1931, Vol. XXV, Mysore, Part I, Report, 1932, p. 229.

2. Ibid, p. 229.

3. Report on the Salt Industry of Raichur and Gulbarga Districts, Department of Industries and Commerce, Hyderabad-Deccan, 1934, p. 1.

and children were employed in this industry. It is seen from records that there were four tassel factories in the district. With the changes of time and fashion, the fez caps have become rare. The raw materials required for the manufacture of tassels are not locally available and have to be imported from foreign countries and therefore this industry has completely decayed in the district.

On the date of States' Reorganisation (1st November 1956), the district of Gulbarga had no hydro-electric power supply. But there were just two diesel power stations, one at Gulbarga and another at Yadgir, which were set up by the former Hyderabad Government in 1936 and 1937, respectively. As the existing power was found inadequate for Gulbarga town, another generating unit was added in 1954. Two more thermal power stations were established at Chittapur and Shorapur in 1959, followed by the setting up of another thermal station at Aland in 1960. Chincholi was also electrified by erecting another thermal station in 1962. Besides, more generating units were added to the existing three thermal stations at Gulbarga, Yadgir and Chincholi. In all, there were six thermal power stations in Gulbarga district in 1962, as shown below :—

1. Gulbarga— two units of 293 kw.  
                  one unit of 308 kw.  
                  two units of 150 kw.
2. Yadgir— one unit of 140 kw.  
                  one unit of 200 kw.
3. Shorapur— two units of 50 kw.
4. Chittapur— two units of 50 kw.
5. Aland— two units of 50 kw.
6. Chincholi— one unit of 50 kw.  
                  one unit of 25 kw.

Thus, before the commencement of the First Five-Year Plan, Gulbarga and Yadgir were the only two electrified places in the district, and practically no progress was made in this direction during the said Plan period. It was during the Second Five-Year Plan that Shorapur, Chittapur and Aland were electrified, while the beginning of the Third Five-Year Plan saw the electrification of Chincholi.

In addition to the above six places, Shahabad town was also electrified in July 1959 and the power was being supplied by the cement factory's generating unit. The total number of street lights in Shahabad town in 1962 was 200 and there were no domestic connections. The M. S. K. Textile Mills at Gulbarga had also a power house attached to the factory. A new power plant with the permission of the then Government of Hyderabad was installed in 1938 in the factory premises in place of the old one which was

not working properly. This power house which was called the "Bhima Power House" was also supplying electric power to Gulbarga town.

#### Hydel Power Supply

The power thus generated in the various diesel generating stations was very meagre and was not at all adequate for the progress and promotion of industries in Gulbarga district. Hence the Government of Mysore decided that the hydel power generated at the Tungabhadra Left Bank Generating Station at Munirabad should be supplied immediately to Gulbarga. Accordingly, the work of running a 110 K.V. double circuit transmission line from the generating station at Munirabad to Sindhnoor over a distance of about 55 miles was taken up in the year 1961-62 and was completed by the end of 1962. The transmission line as well as the master unit sub-station at Sindhnoor were commissioned into service on 22nd December 1962.

The next phase of work was the laying of the 110 K. V. transmission line from Sindhnoor to Raichur, a distance of another 55 miles, and constructing a master unit sub-station at Raichur. This work was also completed during June 1963 and the transmission line was charged and hydel power supplied to Raichur thereafter. Immediately afterwards, the construction work of the 110 K. V. transmission line from Raichur to Gulbarga *via* Shahapur and Shahabad was taken up, covering a distance of about 112 miles and with special river-crossing structures of a height of about 200 feet across the Krishna river with a span of nearly 2,300 feet. A master unit sub-station of 10 M. W. capacity was also constructed at Gulbarga. The entire work was completed by March 1964 and the transmission line as well as the master unit sub-station at Gulbarga were commissioned into service on 29th March 1964. Thus, Gulbarga town was supplied with hydel power, for the first time, in March 1964 along with Aland, which was also simultaneously connected with a 33 K. V. transmission line from Gulbarga.

In the meantime, another master unit sub-station of 10 M.W. capacity was also constructed at Shahabad and power to an extent of 4,000 KVA was supplied to the Shahabad Cement Works in addition to the supply of 2,000 KVA to the A.C.C. Engineering Works, also at Shahabad. The master unit sub-station at Gulbarga, apart from supplying power to the town, also provided electricity to an extent of nearly 2,000 KVA to the M.S.K. Textile Mills in the outskirts of Gulbarga town.

Soon after, 33 K.V. transmission lines were laid to Seram and 11 K.V. sub-transmission lines to Malkhed, Dandothi and Chittapur and these places were electrified during July 1964. The 33 K.V. transmission line from Shahapur to Yadgir and the 11 K.V. transmission lines from Shahapur to Shorapur and Khanapur and

from Yadgir to Gurmatkal were completed and commissioned into service during December 1964.

From Seram, the 33 K.V. transmission line was extended upto Chincholi during September 1965, while the other 11 K.V. transmission lines were further extended from Shahabad to Firozabad, Kirani, Tonasenhalli and on to Jevargi. Further radial lines were also constructed to Kadaganchi, Koralli, Kadalhangarga, Naron, Gola, Mahagaon and Kamalapur and all these places were electrified during the same period. Then again, the construction of 11 K.V. transmission lines from Shahapur to Gogi and from Shahabad to Wadi and Chittapur was also completed by September 1965, followed by the extension of the transmission line from Chincholi to Ainoli, Degalmadi and Polikapalli. In the meantime, another 33 K.V. transmission line was constructed from Gulbarga to Afzalpur *via* Gobbur and Chowdapur.

Thus, by the end of the year 1965, 33 towns and villages in Gulbarga district were supplied with hydel power, and work was in different stages of progress in respect of another 25 towns and villages. There is also a proposal to supply power to Hyderabad by constructing a 110 K.V. transmission line from Shahabad *via* Seram.

The Mysore State Electricity Board has plans to electrify 300 towns and villages in Gulbarga district by the end of the Fourth Five-Year Plan, apart from providing power to about 6,000 irrigation pump sets. The Board proposes to invest about three crores of rupees to supply power for agricultural purposes alone, *i.e.*, for irrigation pump sets, in Gulbarga district in the Fourth Plan period.

The following statement indicates the number of different types of electrical installations in the various towns of Gulbarga district as at the end of October 1965.

