

CHAPTER V.

INDUSTRIES.

PATNA IN THE INDUSTRIAL ECONOMY OF BIHAR.

Except sands of the river Son and stone chips of Rajgir hills, the district has practically no other minerals. There is no major power-generating scheme. The Mokameh-Barauni industrial area has just started developing. However, the products of some factories (*infra*) are consumed locally and also exported to other parts of India and abroad. Patna has been famous during the past few centuries for excellence of its handicrafts which have commanded respect in foreign markets on account of their finish, generally attributable to master craftsmen who have exhibited their skill from generation to generation.

PRIMITIVE INDUSTRIES.

These industries are usually based upon individual skill, labour and capital of a family which also generally looks to the marketing side of its products.

Since time immemorial, potters, carpenters, blacksmiths, copper-smiths and goldsmiths have been carrying on their traditional occupations both in rural as well as urban areas, to earn their living. Under the impact of modern economy, these classes are fast disintegrating; but geographical *inertia* still provides them a shield against total extinction.

Potters in the rural areas engage themselves in the manufacture of earthen wares, *Khapara* (tiles) and toys of clay, which are consumed locally. They also manufacture utensils, which are, however, now being substituted gradually by aluminium wares. Those living in urban areas concentrate on manufacture of *Khapara* for roofing of numerous small houses; some of them specialise in manufacture of pitchers and *Surahis* (jugs). The potters of Biharsharif are famous for the manufacture of these wares which are in demand in South Bihar on account of their finish and durability. Some of them are noted artists and make statues of gods and goddesses, particularly of *Durga* and *Saraswati*, to celebrate the festivals concerned, both in rural and urban areas. Patna urban areas often celebrate these festivals on large scale.

The carpenters manufacture *Choukies*, *Charpaies*, wooden chairs, cart-wheels and oil-press to meet the demands of the rural areas. They also manufacture wooden parts of primitive agricultural ploughs and other implements for cultivators. In urban areas, particularly in Patna and Danapur, timber merchants usually operate saw mills and often engage skilled carpenters to manufacture high class furniture. Some of

them carry on upholstery business as well together with furniture making. The *Somwari mela* held at Patna in the month of *Shravan* witnesses good assemblage of furniture made by carpenters of Patna, Danapur and even other places in the interior.

Blacksmiths in the rural areas manufacture ploughshares and rough agricultural implements. They also sharpen these appliances. Some of them also manufacture protective caps for cart-wheels. The skilled ones among them manufacture iron-safes and almirahs. Sultanganj Mohalla of Patna is noted for this type of industry.

Coppersmiths manufacture copper and brass utensils for the well-to-do people. One important centre for this manufacture is at village Pareo in Bihta thana. Thatheri Bazar opposite Patna Science College specialises in manufacture of brass utensils and the products are consumed locally.

Goldsmiths are found both in rural and urban areas and they manufacture ornaments to meet local demands. The Gold Control Order, 1964 caused loss of employment to them as under the law they could manufacture ornaments of 14 carat only, which did not satisfy the demands of the people. However, with the lifting of the Gold Control Order in 1966, their business is now reviving, though the present (1967) economic recession has depleted the resources of the people to go in for gold ornaments. But silver ornaments are becoming popular in rural areas and are being patronised even by the well-to-do people in towns. They are also in demand in foreign markets. Some of the goldsmiths are also employed as master craftsmen in the shops of leading jewellers of Patna.

MEDIEVAL INDUSTRIES.

The establishment of the first British factory at Patna under Robert Hughes and John Parker in 1620 for the purchase of cheap, excellent local calico and working the raw silk of Bengal into suitable skeins, was an important phase in 'England's Quest of Eastern Trade' and synchronised with setting up of English factories in other parts of India, Patna occupying an important position among them.

Cotton—Patna had a flourishing trade in cotton and silk goods. Different varieties of calicos, both fine and coarse, were available in the neighbourhood of Patna. In the neighbourhood of Patna, every village and town was a centre of cloth production. Very fine cotton fabrics, both white and coloured, were produced both for internal use and export. In the times of Emperor Shah Jahan cotton was grown in the area

between Naubatpur and Patna. Cotton manufactures flourished in the time of Manucci (1653—1708). As he observes, 'fine white cloth' was manufactured at Patna and was 'very plentiful' in the province of Bihar.*

Silk.—Patna was an important centre of silk trade and early in the 17th century, it produced annually 1,000 to 2,000 maunds of raw silk. Baikunthpur, about 20 miles east of Patna, was an important silk manufacturing centre. These were generally purchased for Persia by Moghal traders and were considered by English factors (1620-21) as likely to have good trade prospects in England.†

Weaving—Weaving was formerly a great industry of the district, but was declining during twenties of the 19th century owing to the competition of comparatively cheap machine-made piece-goods. Cotton weaving was, however, carried on to a small extent in nearly every village, and on a larger scale in the city of Patna and in the towns of Bihar and Danapur. The chief article manufactured was coarse cotton cloth called *motia* or *gazi*, which was chiefly used by the poorer classes in the cold weather. Towels, bed-sheets, table cloths and napkins of a superior kind were manufactured at Danapur; at Bihar good muslin was produced; and *newar* was made in Patna City.

Silk weaving was then almost confined to the Bihar subdivision. The weavers produced *tusser* silk fabrics, which had a local market and were also exported to Calcutta; but they mostly turned out cotton cloth, called *bafta*, composed of a mixture of cotton and silk. In Fatwa thana there were till comparatively recent times over 1,000 looms engaged in cotton and silk weaving, but the industry had declined and the number of weavers had largely dwindled; the only place where silk was woven in some quantity was Raipura (Fatwa). Blanket weaving was carried on to a limited extent by *gararis*, especially in the Masaurhi thana.

Hand Industries—Carpets, brocades, embroidery, pottery, brass-work, toys, fireworks, lac ornaments, gold and silver wire and leaf, glass-ware, harness, boots and shoes, cabinets and bird-cages were made in Patna City; carpets in Sultanganj, Pirohahor and Chauk; and embroidery and brocade work

* *Bihar Through the Ages*, 1958, p. 565.

† *Ibid.* pp. 565-566.

in the Chauk and Khaje Kalan thanas. Durable furniture and cabinets were made at Danapur. The manufactures of the Barh subdivision consisted of jessamine (*chameli*) oil, coarse cloth and brass and bell-metal utensils, and those of the Bihar subdivision were soap, silk fabrics, *naichas* (tubes) for *hookahs*, muslin, cotton cloth and brass and iron ware. With the exception of the linen, furniture and cabinet-ware of Danapur, few of the local products were exported.

Paper.—Rajgir was a centre of paper manufacture. Near that city there were quarries of stone resembling marble from which ornaments were made.

Pottery.—The Venetian traveller, Manucci found Patna to be a centre for the manufacture of bottles and fine earthen pottery, including 'cups of clay finer than glass, lighter than paper and highly scented'. The earthenware manufactures in general emitted 'a pleasant odour' and were 'so fine' that they were not 'thicker than paper'. Such articles were used not only by nobles, but also sent to the courts as 'a rarity' and 'carried all over the world' as curious*.

Glassware.—Patna City was almost the only place where glass was made. A large number of bottles for holding scent, lamps and bangles were made out of Son sand mixed with soda (*khari*). The glass produced was usually green and impure, but some pure white glass vessels were also made from broken railway lamp glass. Vases of European design in coloured glass were also manufactured, the workmen colouring the glass with sulphate or copper, indigo blue and other ingredients, while blue glass was made by adding oxide of tin. Lodi Katra in Patna City was the centre of the industry.