Sl. No.	Name of place	Domestic lighting	Commercial lighting	Heating installations	Street lights	Irrigation pump sets
1.	Gulbarga	4,259	2,014	16	1,632	26
2.	Yadgir	680	130	12	290	16
3.	Aland	477	232	..	582	25
4.	Chincholi	223	78	..	268	..
5.	Shorapur	613	116	1	349	..
6.	Chittapur	440	181	1	274	6
7.	Shahapur	89	87	..	200	..
8.	Seram	61	12	..	194	1
9.	Shahabad	164	121	..	393	..
10.	Jevargi	11	26	..	53	..
11.	Kamalapur	92	35	..	97	2
	Total	7,109	3,122	30	4,332	76

**Cement  
Industry**

The Shahabad Cement Works, one of the largest of the several cement factories owned by the Associated Cement Companies Limited, is situated at Shahabad on the Bombay-Madras line of the Central Railway. This cement factory started working in 1925 with Messrs. Tata Sons as managing agents. It started production with an annual capacity of 40,000 tons of cement and in 1929, the plant was expanded to give an output of 1,25,000 tons per year by installing a second rotary kiln. In 1936, the factory was taken over by the Associated Cement Companies Limited, who now own and run a chain of cement factories. The Shahabad Cement Works had the distinction, before the re-organisation of States, of being the only cement factory in the Hyderabad State and has now become one of the four cement factories in the New Mysore State, the other three being situated at Bhadravathi (Shimoga district), Bagalkot (Bijapur district) and Ammasandra (Tumkur district). The Shahabad Cement Works which was started in 1925 with one rotary kiln of a rated capacity of 40,000 tons a year has steadily grown and to-day, it has five kilns with an aggregate capacity of 5,68,000 tons of cement a year. While expanding the factory, measures have been taken to modernise the plant in order to achieve efficiency.

The Shahabad Cement Works obtains its principal raw material—limestone—from its quarries situated some three miles from the factory. This raw material which is required for the cement industry is not only available in plenty in the vicinity of the present factory but also in Shorapur taluk. Coal is used as the principal fuel in the manufacture of cement, and is obtained from collieries of Kotna, Singareni, Nowrozabad, Asansol and Ranigunj. Iron ore is obtained from Hospet and Banasandra. Gypsum of the required quality is obtained from Ariyalur and Pullambadi. The red clay comes from the quarry about a mile away from the factory. These quarries have been almost completely mechanised. Limestone and murrum are transported from the quarries to the Works by means of a broad gauge electric railway system owned and operated by the Associated Cement Companies.

As regards transport facilities, the factory is very close to the Shahabad Railway Station which is on the Madras-Bombay broad gauge railway. Wadi, which is also not far off from Shahabad and which is a junction from where a railway line branches off to Secunderabad, has added to the transport facility of the factory. The factory is located in an ideal place which has all the necessary facilities for the location of industrial units.

At the Works, the limestone boulders as received from the quarry are broken up in the crushers. The resulting small pieces of stone are then taken on rubber-belt conveyors either to

storage or direct into the raw mill stone hoppers. The red clay, locally called as *murrum* is similarly crushed and then transported to the *murrum* hoppers. These materials are then fed into the mills in regulated quantities along with the required quantities of water to be ground into a thin paste called 'slurry'. This 'slurry' is pumped through pipe lines to storage silos where it is corrected to the required composition. It is then ready for the next operation and is taken into the mixer basins where it is constantly agitated by means of compressed air and mechanical stirring. From the mixer basins, it is pumped into the kilns in automatically regulated quantities. The kilns are mounted at a slight incline and while 'slurry' is fed into the upper end, finely pulverised coal is injected with a blast of hot air under pressure and is burnt at the lower end of the kiln to produce a 'burning zone' with a temperature of about 2700°F.

When it enters the kilns, the 'slurry' first comes into contact with the hot gases and promptly loses its moisture. The dry material as it moves further down the kilns comes into contact with increasingly hotter gases and undergoes calcination. When the calcined material enters the 'burning zone' of the kilns, it fuses and at the same time undergoes a complete chemical transformation and finally emerges from the discharge end of the kilns in the form of hard dark green pellets called 'clinker'.

The clinker is transported by means of shaking conveyors and bucket elevators to the crane storage from where an electrically operated overhead travelling crane delivers it to the cement mill hoppers. The final stage in the process is the grinding of clinker together with a small proportion of gypsum (about five per cent) in the cement mills. (The gypsum helps to determine the time the finished cement will take to set). The resulting cement is conveyed through pipe lines by fluxo-transporters actuated by compressed air to large cement storage silos. Cement from the silos is conveyed by air-slides and bucket elevators to automatic packing machines. These machines discharge the packed bags on to the belt conveyors from where the bags are loaded into wagons placed on either side of the packing platform. At every stage of the manufacturing process, hourly quality control tests are carried out on the various intermediate products. The cement is also subjected to various tests as required by the Indian Standards Specification.

From 1961 to 1965, about 25,000 metric tonnes of oil-well cement was also manufactured at the Shahabad Works and dispatched to the various oil fields belonging to the Oil and Natural Gas Commission.



The following is the financial picture of the Associated Cement Companies\*.

Year	Total invested Capital (Capital Plus Reserves and surplus)	Fixed Assets	Current Assets (including investments)	Value Realised	Dividend Declared
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(Figures in lakhs of Rupees)

	Rs.	Rs.	Rs.	Rs.	Per cent
1956-57 ..	2,626-37	2,107-45	1,950-31	2,239-01	9
1957-58 ..	3,038-70	2,435-67	2,015-39	2,534-87	8.5
1958-59 ..	3,017-24	2,720-67	1,743-93	2,637-78	11
1959-60 ..	2,985-95	2,630-38	1,800-84	2,793-50	12
1960-61 ..	2,976-90	2,636-02	2,115-84	3,087-41	12
1961-62 ..	2,960-18	2,678-49	2,342-48	3,506-94	12
1962-63 ..	3,184-91	2,849-18	2,731-38	3,745-20	12
1963-64 ..	3,183-90	2,994.12	2,931.01	3,921-07	12
1964-65 ..	3,181-46	3,190-72	3,113-31	4,173-76	12

\*\*Subject to Income-tax.

The total profits earned by the Associated Cement Companies Ltd., during 1963-64 were Rs. 2,13,83,283 and Rs. 1,70,11,829 during 1964-65.

The following figures show the production of cement from 1940-41 to 1964-65 by the Shahabad Cement Works.

Year	Production (tons)
1940-41	1,42,000
1945-46	1,55,000
1950-51	1,76,000
1955-56	3,73,494
1960-61	4,84,000
1964-65	5,68,000

The total number of persons employed by the Works at the end of March 1964 was 1,720. The cement produced by the Shahabad factory is marketed through authorised selling agents mainly in

\* The Associated Cement Companies, Ltd., own and operate 16 cement factories, two collieries, one firebricks and one refractory and engineering works. Each year only a combined profit and loss account is prepared and separate profit statements for individual factories are not made out.

Mysore, Andhra Pradesh and Maharashtra State. The Government have recently permitted the Associated Cement Companies to expand the existing capacity of portland cement production at Shahabad by another 65,328 tons a year. The Government have also issued necessary industrial licences to the Engineering Works of the company, also at Shahabad, to take up other new lines of production. Industrial licences to manufacture mining and electrical machinery with an installed capacity of 3,000 tons per annum, cement-making machinery with an installed capacity of 12 units per annum, solvent extraction plants of a capacity of six to eight units, paper and pulp-making machinery of an annual value of Rs. 80 lakhs and electrical overhead travelling cranes upto 50 tons capacity have been issued. The Shahabad Cement Works, with its present activities and future programmes detailed above, will soon be one of the largest cement plants in the country and being situated at a strategic point as far as the market is concerned, will play an important part in the country's development.

In addition to the Shahabad Cement Works, the Associated Cement Companies Ltd., have also decided to establish another cement factory at Wadi, five miles from Shahabad with an initial production capacity of four lakh tons per annum. The necessary industrial licence has been granted to the Company and it is expected to start work shortly. The factory is expected to commence production in 1968.

Besides, the Cement Corporation of India Ltd., a Government of India undertaking, has also proposed to set up a cement factory at Seram, 31 miles from Gulbarga, with an installed capacity of four lakh tons of cement per annum. This capacity is proposed to be maintained in two stages, the first stage to commence from 1969 with a production of 3 lakh tons and the second stage thereafter. It will be a private limited company in the public sector. As regards the plant and machinery for the factory, it is stated that the entire plant to be imported would cost over Rs. 3 crores and equipment worth about Rs. 30 lakhs would be acquired from indigenous sources. The requirements of power and water of the factory are estimated at 7,000 K.W. and 10 lakh gallons per day respectively. No foreign collaboration is envisaged in setting up this factory.

The Mahboob Shahi Kulbarga Mills Co., Ltd., Gulbarga, **Textile Industry** was established as early as 1883. Messrs. Sabhapathy Iyah and Akhilandayya, who hailed from Bangalore, approached the Nizam's Government for a *Sanad* to establish a cotton spinning and weaving mill at Gulbarga. The Government granted a *Sanad* in the name of Sabhapathy and Company and it was registered in Madras on 19th July 1883 under the name and the style of the "Mahboob Shahi Mills of the Kulbarga Mills Company, Limited"

with an authorised capital of Rs. 12 lakhs divided into 2,400 shares of Rs. 500 each. The foundation-stone of the Mills was laid on 10th January 1884. A legal flaw having been discovered in regard to the constitution, the company had to be wound up, reconstituted and again registered in Bombay on the 24th August 1888 under the Indian Companies Act of 1882, under the name and style as obtains today. In March 1888, an agreement was concluded between Mr. Sabhapathy Iyah and Khan Bahadur Shapoorji Edulji Chenai, whereby the latter was admitted to the company as a partner in the form of managing agent. Mr. C. Sabhapathy Iyah practically severed his connection with the company from 1889 onwards, when Khan Bahadur Shapoorji Edulji Chenai became the sole proprietor. He was associated with the company for 37 years. After his death in 1924, his sons became the managing agents and managed it for 3 years. This textile mill came under different managements till 1960, and when it was about to founder on the rock of financial stringency, the Government of Mysore secured controlling interests in this mill as a prerequisite for advancing initially Rs. 15 lakhs towards the working capital for enabling the mill to pay off its immediate financial commitments. The Government of Mysore is now holding 51 per cent of the shares of the company and so far, it has advanced loans to an extent of Rs. 112 lakhs, exclusive of the debentures purchased by the Mysore State Financial Corporation and the Government of Mysore to the tune of Rs. 14½ lakhs.

The mill started working with a modest complement of one engine, three boilers, 5,000 spindles and 200 looms with necessary preparatory machinery. In 1906, the boilers were found to be incapable of supplying sufficient steam and hence they were replaced by three water tube boilers. Between the years 1906 and 1909, the company invested about three lakhs of rupees on renewals and replacements of machinery, installation of humidifiers and electricity. At the end of 1909, there were 24,500 spindles and 350 looms in the mills. A fourth boiler was purchased in 1913. In 1916, there were 29,000 spindles and 360 looms and a supplementary engine was secured with which the major portion of the weaving section was worked. The humidification plant that was installed in 1906 was old and quite worn out; hence an up-to-date humidification plant was purchased in 1922. By this time the number of looms in the mills had gone up to 390. In 1926, the antiquated roller cards were replaced by flat cards to enable turning out of better yarn. The mills had now 100 carding engines and 77 ring spinning frames with the preparatory machinery. The number of looms and spindles in 1953 were 598 and 28,336 respectively which increased to 606 looms and 35,000 spindles by 1962.

As regards the financial position of the company, it was started with less than five lakhs of rupees of paid-up capital; but the

agents borrowed money and invested about 16½ lakhs of rupees on machinery and buildings at the outset. During the first period of 27 years, the gross profits earned amounted to Rs. 21,46,835 without providing for depreciation. The total amount of depreciation written off during the period amounted to Rs. 4,85,635. The cost of buildings and machinery up to the end of 1914 amounted to Rs. 20,85,270. Between 1915 and 1923, the gross profits earned rose up to Rs. 60,06,418. The period between 1927 to 1938 was a period of steady progress and plant and machinery worth rupees 13 lakhs were added. From 1940 to 1953, the mill worked satisfactorily and in 1940, 1943, 1945, 1947, 1950 and 1953, the company declared dividends to its share-holders. After 1953, the factory was working without any profit or at times with losses till 1962 when it was closed for want of finances. The Government of Mysore stepped in to restart the mills in 1963. On 30th September 1964, the total assets of the concern were worth Rs. 47,79,282.