Cabinet ware.—Patna and Danapur were noted for their skilled carpenters. A large quantity of European furniture and other cabinet work of good quality was made at Danapur and Patna for export to other places. Dog-carts and *palkis* were also made in the same towns.

Embroidery.—Gold and silver embroidery and brocade work were carried on in the Chauk and Khaje Kalan thanas in Patna City and also to a limited extent in Bihar town. The embroidery, which was known as *kamdani* and *zardozi*, was chiefly applied to caps and to the trappings of horses and elephants. The gold and silver wire and leaf used were made locally, but most of the gold thread came from Varanasi and other places in the Utter Pradesh.

Stone carving.—Stone cutting was carried on in Marufganj in Patna City. The stone used was chiefly sand-stone (locally known as Mirzapur stone), which was brought by river from Mirzapur.

* *Bihar Through the Ages*, 1958, pp. 566-567.

Gold and silver work.—Patna formed one of the principal centres of the gold and silversmith's art in this province. Gold and silver ornaments were principally made in the city of Patna, but there were also gold and silversmiths in the mufassil towns and every large village. Gold ornaments formed the most important item of *dowry* and therefore they were in great demand*.

Opium.—The manufacture of opium was a special industry of Bihar, which was the greatest producer of the drug in the world. Bihar opium was very much prized in the Far Eastern markets, particularly in China. From 1761 onwards the industry was a Government monopoly which was carried on, as Holt Mackenzie observed in 1832, with a 'view to revenue, not trade'. The East India Company had its Bihar Agency with headquarters at Patna and a number of subordinate factories, which excelled all in other parts of the country. The total supply of opium from Bihar during the year 1908-09, exceeded 8,000 maunds. During the next quarter century the supply increased still further, thus swelling the Company's revenue. But as in the case of other primary producers in Bihar, the position of the poor poppy-growers who furnished poppy juice to the Company's factories was far from enviable**. The opium industry retained its sound position during 1833—1858 in spite of occasional disturbances caused by the Anglo-Chinese Wars†. But in 1907 an agreement was signed with China whereby the British Government undertook not to export opium to that country from India‡. The manufacture of opium, for which Patna had been famous for centuries, was abandoned in 1911 due to the loss of the Chinese market to the British.§

Saltpetre.—Bihar was the leading producer of saltpetre in the second half of the 17th century and Patna was a thriving centre of its trade. Apart from Patna district, saltpetre occurred in Tirhut, Saran, Champaran and Gaya and Patna commanded this trading area on account of its central location. This material was in great demand in Europe at that time as an ingredient of gun powder for use in armaments. Earlier it was used as ballast in ships. There was home market also of saltpetre in 17th and 18th centuries, as refrigerant for cooling drinking water and soft drinks, fireworks and also for manufacturing gun powder and other explosives. English, French, Dutch and Portuguese established factories here for trading in saltpetre which was of the best quality and in 1650 cost only Re. 1 a maund at Patna and on its way to Europe at Hugli port Rs. 1-12-0 including customs

* *Patna District Gazetteer*, (1924), p. 124—127.

** *Bihar Through the Ages*, (1968), p. 771.

† *Ibid.*, p. 773.

‡ *Ibid.*, p. 775.

§ *Patna District Gazetteer*, (1924), p. 122.

and freight charges*. This industry became extinct by about the middle of the 19th century due to loss of foreign market which found alternative source of raw material elsewhere. Thereafter *Nonias* continued to manufacture salt out of it to feed cattle. But in the early part of the 20th century due to cheaper rates of ordinary salt, trade in saltpetre disappeared altogether.

Gold.—There were no mines at work in the district. Formerly only a small goldmine was worked at Kalianpur, three miles from Rajgir, but the work done was merely of a prospecting nature, a few tons of quartz being taken out of different pits and tested, and there were no real mining operations resulting in a definite output. The mine was abandoned, after a very short existence, in 1892†.

Decline of Medieval Industries.—As we have observed above the decline of old-time industries began towards the last quarter of the 18th century and by about the middle of 19th century, industries, particularly handicrafts, cotton, silk and weaving were almost liquidated due to loss of market. The feudal aristocracy had by that time been completely shorn of power and prosperity under the British rule and the industries which looked to them for patronage, were left helpless. As the country was under the foreign rule, no foreign market could be found for the local products. Further, due to discrimination in respect of tolls and other fiscal matters against the local industries at the hands of the British, the home-made goods could not sell in competition even in local markets. Besides, cheap machine-made goods appeared as a substitute in market and began to circulate even in the remotest interior and thus the local craftsman finding no avenue for their goods, stopped production and took to other gainful employments.

COTTAGE INDUSTRIES—PAST AND PRESENT IN PATNA CITY.

Patna City was seat of Government for a long time, specially during the rule of later Mughals and naturally it was inhabited by big and powerful nobles with their retinues. Their patronage drew a large number of artisans of different trades to the city to meet the requirements of the nobility. This led to the establishment of multifarious cottage industries. But due to the dwindling fortunes of the nobility after the stronghold by the British, in mid nineteenth century these industries began to decline and were almost ruined by the turn of the century in unequal competition with the imported cheaper

* *Bihar Through the Ages*, (1953), pp. 564-565.

† *Patna District Gazetteer*, (1924), pp. 122-123.

British goods. The abolition of the Zamindari system by 1950 dealt the final blow to the artistic industries which had lingered somehow due to geographical *inertia* and they have now disappeared altogether.

We may make a survey of these industries of Patna City.—

- (1) *Lapidarists (Gem-cutters).*—As the nobles were fond of adorning themselves and members of their families with precious gems a large number of persons were engaged in gem-cutting industry. Some 150 years ago there were 50 to 60 families engaged in this work. They were concentrated mostly in Mohallas Machharhatta and Jhawganj of Patna City. They were so advanced in their work of carving beautiful gems that their work received recognition not only in Patna but also distant places. In the heyday of the nobility they were well-to-do people and held in high esteem in society. But now these families have been reduced to penury due to the disappearance of the nobility. In 1966 there were only 5 to 6 families reminiscent of the old lapidarists. But they are no longer gem-cutters, but engaged in ordinary stone-cutting which is not a paying proposition. These families have to eke out their living by taking to other jobs in addition to stone-cutting.
- (2) *Zarduzi (embroidery of weaving apparel with metallic threads).*—Previously ladies of the families of the nobility, high officials and big businessmen used to have their clothes adorned with gold and silver threads to maintain social distinction. This art was so much in vogue in those days that about 500 families were engaged in the work. These workers were mostly concentrated in Mohallas Khaj-e-Kalan, Kashmiri Kothi, Gurhatta, Noon-Ka-Chauraha, Fasahat-Ka-Maidan and Mughalpura. They were so skilled in their art that they could bring out beautiful flowers, animals and scenery in the clothes embroidered by them. But with the disappearance of the nobility, modernisation of the costumes of the ladies of well-to-do families and cheap and beautiful artificial silk and other modern clothes, this work is also rapidly dying out since the middle of the present century. However, there are about 50 families still engaged in this work though they may not earn more than marginal wages. Their work has not yet deteriorated and they still produce very fine embroidery. But due to the reduced purchasing power of the customers imitation metallic threads are now in common use in place of gold threads. Generally these works are patronised by the Marwaris and the Panjabis, who are financially better off than

the local people. Moreover, the Marwaris and the Panjabis use these products for trade as well. The *Zarduziwalas* manufacture *sehra* (metallic thread garlands), *badla*, *salma sitara* and *chimki* of gold, silver and other lustrous base metals. The garlands manufactured by them are so artistic that one may sometime fetch Rs. 50 and above.