The total number of persons employed in 1965 was 2,600 with a monthly wage bill of about Rs. 3 lakhs. The following were the production figures of the mills from time to time :—

<i>Year</i>	<i>Yarn in lbs.</i>	<i>Cloth in yards</i>
1922	2,186,805	886,705
1938	4,922,746	2,171,905
1952	5,205,569	14,884,502
1960	4,697,783	13,099,743

Initially, the factory was producing only coarse cloth, but now finer varieties of cloth are also being produced.

Narayandas Brothers' Oil Mills is another fairly large-scale industry in Gulbarga, located in the Nehru Ganj area on Humnabad road. Started as a small-scale industry in the year 1952, the mills gradually developed into a large-scale industry and registered as such in the year 1964, with the installation of a solvent extraction plant of 50 tons' capacity. It employs on an average about 120 persons per day. **Oil Mills**

During 1963-64, the mills extracted 2,286 tons of groundnut oil and produced oil cakes to the extent of 3,380 tons. Besides, 648 tons of solvent oil out of cake and 8,000 tons of de-oiled cake were also produced during the same year.

A Government Branch Press was established in Gulbarga in January 1963, with an initial investment of about Rs. 1.47 lakhs and a staff strength of 65, headed by a Deputy Director. This press at present undertakes the Government printing works of the four districts of Gulbarga, Raichur, Bidar and Bellary. **Government Branch Press** Printing

works of the semi-government establishments of this region are also undertaken on chargeable basis.

To start with, the press was located in the jail barracks attached to the Central Prison, Gulbarga. A new and up-to-date building, costing about Rs. 10 lakhs, is being constructed on the M.S.K. Mills road, which is expected to be completed by the end of 1966. An eight-acre plot of land has also been acquired on the Jevargi road for putting up quarters for the staff working in the press. There are also proposals to instal more machinery and equipment and correspondingly increase the staff-strength of the press after it is shifted to the new building.

### Small-scale Industries

As stated already, modern factory-type small-scale industries have not developed to any appreciable extent in Gulbarga district. It is only in Gulbarga town that there is some activity in this sector. The most important of the small-scale industries in the district, which are mostly concentrated in Gulbarga town, are the manufacture of agricultural implements, saw mills, furniture manufacture, automobile workshops, engineering repair shops, tyre-retreading and leather footwear making. Details regarding investment, employment and output of some of the small-scale industries in the district are summarised below.

#### SMALL-SCALE INDUSTRIES IN GULBARGA DISTRICT (1965)

<i>Sl. No.</i>	<i>Type of Industry</i>	<i>No. of Units</i>	<i>Persons employed (approximate)</i>
1.	General Engineering .. ..	11	50
2.	Automobile Workshops .. ..	5	30
3.	Agricultural Implements and Builders' Hardware.	24	120
4.	Wooden Furniture .. ..	8	45
5.	Saw Mills .. ..	18	90
6.	Tyre Retreading .. ..	4	16
7.	Leather Footwear .. ..	30	120
8.	Blacksmithy .. ..	24	50
9.	Electroplating .. ..	1	2
10.	Soap Manufacture .. ..	6	25
11.	Bakery and Biscuits Manufacture .. ..	2	25
12.	Cart Making .. ..	18	54
13.	Cement Spun Pipes and allied products	2	30
14.	Steel Furniture .. ..	1	8
15.	Fuller's Earth Processing .. ..	1	8
16.	Confectionery .. ..	1	5
17.	Electrical Repair Shops .. ..	4	14
18.	Printing Presses (other than Government Press).	15	50

The small units in the general engineering group manufacture oil engines and automobile spare parts against orders and also accept repair of oil engines and general welding and turning work. There were 11 units in the district in 1965 of which 9 were located in Gulbarga town, one at Yadgir and one at Shahapur. The capital investment of these concerns amounted to about Rs. 1,25,300. They had provided employment to 50 persons and the value of their output amounted to Rs. 56,400 during 1964-65. These units depend on job orders and the machines employed by them are obsolete and require replacement. A few of the units which manufacture pistons get their casting from foundries in Sholapur and Belgaum. The workers in these units are not technically well qualified and are also not well-equipped to take up new lines of manufacture. Added to these, the financial inadequacy is acting as a factor inhibiting the progress of this industry. In view of the fact that there is demand for the products of these units, the prospects of expanding the production activity of these workshops are fairly bright. However, these units require technical guidance, training facilities for workers and financial assistance both for the purchase of equipment and for meeting working capital needs, so that they can modernise their workshops and take up manufacture of new products instead of confining themselves to repair services. It is also necessary that these workshops should be able to obtain castings locally instead of depending on the foundries outside the district. At present there is only one such foundry at Gulbarga in the private sector.

**General  
Engineering**

There were five small-scale automobile workshops in the district, three at Gulbarga and two at Yadgir. These units had an investment of about Rs. one lakh. They had provided employment to 30 workers and turned out an output valued at about Rs. 40,000 during 1964-65. These units are not well-equipped at present and require additional machinery. There is very good scope for the expansion of these workshops as motor vehicle traffic in Gulbarga district is very heavy. In view of the meagre railway communications in most parts of Gulbarga and Bidar, the dependence on road transport is very great and this is expected to increase substantially in the future. Although the existing workshops are meeting the service requirements of the vehicles in the district to some extent, for any major repair, the vehicles are at present taken to Hyderabad. If, therefore, the existing workshops are assisted by way of additional machinery and equipment, they will be able to provide better automobile workshop facilities.

**Automobile  
workshops**

There were in all 24 units belonging to this category, and the products manufactured by them included agricultural implements, such as ploughshares, spades, sickles, axes and buckets and builders' hardware such as door and window fittings and gate-hooks, pots etc. The total investment in these units in 1964 amounted to

**Agricultural  
Implements  
and Builders'  
Hardware**

Rs. 2.9 lakhs with an employment of 120 persons and output valued at Rs. 3,21,000 approximately. All the 24 units manufacturing agricultural implements are centered in Gulbarga town. These units may be better described as traditional blacksmithies using hand-operated implements and tools. The production activity is not carried out on modern lines. As a result, the quality and finish of the implements and other products made by them are not up to the mark. Not only is there need for a considerable degree of mechanisation of the units, but the workers employed by them also require training in modern techniques of production. The market prospects for agricultural implements and builders' hardware are quite bright and the demand for these products is expected to increase substantially. There is, therefore, good scope for the expansion of the activities of the existing units and also for the setting up of a few additional units for the manufacture of modern agricultural implements and builders' hardware.

**Wooden  
furniture**

There were eight small-scale units in Gulbarga town engaged in the manufacture of wooden chairs, tables, stools, cots, racks etc. Their investment was estimated at Rs. 94,000. In 1965, they employed 45 persons and produced furniture valued at Rs. 1,50,000 approximately. The demand for wooden furniture is quite large and raw materials required for the manufacture of the same are also available in the Gulbarga district. The production activity of these units needs to be considerably mechanised and for this purpose the units require power-operated wood-working machinery. In order to improve the quality of the products, the units require a wood-seasoning plant which would help these units not only to expand their output but also to improve the quality of the products they are now making.

**Saw Mills**

The number of saw mills in the district was 18 and of these, all but four were located in Gulbarga town. The remaining four were located in Shorapur and Aland taluks. These units had invested about Rs. 2 lakhs. The number of persons employed by them during 1965 was 90 and the output turned out was valued at Rs. 1,75,000. As indicated earlier, the market prospects for furniture are quite bright and some of the well-organised among the saw mills can also take up the manufacture of wooden furniture and wooden door and window frames required in the house-building industry.

**Tyre  
Retreading**

There were four units in Gulbarga town engaged in retreading of tyres. These had an investment of about Rs. 32,000 and employed 16 workers. The value of retreading service provided in 1965 was estimated at about Rs. 1.5 lakhs. In view of the heavy motor vehicle traffic in the district, there is considerable scope for the expansion of these units.

Leather tanning is an important industry for which the necessary raw materials are available in good quantities in the district. But the industry has not been well-organised and developed. A recent survey of the tanning industry conducted by the Small Industries Service Institute has shown that raw materials such as hides and skins and tanning materials such as avaram bark (tadwad bark) and myrobalan are available in the district but instead of being used locally, they are collected by agents and exported to Hyderabad and Madras. On an average, about 1,000 cow and bull hides and 2,000 sheep and goat skins are available per month. The hides which are collected in the district at cheap prices are of good quality and fetch a higher price in Madras. At present, only ox hides are tanned by local tanneries and sold to foot-wear manufacturers. Tanning in the district is carried on in a crude form as a part-time avocation by those who are otherwise employed in agriculture. There are no organised tanneries, large or small. In most places, tanning is done in natural shallow pits formed below ground level and well-constructed cement pits are few. The tanners as a class are financially poor and unable to buy raw hides and tanning materials. Each cottage unit tans about two or three hides per month and sells them to mochis on bazaar days. Efforts are, however, being made by the State Government to organise the tanners into industrial co-operatives. The Mysore State Khadi and Village Industries Board is also assisting the development of the industry. The Board provides financial assistance to societies, both in the form of grants and loans, for the organisation of flaying centres and village model tanneries. It also gives subsidy upto Rs. 200 to village artisans for the construction of new tanning pits and a subsidy to the extent of Rs. 40 is also given for the repair of old pits. Till 1965, 15 industrial co-operatives of tanners had been formed in the district and several of these had already availed themselves of the Board's assistance.

**Leather  
Tanning**

There were, in 1965, 30 units, all located in Gulbarga town, engaged in manufacture of chappals and shoes. These units had invested about Rs. 7,000 and employed 120 workers. During 1965, an output valued at about Rs. 1.5 lakhs was turned out by these units. The market prospects for leather footwear are quite good and Gulbarga chappals are reported to be quite popular in the surrounding areas. These units, however, require technical guidance in improving the quality of their products. They should also consider the manufacture of other leather goods such as suit-cases in addition to footwear, as there is good demand for the same. One of the problems of these units is, however, the non-availability of good quality leather which they are now importing from outside the State. If the tanning industry is well-organised and the hides available in the district are tanned locally, this problem can be met to a great extent.

**Leather  
Footwear**



**Handloom  
Weaving**

The handloom weaving industry, as the premier cottage industry, has contributed its share in building up the economy of Gulbarga district. It was estimated that there were 16,500 handlooms in the district in 1965, with a total artisan population of about 20,000. More than 60 per cent of the looms had been brought into the co-operative fold at the end of the Second Plan period. Twenty-one cotton weavers' societies, six woollen weavers' societies and five silk weavers' societies had been organised with a view to developing the unorganised handloom industry on healthy lines and also for channelising both technical and financial aid to the industry. The weavers' co-operative societies had been sanctioned considerable amount of loans as working capital as well as share capital, both from the cess fund and also from the scheme sponsored by the Reserve Bank of India.

As the weavers were generally using outmoded tools and implements, various improved appliances such as take-up motion attachments, dobbies and warping drums have been supplied to them. Assistance has also been provided for conversion of pit looms into frame looms. The Mysore State Cotton Handloom Weavers' Co-operative Society arranges for the purchase and distribution of the equipments to the weavers' co-operative societies. The following statement gives the details of power looms allotted to the cotton handloom weavers' co-operative societies of Gulbarga district under 'power looms scheme' as at the end of 1964-65 :—

Statement showing the details of power looms allotted to the Cotton Handloom Weavers' Co-operative Societies of Gulbarga district under Power Loom Scheme as at the end of 1964-65.

Sl. No.	Name of Weavers' Co-operative Society to which power looms were allotted	Total Number of power looms allotted	Total Number of power looms erected	Total Number of power looms commissioned	Power loom loan advanced in the form of machinery	Working capital and share capital loans advanced	Financial Assistance made for preparatory equipment		Power connection charges advanced as grant	Servicing charges advanced as grant
							Loans	Grants		
					Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1.	W.C.S. Mominpura ..	25	11	..	62,500	..	..	2,100	..	720
2.	.. Kamalapur ..	25	12	6	62,500	12,800	2,100	2,100	..	720
3.	.. Aland ..	24	24	5	62,500	15,911	2,625	2,625	..	900
4.	.. Hiroli ..	12	12	6	30,000	13,050	2,100	1,050	..	360
5.	.. Madan Hipparga ..	25	25	25	62,500	12,800	2,100	2,100	..	720
6.	.. Rangampet ..	15	6	6	37,500	15,632	2,625	2,625	900	900
7.	.. Thimmapur ..	6	..	..	15,000	..	..	..	..	..
8.	.. Khanapur ..	6	6	..	15,000	..	..	1,050	..	360
9.	.. Shahapur ..	12	..	..	30,000	..	..	..	..	..
10.	.. Gogi ..	15	..	..	37,500	..	..	2,625	..	900
11.	.. Chandarki ..	25	12	12	62,500	12,758	2,100	2,100	..	720
12.	.. Gurmatkal ..	12	6	..	30,000	..	..	1,050	..	360
13.	.. Chittapur ..	4	4	..	10,000	..	..	525	..	180
14.	.. Mudhol ..	25	12	..	62,500	..	..	..	..	..