- (3) *Manufacture of Tabaq* (i.e., *gold and silver leaves*).—Formerly every eatable and medicines used by the nobility, big officials and big businessmen were generally covered with gold or silver leaves not only to enhance the beauty and palatability of these articles, but also to serve as tonic. Occasionally it is even now used in banquets. These leaves were beaten so thin as to become semi-transparent and several thousands placed one upon another could reach only an inch in thickness. In olden days a gold beater was found in nearly every lane of the City. But due to the change in the socio-economic pattern and use of synthetic dyes, perfumes and flavouring materials in the manufacture of sweets these leaves are no longer popular except with some *panwalas* and sweet vendors. This decline has been rapid since the early fifties of this century. In 1966 only two families in Lodikatra, two in Kaghaiyatola, two in Gorhatta and two in Chowk Shikarpur were engaged in manufacturing silver leaves. Gold leaves are not being manufactured these days. Raw materials for this work are generally imported from Delhi. The leaves manufactured are in demand not only in Patna but also throughout the State of Bihar and even in Varanasi (Uttar Pradesh).
- (4) *Panni, i.e., Metallic Foils*.—This is manufactured from base metals. In popular festivals such as the *Durga Puja* and the Muharram rivalry is usually seen on the part of the organisers to outdo one another in show and decorations. Every attempt was made till recent times to bring out *tazias* in imposing form. Particularly this was the case with *tazias* manufactured under the patronage of Nawabs and Rajas. These *tazias* used *pannis* in profuse quantity and were made as show worthy as possible with their aid. This gave a great fillip to the manufacture of *panni* and the *panniwalas* made a decent living. Some 800 persons in about 50 shops in Mohalla Machharhatta Gali of Patna City were engaged in this trade. The articles produced by them were so beautiful that they received high praise even in the exhibition of Ramgarh Congress Session in 1939. But this industry has been facing serious competition from Japan. The Japanese

pannis are much cheaper than those manufactured locally and also not inferior in quality. So the industry has been lagging for about two decades and now there is only one shop in Mohalla Kath-Ka-Pul of Patna City which manufactures it. The raw materials are now obtained from Calcutta.

- (5) *Jhar and Fanus Manufacture*.—During the olden times, rich men of taste used to decorate their houses with *jhar* and *fanus*. These were articles of exquisite beauty adorning lights used in the palatial houses of these people and also a symbol of aristocracy. These beautiful products of art were manufactured with hand. The glass used in their manufacture was locally made in locally manufactured crucibles. The glass blowing was done manually. The manufactures of these articles were concentrated in Mohallas Machharhatta and Mirkulaba-Ka-Bagh. But with the advent of electricity and manipulation in light-effect *jhar* and *fanus* are no longer manufactured and this industry has died out.
- (6) *Atishbazi, i.e., Fireworks*.—During the Mughal and the British periods it was customary to display fireworks on occasion of festivities, such as national festivals, marriages, etc. On these occasions it was the ambition of everyone taking active part in the celebrations to excel others in the display of fireworks, so much so that it was not uncommon for Nawabs and Zamindars to sell some of their landed property and utilise the proceeds towards fireworks. Thus a large number of persons called *atishbaz* came to be engaged in the manufacture of fireworks of beautiful effect on being fired. The display of these fireworks usually attracted large crowds of spectators. In Patna City the *atishbaz* community was concentrated in Mohallas Guzri, Khaje-Kalan and Hajiganj. They got and still get their raw materials from Varanasi, Calcutta and Madras. But with the thinning of the purses of Nawabs and Zamindars displays of fireworks are getting simpler everyday. The *atishbaz* community is now mostly engaged in manufacturing small items for *Diwali* and *Shab-e-Barat* and to a very small extent for marriage occasions. Thus their number is dwindling fast.
- (7) *Lac Bangle-making*.—Some 60 years ago bangles made of lac were in general vogue amongst the women folk of the country. This industry engaged some 70 to 75 families concentrated in Mohalla Begumpur. These days lac bangles are out of fashion, though used by bride on nuptial occasions. This industry is now almost non-existent. There was another

industry related to bangle making. It was printing on imported *churis* with silver or gold leaves. These printed *churis* were very beautiful and attractive. 70 to 80 families in Mohallas Pachhim Darwaza, Lodikatra and Hajiganj were engaged in this work. But this industry also has disappeared altogether.

- (8) *Tikuli Manufacture*.—Till about third decade of the present century the womenfolk of every class used *tikuli* on their forehead. These *tikulis* were of various materials and of multifarious designs. They varied in size from 2" to 1/8" in diametre. The *tikuli* manufacturer used to have good business. They were concentrated in Mohallas Gorhatta, Noon Ka Chowraha and Machharhatta. But now a days *tikuli* has gone out of fashion and few ladies in town think of using it. The local *tikuli* manufacture has totally disappeared and demands, if any, are met by importing modern plastic designs.
- (9) *Printing on Wearing Apparels with Gold and Silver leaves*.—During the days of aristocracy when *zarduzi* and the like industries flourished, cloth printing was also in vogue to meet the taste of people not so well off as the aristocrats. It was a flourishing industry in those times. There were some 50 shops concentrated in Mohallas Chowk, Sadargali, Kasera Toli, and Pachhim Darwaza. Those engaged in this trade were very skilled artists in their work and produced very fine pieces of attractive apparels. Such printed cloths are now getting out of fashion and are being replaced by mill printed cloths of plastic materials. But they are in demand during the marriage season when old customs prevail over modern innovations. There are now not more than 10 families which are engaged in this trade.
- (10) *Naicha*.—*Naichas* were used for smoking tobacco through hubble-bubble. These *naichas* were generally of two kinds—one made of reeds (*nurkut*) covered with cloth and decorated with metallic or silken threads. The other kind of *naicha* (*fatehpaich*) was pipes made of twisted iron wire covered with cloth and artistically decorated with metallic threads and shining silver wire. These were in great demand not only amongst the native gentries but also were used by easeloving and fastidious Europeans who tried to assert their superiority over the people by imitating the Nawābs. The *fatehpaichs* were also used by India-returned Europeans in Great Britain as well. In Patna City the manufacture of these articles

was carried on in some 15 shops in Mohalla Gorhatta. But fashions have changed, modernism has ousted not only these *naichas* and *fatehpaichs* but also has caused a reduction in the quantity of tobacco indigenously manufactured for smoking in hubble-bubbles. The use of cigarettes and cigars has replaced the hubble-bubble and *naicha* manufacture has practically ceased. There is now only one person who carries on work of repair to the old *naichas* and *fatehpaichs*.

- (11) *Brass and Copper Utensils*.—Copper utensils are used for *Puja*. Brass and copper utensils are also used for culinary purposes since time immemorial. Previously some 400 families were engaged in this trade and the din raised by the stroke of their hammer used to be nerve-racking. The utensils manufactured were plain as well as artistic with beautiful designs drawn on them, specially these designs were drawn on tumblers, spit toons, *silafchis*, *sanis*, *huggas*, etc. Gradually more polished Moradabadi wares began ousting the local manufactures. Further, the introduction of cheap aluminium wares has greatly reduced the consumption of brass and copper utensils. The Mohalla in which these wares were manufactured is called Kaseratoli. This industry has now fallen on bad days and only about 50 families are engaged in this. Their wares are mostly in demand during marriage and *tilak* seasons and also during the *Dhwal*i festival when every Hindu family is religiously required to purchase one new brass or copper utensil. The raw materials for this work are usually obtained from Mirzapur and Varanasi.
- (12) *Mour (Bridegrooms, Head Dress)*.—The head dress (*Mour*) is of a peculiar design constructed of metallic wires and threads in exquisite and attractive designs. The fashion of this head dress is of recent origin. The artisans also manufacture ornaments for the idols of Durga. They are mainly concentrated in Mohalla Machharhatta Gali. Some 20 shops employing about 75 persons make these articles. This trade is on the increase. The raw materials are obtained locally and also from Surat and Delhi.
- (13) *Metal Boxes (Trunks) and Metal Racks*.—These are usually manufactured out of tinned sheets of varying thickness. These boxes are much in demand these days. This trade has been in existence in Patna City for over 50 years. The tinned sheets are obtained through the Industries Department of Government and the paints, hinges, locks, etc., locally. This industry is scattered throughout the City area. Some 400 persons are employed in this work.

- (14) *Iron Safe and Iron Almirah of Fire-proof and Non-fire-proof types*.—These are manufactured in Mohalla Sultanganj of the Patna City area. These articles were previously imported from Calcutta. Messrs Chiraghuddin and Sons was the first firm to introduce the manufacture of these articles and continued to be the sole local manufacturer for a long time. During the last 20 years a number of other manufacturers of these articles have come up who engage local artisans trained in this work. In 1966 there were some eight firms manufacturing these articles. All of them are concentrated in Sultanganj Mohalla. The manufacturers use only ordinary hand tools in their work and this industry might well be classed amongst cottage industries. The products can be compared favourably with those manufactured in other places in India.
- (15) *Kathwana (i.e. Wood Works)*.—Some 20 families are engaged in making "*sindhura*" for keeping vermilion. They also make wooden toys. They are concentrated in Chhoti Bazar. But they are now facing a keen competition from plastic *sindhuras* and toys which are produced on mass scale and are overflowing the market.
- (16) *Earthen Toys and Earthen Utensils*.—Only four families in Machharhatta Mohalla manufacture these articles. They also manufacture crucibles for melting glass and metals.
- (17) *Goldsmithy*.—This work was previously carried on in Mohalla Sonartoli. The artisans were so skilful that their work was considered to the best of its kind in India. But the Gold Control Order* has killed the industry and reduced the goldsmiths to penury.

Some new and modern cottage industries have sprung up in Patna City. They are—

- (1) *Incandescent Kerosene Lamps (misnamed petromax lamps)*.—There is one shop in Mohalla Guzri which manufactures these lamps. The body is manufactured out of mobil oil tins. Tubes, valves and other parts are obtained from outside Patna. Each such lamp was priced at Rs. 65 in 1967. These lamps are exported to Calcutta also. But the demand is dwindling due to the introduction of mobile electric generators and mercury vapour lamps which can be arranged very artistically for show during marriages and festivals.

*Withdrawn in 1966.

- (2) *Chimneys for Kerosene Burning Incandescent Lamps*.—In the manufacture of such chimneys the chief raw materials used are tin sheets obtained locally and also mica plates from Koderma or in the alternative glass slips obtained locally from cuttings of glass used in photo framer's shop. Near about 1910 some 15 families were engaged in this work. But now their number is reduced to three who live in Mohallas Guzri and Khaj-e-Kalan.

Besides the above, the manufactures of soap, biscuits, bread, bunbun (lemon juice) and *biri* are also carried on extensively in the city area.

MODERN INDUSTRIES.

In early twenties of the present century among the industrial undertakings in the district the following were important : the Government Drawing Office and Press at Gulzarbagh, the workshops of the Bihar School of Engineering at Patna, of the East Indian Railway* at Khagaul, of the Bengal and North-Western Railway** at Mokameh and of the India General and Rivers Steam Navigation Company at Digha†. There were also the following factories‡: Shri Bihariji Oil and Flour Mills, Patna City; Aryan Oil and Flour Mills and Foundry, Danapur; Vishwakarma Oil and Flour Mills and Foundry, Digha; Patna Oil Mill, Begumpur; Mokameh Oil Mill, Mokameh; Patna Iron Foundry, Begumpur; Bankipur Iron Works, Mithapur and Patna Ice Factory, Gulzarbagh. Besides, there were four Printing Presses also at Bankipur. In the Vishwakarma and Aryan Mills there were machineries for small and medium sized castings; the work done was ordinarily in connection with the maintenance of the mills, but orders from other establishments were also undertaken. Of foundries proper there were the Patna Iron Foundry and the Bankipur Iron Works. Both did general foundry business, but specialised in making *kolhu* for sugarcane crushing. The Patna Iron Foundry also specialised in making cast iron railings.

REGISTERED FACTORIES.

In 1961 there were 630 factories in Patna district§. Of these, as many as 475 were located in towns and 155 in rural areas. On average these provided employment to 10,825 workers daily in 1960. In 1961 Patna had 13,786 industrial establishments—

*Now Eastern Railway.

**Now North-Eastern Railway.

†*Patna District Gazetteer* (1924), p. 122.

‡The workshop of the Bengal and North-Western Railway at Mokameh and that of the India General and Rivers Steam Navigation Co. at Digha do not exist now, the former due to the shifting of entire meter gauge establishment to Garhara (Barauni) and the latter because of major decline in the water-borne trade on the river Ganga.

§*District Census Handbook*, Patna, 1966, pp. iii-iv.

7,812 in rural areas and 5,974 in urban areas. The Patna Municipal Corporation area alone had 3,548 units. The household industries in the district gave employment to 60,655 persons*.

Source and Consumption of Power.—The district receives its power supply from the Damodar Valley Corporation, the Barauni Thermal Power Station and the Power House of the Patna Electric Supply Co., Ltd.

All the ten towns of the Patna district are supplied electricity now. In rural areas, however, the pace of electrification has been comparatively slower. Out of 2,395 inhabited villages in the district, 494 villages were electrified up to March, 1961**.

The Patna Electric Supply Company with headquarters at Patna supplies power to the consumers in Patna urban areas and Danapur. On 31st March 1966 it had a total of 32,093 consumers classified as follows:—

Domestic 18,203; Commercial 12,119; Industrial 1,705; Irrigation 8; and others 58. The number of buildings electrified in its area up to 31st March 1966 was about 25,000.

*
The following table shows average monthly units consumed by its subscribers of different categories as on 31st March 1966 and the average price of each †:—

Category.	Units.	Value (in Rs.).
(a) Domestic ..	8,24,537	2,96,391.16
(b) Commercial ..	14,00,672	3,51,260.92
(c) Industrial ..	16,31,005	2,29,806.92
(d) Public lighting ..	60,734	25,396.32
(e) Irrigation ..	14,618	1,756.96
(f) Others ..	6,65,671	1,00,538.00
Total ..	45,97,237	10,05,150.28

The district had 53,850 consumers of Bihar State Electricity Board in March 1967, 41,778 being of domestic category. The table below

* *District Census Handbook*, Patna, 1966, p. iv.