To promote the marketing of handloom goods by the weavers' co-operative societies, assistance had been given to set up sales depots and eight such depots had been started in the district till 1962. The following statement shows the production, sales, number of registered looms and number of persons engaged in the handloom industry in the district in 1962 :—

	Registered looms	Produc- tion in yards	Sales in yards	Rebate sanctioned	No. of persons engaged
				Rs. P	
Cotton looms	.. 10980	23,62,783	27,78,962	1,21,959-47	23,251
Woollen looms	.. 832	3,707	2,957	..	794
Silk looms	.. 470	32,047	19,859	..	365

Further, seven dye-houses had also been sanctioned to the weavers' societies. In addition to supplying various improved tools and appliances to the weavers' societies, two housing colonies, one for the Gogi cotton weavers' society consisting of 100 houses and another for the woollen weavers' society of Konkal with 24 houses had also been sanctioned. The total expenditure incurred on several handloom improvement schemes in the district during the Second Five-Year Plan was Rs. 16.87 lakhs. A provision of Rs. 28.39 lakhs had been made for the development of handloom industry in this district during the Third Five-Year Plan period. Among other things, two dye-houses and a calendering and finishing plant were to be set up in the district.

#### Beedi manufacture

During 1964-65, there were eight beedi factories registered under the Factories Act in Gulbarga district. About 400 persons were employed in these factories, the number of women workers being larger than the number of men workers. The process of beedi-making is very simple. The principal ingredients in the manufacture of beedies are tobacco flakes called "bhuka" and the wrapper leaves, commonly known as "tendu" or "tembhuri" leaves. The quality characteristics desired in beedi leaf are that it should be of medium thickness, pliable, large-sized and greenish yellow or light copper-red in colour. The wrapper leaves are first cut into rectangular pieces of the desired size. These are soaked in water to make them pliable. The wrapper is held by the worker in his left hand and the tobacco mixture is placed on it and spread evenly along the line. The wrapper is then rolled between the fingers into a conical shape. The lower end is closed by bending it inside with the fingers while the tapering end is tied with a piece of thread. The annual production had been estimated at about 30,000 lbs. which were consumed mostly in the districts of Bidar, Raichur and Gulbarga. There were two Beedi Workers' Co-operative Societies, one each at Chittapur and Yadgir with a membership of 140 and 41 and a share-capital of Rs. 700 and 610 respectively.

A system of collecting important particulars of smaller industrial units in order to help the unorganised small-scale industries to prosper by giving them the needed assistance, wherever necessary, in the shape of financial aid, technical advice, supply of basic raw materials and other commodities was started by the Directorate of Industries and Commerce during 1960-61. The small industrial units were requested to get themselves registered in the said Directorate and to furnish quarterly production statistics in the prescribed *pro forma* so as to enable Government to have a clear picture of the position of small-scale industries in the State. Up to December 1965, 51 small-scale industrial units had got themselves registered in Gulbarga district. Of these, 14 were basic metallurgical industrial units, 12 engineering industrial units, six processing industrial units, seven food, drink and tobacco industrial units, four mineral industrial units, four chemical industrial units, one textile unit and three miscellaneous industrial units. Most of these industrial units, *i.e.*, nearly 40 of them, were concentrated in Gulbarga town and its outskirts, while the rest were dispersed in Wadi, Yadgir, Shorapur, Aland, Saidapur and Chincholi.

**Registered  
Small-scale  
Industrial  
Units**

A number of industrial co-operatives were organised in the district under the successive plans with a view to helping small industrialists of the district in various ways. In 1964-65, there were, in all, about 60 industrial co-operative societies in the district for village oil, leather, handicrafts and other miscellaneous types of industries.

**Industrial  
Co-operatives**

Prior to the re-organisation of States, there were three Artisan Training Institutes, one each at Kamalapur, Yadgir and Gulbarga. These were the Rural Arts, Crafts and Industries Centre at Kamalapur and the Village Industries Development Centres at Gulbarga and Yadgir. In 1959, the Village Industries Development Centre at Gulbarga was closed down and the other two centres were re-organised and renamed as the Rural Artisan Training Institutes. Thus, there are now only two such institutes in the district, one each at Yadgir and Kamalapur; the latter has a branch at Mahagaon. These training centres had their own syllabus and method of training before 1959. With a view to bringing about uniformity in the system of training and syllabus, the department was reorganised and the above two institutes were reshaped in 1959. The Rural Artisan Training Institute at Kamalapur imparts training in smithy, carpentry and leather stitching and the branch centre at Mahagaon, in the manufacture of glass beads.

**Rural Artisan  
Training  
Institutes**

The training institute at Yadgir imparts training in smithy, carpentry, tailoring, woollen weaving, leather stitching and cotton weaving. Candidates for training are recruited annually and each candidate gets a stipend of Rs. 30 per month.

**Model Carpentry and Smithy Centre, Gulbarga.** The Model Carpentry and Smithy Centre, Gulbarga, was started in the year 1958 and it is the only model centre functioning in the district. Till March 1965, 199 candidates, in all, were trained in this centre in modern methods of carpentry and smithy. The total value of the products made in the centre upto the end of March 1965 was Rs. 42,771 while the total value of the sales effected upto the same period was Rs. 36,491. A scheme for starting an upgraded smithy centre was taken up during the Second Plan period and the centre started functioning in October 1965.

**Training-cum-Service Centre for Mechanical Workshop Practice** A Training-cum-Service Centre for mechanical workshop practice was started in Yadgir in April 1965. Though this centre was sanctioned in 1959 under the Second Five-Year Plan, the erection of building and machinery was completed only during 1964-65 and it started functioning soon after. Besides imparting training, common servicing facilities are also provided to the artisans in this centre on a nominal payment. The duration of training is one year and 15 candidates are being trained at a time. Each trainee is paid a stipend of Rs. 30 per month during the period of training.

**Training Centre for manufacture of footwear** To provide training to cobblers in the manufacture of quality footwear utilising the latest mechanical equipment and techniques, a training centre has been established in the district. The centre has already started functioning in the Industrial Estate at Gulbarga. Provision for common servicing facilities to cobblers on nominal payment has also been made in the centre. The duration of training is one year and 15 trainees are admitted at a time. Each trainee is paid a stipend of Rs. 30 per month during the period of training.