** *Ibid.*

† *Source.*—Patna Electric Supply Co., Ltd., as per their communication no. 3277, dated the 27th May, 1967.

shows the average volume of units consumed by their subscribers of different categories with average respective valuation for the year 1965-66* :—

		Units of consumption. in KWH.	Valuation (in Rs.)
(1) Domestic	..	3,73,292	1,98,240
(2) Commercial	..	4,23,390	1,76,136
(3) Industrial	..	9,85,455	2,12,496
(4) Public lighting	..	34,326	17,899
(5) Irrigation	..	1,00,91,639	14,76,580
Total	..	1,19,08,102	20,81,351

LARGE AND MEDIUM-SCALE INDUSTRIES**

The large and medium-scale industries in this district are as follows:—

Gulzarbagh Secretariat Printing Press.—With the creation of the province of Bihar and Orissa in 1912 the Government Press at Shillong (Assam) was removed to Ranchi where the capital of the new State was temporarily located; later it was shifted to Gaya and ultimately to the premises of the old opium factory at Gulzarbagh.† On separation from Bihar in 1936, Orissa started its own printing press, but the work at the Gulzarbagh Press has gone on multiplying. In 1955 the Printing Section was separated from that of Stationery Stores and Publications and each was put under a separate Superintendent, both being under the control of the Finance Department in the Secretariat. The total capital investment in the Press is about a crore of rupees.

The Superintendent of the Press Section is assisted by one Deputy Superintendent, two Assistant Superintendents and an Administrative Officer. The establishment consists of 675 persons, 500 being technical hands and 175 ministerial. This Press has three branches, one at the Secretariat, Patna, the second at Raj Bhavan, Patna and the third at Ranchi, each functioning under the charge of a Foreman.

*SOURCE.—Electrical Superintending Engineer, Patna Electrical Circle, Patna.

**The capital investment in a unit of large-scale industries is Rs. 25,00,000 and above whereas in a unit of medium-scale industries it is Rs. 1,00,000 to 25,00,000.

†The Government Press, Doranda (Ranchi) continues on a modest scale while that at Gaya is at par with this press.

Stationery Stores and Publications—The main function of the office of the Superintendent, Stationery Stores and Publications is to supply paper and stationery articles to the offices of the State Government throughout the State of Bihar. Besides this it supplies typewriters to Government offices, manages sales and distribution of Government publications, manufactures rubber stamps for use in Government offices, repairs Government typewriters, embosses stamps, supplies water marked plain paper and non-judicial stamps to the treasuries of Bihar Government.

The Superintendent of this section is assisted by a Deputy Superintendent and the staff consists of 150 persons. It has a branch of Roneo Duplicating Section located in the Patna Secretariat under the charge of a Supervisor. The total capital investment in this section is about 27 lakhs of rupees.

Government Survey Map Making and Printing, Gulzarbagh.—This is housed in an old opium godown at Gulzarbagh*. With the creation of the province of Bihar and Orissa in 1912, it was felt necessary to have a separate office of the Deputy Director of Surveys. The office was sponsored in 1912 and still continues to have records for Orissa.

Its main function is to conduct traverse surveys, reproduce village and urban area maps from original prepared during survey operations, reproduce blue print maps and other maps for settlements, reproduce charts, graphs, posters, etc. by litho-printing and compile revenue thana and district maps.

In the record room of this office originals of maps are kept for both Bihar and Orissa which number about two lakhs. The office stocks original survey and settlement maps from the time of the Revenue Survey and is fully equipped for theodolite and plane-table surveys, the compilation of maps and reproduction in colours of maps, charts, graphs, etc. Road map of Bihar, State map of Bihar (Political), district maps, thana maps, town maps and Patna guide map may be had from this office. Block copies of village maps are supplied to the district authorities for sale.

This office is equipped with photo section and off-set machines. The main wings of the office are Drawing Section, Traverse Section, General Section, Record Room and Reproduction Section with its several sub-sections such as Graining, Vandyke, Zinco Printing and Despatch.

*This location is an historical incident. On opium trade becoming extinct, the godowns meant to store opium had become redundant and the vacant premises were utilised for the office of the Deputy Director of Surveys.

The head of the office is a Deputy Director who is under the administrative control of the Director of Land Records and Survey-cum-Additional Secretary, Revenue Department, Government of Bihar. He is assisted by supervisory staff of different sections. The total strength of staff in this office is nearly 400.

The Bihar Cotton Mills, Ltd.—This factory is situated at Phulwarisharif about 4 miles west of Patna. It was started in 1933 and is a private limited company managed by a Board of Directors. The entire requirement of cotton is met from Madhya Pradesh, Haryana, East Punjab and Uttar Pradesh. The yarn and cloth are exported mostly to Nepal. The import and the export are done both by rail and road.

The factory is worked with the power supplied by the Bihar State Electricity Board, Patna.

The table below shows the approximate volume of import of cotton during 1961—65 :—

Import of raw materials—

Years.		Quantity of cotton in bales*.	Value in Rs.
1961	..	4,366	19,63,849
1962	..	4,018	20,54,879
1963	..	3,710	19,55,355
1964	..	3,133	16,78,455
1965	..	2,628	14,94,873

The following table shows the approximate volume of production of yarn and cloth during 1961—65 :—

		Yarn in K.G.	Value in Rs.
1961	..	6,32,600	12,65,200
1962	..	3,56,811	17,84,055
1963	..	4,95,972	24,25,900
1964	..	4,60,878	20,46,135
1965	..	3,33,868	16,51,195

*Each bale of 400 lbs. approximately.

		Cloth in Metric Tons.	Value in Rs.
1961	..	34,84,479	17,42,239
1962	..	22,95,582	11,57,524
1963	..	4,72,647	2,38,66
1964	..	1,72,626	1,25,839
1965	..	4,47,756	2,79,847

The decline in production may be attributed to general labour unrest and also because labour is not so qualified as to suit the present requirement of modern machines of textiles.

The following table shows the value of export of cloth and yarn during 1961—65 :—

	1961	1962	1963	1964	1965
	Rs.	Rs.	Rs.	Rs.	Rs.
Cloth ..	6,03,690.84	5,50,795.40	5,88,457.79	71,446.49	3,77,448.00
Yarn ..	17,680.00	16,102.20	9,149.80	61,772.95	83,039.00

The workers both skilled and unskilled employed in the factory, are mostly local. The total number of workers employed during 1961—65 is given below. There are no female workers in the factory :—

1961	..	732
1962	..	703
1963	..	618
1964	..	495
1965	..	432

The factory contributes to employees' provident fund and has provided canteen and residential quarters for them. The workers are registered under the Employees' State Insurance Scheme for different kind of benefit.

South Bihar Sugar Mills, Ltd.—The factory is situated at Bihta about 18 miles west of Patna. It was started in 1933. The concern is a public limited company managed by a Board of Directors. The supply of sugarcane is drawn from the locality as well as from the Shahabad district. The produce is exported to Calcutta, Dhanbad, Shahabad, Patna and other places throughout the State of Bihar. Both the import and export are carried out by rail and road.

The factory is run by power supplied by the Bihar State Electricity Board, Patna.

The table below will show the average volume of import, production and export of the factory during five years beginning 1962-63* :—

Import of Sugarcane—

Season.		Quantity purchased in quintals.	Value in Rs.
1962-63	..	3,24,911.60	12,92,780.42
1963-64	..	1,07,456.60	5,66,093.19
1964-65	..	3,77,800.55	19,81,184.58
1965-66	..	7,05,222.83	36,46,933.08
1966-67	..	2,77,363.93	14,67,393.60

Production of Sugar—

1962-63	..	29,869	22 lakhs
1963-64	..	11,552	9.20 ..
1964-65	..	35,319	35.31 ..
1965-66	..	62,689	63.80 ..
1966-67	..	23,775	25.67 ..

*Source.—Data supplied by the South Bihar Sugar Mills, Ltd.

The decline in production is mainly due to the shrinkage in acreage of sugarcane.

Export of Sugar—

Season.		Quantity purchased in quintals.	Value in Rs.
1962-63	..	58,262	44.60 lakhs
1963-64	..	19,173	16.32 ,,
1964-65	..	28,491	28.57 ,,
1965-66	..	48,228	48.61 ,,
1966-67	..	15,913*	16.70 ,,

The workers both skilled and unskilled who are mostly seasonal come mostly from the locality. Those who worked in the preceding season are usually engaged in the next season. There is no female worker in the factory.

The total strength of workers employed during five years beginning 1962-63 was as follows** :—

		Season.	Off-season.
1962-63	..	721	121
1963-64	..	660	74
1964-65	..	694	145
1965-66	..	712	102
1966-67	..	708	83

The factory provides free medical aid to its workers and maintains a dispensary for them. It imparts free education to the children of the employees up to Middle standard and runs a school which is recognised by the Education Department. In 1967 about 100 children of the employees were getting free education in the school. There are about 60 family and 160 bachelor quarters for the workers who get them on modest rent. The management also looks after sanitation, water-supply, electricity, club, reading room, library indoor and outdoor games and other recreational facilities for its workers.

*The export is subject to Government control.

**SOURCE.—Data supplied by the South Bihar Sugar Mills, Ltd.

Bata Shoe Company Private, Limited, Hathidah.—The company is situated at village Dharampur (Hathidah) about five miles east of Mokameh Junction. It was started in 1943 and is a private limited company.

The first task of this company at Mokamehghat was to supply all the required hides to Batanagar where a tannery was established in which raw hides were tanned into finished leather and again into thousands of pair of shoes. The task of supplying sufficient hides to Batanagar Tannery was possible only by starting a centre of raw hides purchasing station at Mokameh which is close to the main producing centres of hides in North Bihar.

Hides being perishable it was necessary to tan them as quickly as possible and thus a tannery at Mokamehghat was started. In April, 1967 there were 630 persons working in it. Besides supplying hides and finished leather to Batanagar and Digba Factory this company is also exporting considerable quantity of leather to England and Australia. The factory is worked with the power supplied by the Bihar State Electricity Board.

The principal raw materials, i.e., raw hides, tannins and oils, other chemicals and auxiliary materials and fuels and lubricants are imported from all over Bihar, Calcutta, Kanpur, Bombay and Madras both by rail and road. Prior to the construction of Rajendra Setu connecting North and South Bihar, transportation by rail was about 55 per cent and by road 45 per cent. After construction of this bridge, the percentage of rail transport is about 20 per cent and road transport about 80 per cent.

THE TABLE BELOW SHOWS THE AVERAGE

Particulars.		1961		1962	
		Weight.	Value.	Weight.	Value.
			Rs.		Rs.
1. Raw hides (kgs.)—					
(a) Buffalo	..	31,52,640	51,39,800	32,77,344	58,77,200
(b) Cow	..	9,55,449	20,18,300	12,72,501	28,79,500
2. Tanning and oils (Metric tonnes)—					
(a) Other barks	..	151.8	30,400	155	31,100
(b) Bark extracts	..	705.7	6,60,500	826	8,47,400
(c) Myrab—crushed, extract/ powder.	..	1,289.1	1,66,700	1,416	3,66,000
(d) Oils	..	..	..	87	14,700
3. Others (Metric tonnes)—					
(a) Retinogen R-6	..	16.2	1,04,000	..	..
(b) Tanigans	..	60.7	1,48,800	57	1,44,000
(c) Basytans 'P' base	..	..	..	61	2,03,200
(d) Plasticbinders	..	..	..	..	..
(e) Basytan 'P' solid	..	..	..	..	..
4. Chemicals and Aux. materials (Metric tonnes)—					
(a) Sulphuric Acid	..	7.6	2,300	11	3,400
(b) Sodium sulphide	..	..	..	94	1,08,700
(c) Lime	..	164.3	11,500	185	20,300
(d) Chrome tanning sale	..	77.6	66,800	119	1,00,400
(e) Common salt	..	..	..	74	8,800
5. Fuels and Lubricants (Metric tonnes/litres)—					
(a) Coal (m.t.)	..	870	33,900	1,038	45,500
(b) Lubricant oils (litres)	..	1,441	5,900	3,492	9,600

INDUSTRIES

IMPORT RECEIVED DURING 1961-62.

1963		1964		1965	
Weight.	Value.	Weight.	Value.	Weight.	Value.
36,36,347	58,89,600	41,50,069	69,96,800	40,14,649	66,84,200
11,45,138	23,24,900	18,31,605	36,44,800	24,74,029	50,71,000
279	41,300	285	62,800	104	24,900
1,092	10,29,100	1,158	12,60,000	899	11,79,800
1,190	3,11,700	1,409	4,36,600	1,113	6,61,400
37	53,600	253	3,87,800	312	5,33,300
..	..	25	1,62,900	29	1,85,100
64	1,26,800	48	1,55,800	29	1,08,500
61	1,67,100	15	56,900	39	1,63,400
..	..	35	3,08,800	..	..
..	..	49	2,09,400	..	..
14	4,000	19	5,500	40	23,100
..	..	145	1,88,200	165	2,23,400
191	23,900	239	33,500	259	36,300
..	..	125	1,75,900	155	2,34,600
76	9,200	123	14,700	153	19,900
..	..	1,558	76,300	2,249	1,09,300
..	43,800	17,621	19,100	20,272	30,700
..	8,600	..	..	..	..

The following table shows the average production during 1961—65. The finished goods are not only exported to the sister factories of Bata Shoe Company situated at Agra, Calcutta and Kanpur, but also to U.K., Australia, Ceylon and Singapore.

Year.	Sole/Kips		Upper		
	Kgs.	Value Rs.	Sq. metre.	Value Rs.	
1961	..	9,57,692	45,46,900	3,58,663.3	56,35,600
1962	..	6,44,443	65,03,600	4,12,410.2	65,88,200
1963	..	13,49,824	66,76,000	4,27,929.0	68,36,500
1964	..	15,30,320	74,08,200	6,22,576.8	97,41,500
1965	..	16,10,498	78,19,900	7,50,818.9	1,18,96,700

The workers who work in the factory come from all over the country. The total number of workers (males only) employed during 1961—65 is as follows:—

—		1961	1962	1963	1964	1965
Bihar	..	400	426	449	511	524
Bengal	..	23	23	20	20	21
U.P.	..	9	9	9	9	8
Punjab	..	1	1	..	..	..
Madras	..	1	1	3	4	4
Orissa	..	3	3	3	3	3
Others	..	7	7	7	9	9
Total	..	444	470	491	556	569

The factory contributes to the employees' provident fund and gratuity and has provided canteen, medical facilities, residential quarters, a middle school and recreational clubs. The canteen caters two major hot meals at subsidised rates and there are arrangements for supplying tea and snacks twice a day. Medical help is provided to employees by the Employees' State Insurance Corporation. A Consumers' Co-operative Store is functioning in the factory. Consumers' articles and also rationed articles are sold from the co-operative store. Most of the employees are members of the store.

There is only one Trade Union (Bata Workers' Union) at Mokamehghat, which is affiliated to the Indian National Trade Union Congress.*

Bata Shoe Company Private, Limited, Branch Factory, Digha.—This company, situated at Digha, about 4 miles west of Patna, was started in 1942. Its shoes are exported to Far-East, Middle-East, Africa, West Indies, U. K., Europe, U. S. A. and Nepal. Besides, they have an enormous market inside the country.

The principal raw materials, i.e., upper leather, bottom leather, rubber soling materials are procured from Bata Tannery at Mokamehghat (Patna) as well as Bata factories in West Bengal and Haryana.

The factory is worked with the power supplied by the Bihar State Electricity Board.

Average production of shoes for five years (i.e., 1962—66) was 55,50,000 pairs valued at Rs. 2,41,25,000.