**Pile Carpet Training Centre, Gulbarga** With a view to extending training facilities to the local artisans in the manufacture of pile carpets incorporating the latest designs, a training centre was started in Gulbarga in April 1961 under the handicrafts scheme. Upto 1964-65, 45 candidates, drawn from both Gulbarga and Bidar districts, had been trained in this centre.

**Handicrafts Emporium, Gulbarga** In order to give a fillip to the development of handicrafts, a Handicrafts Emporium was started at Gulbarga in February 1960. This scheme which was initiated by the All-India Handicrafts Board is meant for the benefit of rural and urban handicraft artisans and to find a market and give wide publicity for their products. The emporium keeps handicrafts articles, on consignment basis, received from several Government institutions, industrial co-operatives and private individual artisans from all over the State. It was decided during 1961-62 to make purchases of articles from several societies and individuals to achieve better sales and for this purpose, an amount of Rs. 15,000 was expended.

During the same year, a sum of Rs. 13,700 for recurring expenditure and Rs. 10,000 for purchase of handicraft articles were allotted. During the Third Five-Year Plan, a sum of Rs. 0.55 lakh had been provided to meet the expenditure of the emporium at the rate of Rs. 0.11 lakh per year. The administrative control of this emporium was transferred to the Mysore State Handicrafts Development Corporation in 1964.

The Department of Industries and Commerce is giving monthly grant-in-aid to home industries institutions in the State for undertaking home industrial activities such as tailoring, embroidery, knitting, rattan work, mat and cloth weaving. Besides, equipment like sewing machines, cloth and mat-weaving looms have also been supplied to some of the institutions. There were three Mahila Mandals in Gulbarga and the State Government were giving monthly grant-in-aid to each of them.

Machinery worth about Rs. 2.85 lakhs was supplied to about twenty units in Gulbarga district on hire-purchase basis upto 1965. The names of the industries and the value of the machinery supplied along with the number of industrial units under each industry are detailed below :—

<i>Sl. No.</i>	<i>Type of Industry</i>	<i>No. of industrial units supplied</i>	<i>Value of machinery supplied</i>
			Rs.
1.	Steel Furniture .. ..	2	15,000
2.	Machine Shops .. ..	6	37,324
3.	Bucket Manufacture .. ..	1	20,000
4.	Printing .. ..	2	4,400
5.	Saw Mills .. ..	3	30,564
6.	Miniature Bulbs .. ..	1	3,500
7.	Utensils .. ..	2	7,000
8.	Fuller's Earth Processing .. ..	1	1,43,000
9.	Tailoring .. ..	1	5,000
10.	Automobile .. ..	1	20,000
	Total .. ..	20	2,85,788

**Industrial Estates**

The growth of small-scale industries has been greatly hampered by the absence of proper locational facilities, power, water supply and communications. To overcome these difficulties, a number of industrial estates with different types of worksheds providing accommodation for the planned installation of machinery have been established all over the State. In the district of Gulbarga, two industrial estates, one at Gulbarga and another at Yadgir, were sanctioned.

The Industrial Estate at Gulbarga was sanctioned at an estimated cost of Rs. 5.13 lakhs with 16 worksheds, during the Second Plan period. All the worksheds were completed by 1965 and a few of them had been occupied by some industrial units. Concession to the extent of 42 per cent of the economic rent is given to the occupants of the worksheds in the estate and they are charged a rent at seven paise per sq. ft. of covered area per month for a period of two years with effect from the date of occupation of the sheds. It is proposed to increase the rent after two years at the rate of one paise per sq. ft. per month every year till the economic rent of 12 paise per sq. ft. per month is reached. This arrangement will greatly help the small-scale industrialists, particularly in the initial stages.

An Industrial Estate at Yadgir with ten worksheds at an estimated cost of Rs. 2.33 lakhs had also been sanctioned and construction of worksheds was under way.

**Development Areas**

Development areas are plots of developed lands to be made available to the small-scale industrial units so that they have the advantage of common services and other facilities like good site, electricity, water supply and sanitation. The sites would be available to small-scale industrialists either on outright sale or on hire-purchase basis, so that they can put up their own worksheds according to approved designs. During the Third Plan period, one such development area was being located in the district.

The industrial estates and development areas were being provided with a common facility centre or a workshop equipped with modern machinery, which the small industrialists could not afford to purchase by themselves. The centre, in addition to affording services to the industries on payment of nominal service charges, will also disseminate technical know-how to the workers engaged in the small-scale industries located in the estate.

**Co-operative or Private Industrial Estates**

The establishment of two or three industrial estates or development areas in a district will not completely solve the ever-increasing problem of accommodation of the small-scale industrialists and, therefore, with a view to establishing more industrial estates, the Government formulated proposals to render all possible

help and encouragement to industrialists who came forward to establish such estates either on a co-operative or a joint-stock basis.

In the district of Gulbarga, agriculture is the mainstay of the people and the proper utilisation of agricultural produce will help industrial development. Among the agricultural raw materials of economic importance may be mentioned groundnut and cotton. The total area under these crops during 1963-64 was 2,04,482 acres and 1,81,111 acres, respectively. The neighbouring districts, *viz.*, Raichur, Bidar and Bijapur, are also known for these crops. At present, there is only one textile mill at Gulbarga and a couple of oil mills in the district. There is ample scope for starting more textile mills, ginning factories and oil mills in the district.

**Industrial  
Potentialities**

An analysis of the resources and the demand for different types of industrial products in Gulbarga district has revealed possibilities of setting up a number of small-scale industries. The development potential of some of the mineral and other natural resources is considerable. As indicated earlier in this chapter, leather tanning is an important industry which is at present neglected but can be placed on a sound footing provided the required organisational efforts are forthcoming. The district has a fairly large bovine population and the hides recovered in Gulbarga are of very good quality. They are now exported to Madras and Hyderabad where they fetch a much higher price than that at which they are bought locally by commission agents. Tanning materials such as avaram bark and myrobalan are also available in sizeable quantities. It is clear, therefore, that there is scope to organise several small-scale tanneries in the district.

Various types of timber such as teak, satin wood and matti are available in the district. They are generally auctioned to forest contractors who take them out of the district. As the demand for furniture in Gulbarga district exceeds the present supply, it will be profitable for furniture manufacturers to expand their production by utilising the timber available locally. There is scope for a few more additional units to come up in several parts of the district such as Aland, Yadgir and Seram. Some of the other wood-based industries which can be suggested for Gulbarga are electrical casings and switch boards.