The table below shows the volume of export to foreign countries with respective value during five years (i.e., 1962—66):—

Year.	Pairs of shoes.	Value in Rs.
1962	3,95,000	20,78,000
1963	3,53,000	17,62,000
1964	7,04,000	32,21,000
1965	6,96,000	31,37,000
1966 .. .	7,84,000	42,27,000

*SOURCE.—Report of Bata Shoe Co. (P), Ltd., Hathidah.

The total strength of workers including essential staff (all males) during five years (i.e., 1962—66) was as follows :—

Year.	Workers (all males)
1962	698
1963	711
1964	858
1965	945
1966	1,047

The factory provides medical and recreational facilities to its employees. It also maintains a canteen, a rest room and welfare fund for them.

The Bihar Co-operative Weavers' Spinning Mills, Ltd.—This factory is situated at Mokameh, about 1½ miles west of Mokameh Junction Railway Station. It was started in 1962 and is a limited concern, managed by a Board of Directors. The entire requirement of cotton is imported from the Punjab, Gujarat and Hathras. The production, i.e., yarn is exported to various destinations in the country particularly Calcutta, Delhi and places in Bihar. The import and export are done both by rail and road.

The factory is worked with the power supplied by the Bihar State Electricity Board, Hathidah.

The average volume of cotton imported since the inception of the mills is 4,170 bales valued at Rs. 26,27,100.

The table below shows the stock and sale position from 1964-65 to 1966-67 :—

Stock and Sale.

Years.	Bales packed.	Approximate value (in Rs.).	Bales sold.	Approximate value (in Rs.)	Balance on 30th June.	Remarks.
1964-65	699	6,99,000	297	2,97,000	402	
1965-66	738	7,38,000	736	7,36,000	2	
1966-67 (up to February, 1967).	1,464	14,64,000	1,531	15,31,000	..	Overall stock in hand in February, 1967— 337 bales ap- proximately Rs. 3,37,000.

The workers both skilled and unskilled, who work in the factory are mostly local. The total number of workers employed during 1963—1966 was as follows :—

Year.	Workers.	
	Males.	Females.
1963	36	..
1964	74	..
1965	179	..
1966	295	45

The factory provides canteen, bath-room, loan facilities and quarters for its workers. The workers are also registered under the Employees' State Insurance Scheme for different kinds of benefit.

Britannia Engineering Company (Wagon Division) Private, Ltd.—This factory is situated at Mokameh and was started in 1959. The entire requirement of rolled steel sheets, wheels, rolled plates, angles, channels are imported from Hindustan Steel, Ltd., Rourkela, Durgapur, Bhilai and also Tisco.*, Jamshedpur and Isco., †Burnpur. The wagons are delivered to various railways under the direction of the Railway Board, New Delhi.

The factory is worked with the power supplied by the Bihar State Electricity Board, Hathidah.

The table below shows the average production with corresponding value for a period of five years since 1962‡ :—

Year.	No. of wagons manufactured.	Value (in Rs.)
1962	660	80,69,160
1963	772	75,45,490
1964	1,147	1,21,00,735
1965	1,098	1,19,42,735
1966	735	1,00,22,034

The workers, both skilled and unskilled are mostly local though some from other industrial towns such as Calcutta, Burnpur, Jamshedpur, etc., are also employed. The average number of workers employed in the factory during 1966 was 499.

The factory provides a canteen, a dispensary, a recreational club and first-aid equipments for its workers. The workers are also registered under the Employees' State Insurance Scheme.

*Tata Iron and Steel Company, Ltd.

†Indian Iron and Steel Company, Ltd.

‡Source.—Britannia Engineering Company.

Pradip Lamp Works, Patna City.—This factory is situated at Mohalla Begumpur in Patna City. It was started in 1945 and is a partnership concern. The principal raw materials, i.e., Electrodes or Load-in-wire, Glass tubings and rods, Glass shells, Lamp caps, Capping cement, Fluorescent powder, Nitrocellulose, Filaments, Tungsten wire, Molybdenum wire, Nickle wire and strips, Zirconium powder, Red phosphorus and Urea formal dehyde and Plastic moulding powder are imported from Japan, England, Holland, Austria, West Germany, etc. The average value of materials imported during the last five years (i.e., 1962—66) is Rs. 40 lakhs. The manufactured electrical goods are exported all over the country and also to Baghdad (Iraq), Nepal, Burma, etc. The annual average value of foreign export during the last five years (i.e., 1962—66) was worth about Rs. 1.50 lakhs.

The factory is run with power supplied by the Patna Electric Supply Company.

The table below shows the approximate value of the average production for the last five years (i.e., 1962—66):—

Year	Approximate value (in lacs of Rs.).	Remarks
1962	65	The fall in production since 1965 is due to the restriction on imported goods.
1963	75	
1964	90	
1965	60	
1966	50	

The total number of workers employed during the last five years (i.e., 1962—66) is as follows :—

Year.	Total number of workers.	Remarks.
1962	373	The fall in production is reflected in the decline in the number of workers since 1965.
1963	457	
1964	482	
1965	440	
1966	367	

There are no female workers in the factory.

The factory contributes to Employees' Provident Fund and has provided canteen and residential quarters for them. The workers are registered under the Employees' State Insurance Scheme for different kinds of benefit.

All the materials required for this industry are not available in the home market and whatever is available is not of as good quality as those imported from foreign markets. Thus the factory faces a conflict between quality and the expansion of its business*.

Express Cables, Private, Ltd.—This factory is situated at village Neora about 10 miles west of Patna on the Eastern Railway. It was started in December, 1962. It is a private limited company managed by a Board of Directors. The bulk of the raw materials, i.e., Aluminium Wire Rods and H. T. Galvanised Steel Wire are imported from Renukoot, Alwaye and Madras, etc., in India and from Canada, U. S. A. and other soft currency areas of the world. The average value of import during 1965-66 was worth Rs. 52 lacs. The factory takes power-supply from Bihar State Electricity Board. Conductors worth approximately Rs. 70 lacs were produced during 1965-66 and exported to all the State Electricity Boards in India.

The workers, both skilled and unskilled, are mostly local. There were 86 workers in 1967. The factory provides free medical aid to its workers through a dispensary maintained by it, free tiffin, free uniforms, free furnished accommodation for persons requiring such facilities, production bonus and annual bonus†.

Shree Baidyanath Ayurved Bhawan, Private, Ltd.‡—This factory is situated at Baidyanath Bhawan Road, Patna. It was started in 1948 and is a private limited company. The principal raw materials, i.e., herbs, *kirana*, sugar, *gur*, honey, gold, metals, *ghee*, oils and chemicals are imported from Calcutta, Bombay, Hardwar, Bareilly and Amritsar and also from foreign countries. The production, i. e., *Ayurvedic* medicines are exported to places all over Bihar, U. P., Assam and Nepal. The import and export are done both by rail and road.

The factory is worked with the power supplied by the Patna Electric Supply Company.

The products include *Rasa*, *Rasayana*, *Bhasma*, *Asawa*, *Aristha*, *Avaleha*, *Churna*, patent medicines and other *Ayurvedic* preparations.

*SOURCE.—Report from the Pradip Lamp Works.

†SOURCE.—Report of the Express Cables, Private, Limited.

‡The parent organisation founded in 1918.

The table below shows the approximate value of production during 1961-65:—

Year. Value (in Rs.).

1961	64,39,970	..	..	..	..
1962	59,40,413	..	..	..	..
1963	52,72,039	..	..	..	..
1964	52,72,039	..	..	..	..
1965	65,66,357	..	..	..	..