Clay, suitable for the manufacture of bricks and tiles, is reported to occur in Shorapur taluk. There is, therefore, scope for starting a few tile and brick manufacturing units in this area.

Rosa grass (*Cymbopogon martini*) of the motia variety is reported to be available in the forests of Gulbarga district. Chittapur, Yadgir, Jevargi, Shorapur and Chincholi are the important centres where this grass is available in large quantities.



Every year, the Forest Department auctions the rosa grass which is bought by merchants who extract rosa oil by using country stills. This oil is sold to merchants in Bombay who export it to the United States and Arab countries. Since rosa oil is a foreign exchange earner, efforts could be made to extract the oil on a scientific basis. At present it has been estimated that the Forest Department is realising Rs. 30,000 annually by the sale of rosa grass to merchants who in turn are selling the extracted oil for at least Rs. 2.00 lakhs.

The important minerals which are available in the district are limestone, red ochre, quartz, Fuller's earth and potter's clay. Extensive deposits of limestone suitable for the manufacture of cement are found in Gulbarga district notably at Chittapur, Jevargi, Chincholi, Shahapur, Shorapur, Nalwar, Wadi, Shahabad, Seram and Malkhed, covering an area of at least 1,500 square miles. At present, the Associated Cement Company which has established a big cement plant at Shahabad is exploiting the limestone occurrences near Bankur on a large scale. But, as the deposits of limestone extend over vast areas in the district, they are capable of supporting a few more large-scale cement factories. Proposals are there to start a cement factory at Wadi and another at Seram as these places have all the locational advantages.

Quartz of good quality is available in Yadgir and Shorapur taluks. This is at present being exploited for export to Bombay where it is used by the glass factories. The quartz available at Arkeri in Yadgir and Siddapur in Shorapur taluk is free from iron and forms an excellent raw material for glass industry. This material can be used locally if a glass factory could be set up in Yadgir town. Some of the other small-scale industries allied to the glass industry which may be encouraged are the manufacture of glass phials and scientific apparatus, as these products are currently in good demand.

A variety of limestone suitable for flooring and roofing is also available in the district in large quantities. The deposits are now being exploited by a few North Indian firms and taken out of the district. These stones are of exceptional quality and are very decorative, owing to their pleasing colours. As there is a good demand for flooring and roofing slabs, a few local entrepreneurs can, with profit, take up the manufacture of polished stone slabs.

A small outcrop of soapstone extending for about half a mile in length and two hundred yards in width is found about two miles to the north of Malakappanahalli in Yadgir taluk. The rock forms a suitable material for soapstone utensils, and the broken and half-made pieces found there point to the existence of such an industry in the past.

Fuller's earth, which is a bleaching agent for vegetable and mineral oils, occurs at Korvi, Sulepet, Chima-Idlai, Dastapur, Navandgi, Kodli, Gunhalli and other villages in Chincholi taluk and at Sugoor in Chittapur taluk. The main use of this material is in refining petroleum and in filtering and clarifying lubricants. It is also used in the purification of water and in removing odours from oily waste material. Trials on bleaching of raw lubricating oil have shown that the Korvi earth is similar to imported earth, at present being used in the country for the bleaching of lubricating oils. It has been found to be the best in the sense that it can be used for various purposes in the natural condition unlike other earths which require processing. Investigations regarding the exact deposits of Fuller's earth in the district were in progress and the State Government was to spend Rs. 50,000 during the Third Five-Year Plan period for this investigation.

Agricultural implements of improved variety are in great demand in the district. There are a few units which are already making agricultural implements by following the old methods of production. In addition to assisting the modernisation and expansion of the existing units, a few additional units for the manufacture of improved implements can be set up in the district.

In spite of the industrial potentialities described above, the general economic climate of the district is one of backwardness. The reason for this is not the lack of natural resources but the lack of spirit of venturesomeness; the absence of basic necessities such as power (which has now been overcome), transport, water and other facilities, is also one of the reasons retarding industrial growth in the district. The objectives of industrial policy will therefore have to be to remove the deficiencies pointed above and create a climate in which industrial development can take place. The establishment of industrial estates in the district will serve the twin purposes of assisting the existing industries to get suitable factory space and also help starting of new industries.

Gulbarga district being industrially backward, any account of **Welfare of** welfare work in the district will necessarily relate to the two big **Industrial** industrial concerns, the Shahabad Cement Works and the M.S.K. **Labour** Textile Mills, Gulbarga.

In accordance with the progressive policy adopted by the Associated Cement Companies towards its employees at all its factories, the Shahabad Cement Works affords to its employees amenities of a good standard. As regards housing, the factory had its own colony consisting of over 800 quarters (provided with free electricity and water supply) in which about 30 per cent of the employees were housed. Clean concrete roads run through the entire colony and sanitation and hygiene were given proper attention. As regards the educational facilities, a well-equipped primary

school, with about 560 children, was maintained by the Shahabad Cement Works for imparting free education to the children. Adult literacy classes were also arranged for the employees. As regards health, a hospital with 16 beds was attached to the factory which provided free treatment to the employees and their families. To provide recreation to the employees, a sports club was being maintained and facilities were provided for cricket, football, hockey, volleyball and tennis and indoor games such as billiards, table-tennis, etc. A reading room and library were important features of the club. Attached to the club, which was housed in a spacious building was a children's park with slides, swings and see-saws. An up-to-date and well-equipped cinema had been provided as an additional amenity. There was also a fine swimming pool. Besides these, amenities which were statutory obligations such as canteen, rest hall, creche, latrines and bath-rooms inside the works premises had also been provided. The Welfare Benefit Fund was also being maintained by the management to advance small loans, free of interest, to the needy employees. As regards the labour welfare organisations, there were two Works Committees (one for the works and another for the central workshop), three Safety First Committees (one for the works, one for the quarry and one for the Central Workshop), one Welfare Benefit Fund Committee and one Canteen Committee. Besides these, there were two co-operative societies; one was an employees' co-operative society and the other, a housing society.

Of great importance for the successful working of a mill is adequate welfare of the operatives in the mill; and this fact has been amply realised by the management of the M.S.K. Mills. The officers of the company had been provided with free, well-built and furnished quarters situated in the vicinity of the factory. Small quarters were also there providing accommodation to some of the low-paid employees. A school was attached to the factory to provide free education to the children of the employees. Free medicine and medical attendance had been provided and a dispensary was located within the mills' compound. A creche and a canteen had also been maintained by the management.

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