The following table shows the approximate value of sale during 1961-62 to 1964-65:—

Year. Sale (in Rs.).

1961-62	58,15,836	..	..	..	..
1962-63	49,11,549	..	..	..	..
1963-64	49,07,503	..	..	..	..
1964-65	59,52,357	..	..	..	..

The workers, both skilled and unskilled are mostly local. The average number of workers employed during the last five years is given below:—

Year. Workers.

1962	257	..	..	..	..
1963	240	..	..	..	..
1964	245	..	..	..	..
1965	272	..	..	..	..
1966	290	..	..	..	..

There are no female workers in the factory.

The factory provides a charitable dispensary, provident fund, gratuity and bonus to its employees. The employees are also registered under the Employees' State Insurance Scheme for the different kinds of benefit*.

Aditya Engineering Works and Foundries.—This factory was started in 1938 and is situated on Patna-Gaya Road in Patna. It is a private limited company.

It manufactures agricultural implements, irrigational equipments, machinery parts, power-driven oil *ghani* parts and structural works.

It imports raw materials such as steam coal, hard coke, pig iron, pig scrap, bars and rods, plates and sheet, joints channel, angles, bolts and nuts, etc., gun metal, white metal, aluminium, lead, paint and varnish, timber and wood, acetylene gas, oxygen gas, electrodes, firewood, lubricants, sand, kerosene oil, fireclay, etc. and consumable stores such as nails, screw, wires, spare parts, pipes, ball bearings, etc., for the manufacture of finished goods from various parts of the country. The total value of the materials imported during 1962—66 are indicated in table below:—

Year.			Gross value of import (in rupees).	Remarks.
1962	..	..	1,40,850	The value includes goods purchased and re-sold.
1963	..	..	1,43,551	
1964	..	..	1,84,854	
1965	..	..	3,05,335	
1966	..	..	4,56,917	

*SOURCE.—Report of Shree Baidyanath Ayurved Bhawan Private, Ltd.

The following table shows the approximate value of production of finished goods for 1962—66:—

Year.	Approximate total value. (in rupees).				Remarks.
1962	..	..	..	2,70,698	The value includes sales tax realised, receipt for repair work as well as for services rendered to customers, materials having been supplied by them.
1963	..	..	..	3,07,478	
1964	..	..	..	3,77,948	
1965	..	..	..	5,69,821	
1966	..	..	..	7,90,783	

The manufactured goods are mostly supplied to various departments of State Government namely, Agriculture, Irrigation, Public Works, Public Health, Waterways and Construction Departments.

Labour.—The workers are local. Their total number during 1962—66 was as follows:—

1962	..	..	..	..	75
1963	..	..	..	..	65
1964	..	..	..	..	68
1965	..	..	..	..	73
1966	..	..	..	..	91

The factory contributes to Employees' Provident Fund. The workers are registered under Employees' State Insurance Scheme*.

Bankipur Iron Works, Private, Ltd., Patna.—This factory is situated in mohalla Mithapur (Patna) and was started in 1890. The entire requirement of pig iron is met from Durgapur and Bhilai and of coal from Dhanbad. The production, i.e., sugar-cane crushers and metric weights are exported to Darbhanga, Monghyr, Chapra, Gaya and other places in Bihar.

*SOURCE.—Report of the Company.

The factory is worked with power supplied by the Patna Electric Supply Company, Patna.

The average volume of import received during the last five years (1962—66) together with their respective value were as follows:—

Article.	Volume (in metric tons).	Value (in Rs.).
1. Pig iron	880	2,64,000
2. Hard coal	22	4,950
3. Soft coke	44	9,900

The average production and export during the last five years (*i. e.*, 1962—66) were as follows:—

Article.	Volume(in number).	Value (in Rs.).
1. Sugarcane	1,500	4,50,000
2. Metric weights (from 50 Kg. to 100 gram sets.)	30,000 sets.	19,80,000

The total number of workers employed in 1967 was 50. They are mostly local. There are no female workers.

The factory contributes to Employees' Provident Fund.

The workers are registered under the Employees' State Insurance Scheme for different kinds of benefit.

Shree Banshi Industries (P), Ltd.—This factory is situated at Mohalla Karbigahiya, Patna and was started in 1957. It is a private limited company. The principal raw materials, *i. e.*, pig iron and hard coke are imported from Durgapur and Jharia respectively. The production, *i. e.*, looms is exported mostly to Bhagalpur, Gaya and Ranchi districts. The import and export are done both by rail and road.

The table below shows the volume of imports with their respective value during the last five years (i. e., 1962—66):—

Year.	Pig iron.		Hard coke.	
	Volume (tons).	Value (Rs.).	Volume (tons).	Value (Rs.).
1962-63	181	43,259	92	11,500
1963-64	187	51,425	104	13,000
1964-65	72	23,400	Nil	Nil
1965-66	168	54,600	84	10,500

The average annual production in the factory is 80 looms of the value of Rs. 1,30,000. The factory has now started manufacturing 5 H, P. diesel engines and centrifugal water pumps. It is worked with the power supplied by the Patna Electric Supply Company.

The workers both skilled and unskilled are mostly local. The average number of workers employed during the last five years (1962—66) is 100 only.

The factory contributes to Employees' Provident Fund and provides first aid. The workers are registered under the Employees' State Insurance Scheme for different kinds of benefit.

Luxmi Iron Works.—This factory is situated at Chandra Gupta Path, Patna. It was started in 1946 and is a partnership firm. The principal raw materials, i.e., hard coke, iron and steel, galvanised metal, hardware, wood, etc., are imported from Bombay, Calcutta, Jharia, Raniganj and also locally. The production, i.e., agricultural implements are exported to destinations in Bihar. The factory is worked with the power supplied by the Patna Electric Supply Company.

*Source.—Report of the factory.

The table below shows the volume of import with respective value for five years (i.e., 1961-62 to 1965-66):—

Year.	Volume of import.			Value (in Rs.).
1961-62	16	wagons.		2,35,824
1962-63	16	„		1,90,782
1963-64	16	„		2,03,588
1964-65	20	„		2,95,761
1965-66	14	„		1,90,438

The following table shows the volume of production with respective value for five years (i. e., 1961-62 to 1965-66):—

Year.	Volume of pro- duction.			Value(in Rs.).
1961-62	20	wagons		3,25,437
1962-63	18	„		3,01,448
1963-64	22	„		3,34,528
1964-65	25	„		3,50,332
1965-66	18	„		3,05,535

The table below shows the volume of export with respective value for five years (i.e., 1961-62 to 1965-66):—

Year.	Volume of export.			Value(in Rs.).
1961-62	18	wagons		2,90,538
1962-63	16	„		2,30,438
1963-64	20	„		2,35,435
1964-65	23	„		3,12,437
1965-66	16	„		2,30,884

The workers are mostly local. The total number of workers employed in the factory during the five years (i.e., 1961-62 to 1965-66) is given below :—

Year.					Workers.
1961-62	..	..	..	..	45
1962-63	..	..	..	..	40
1963-64	..	..	..	..	48
1964-65	..	..	..	..	42
1965-66	..	..	..	..	38

There are no female workers in the factory.

The workers are registered under the Employees' State Insurance Scheme for different kinds of benefit*.

Shree Madhav Mills, Private, Limited.—This factory is situated at Mohalla Malsalami (Patna City) about 7 miles east of Patna. It was started in 1924. It has three sections, viz. (i) Roller Flour Mills, (ii) Engineering and Foundry Works, and (iii) Ice Factory and Cold Storage.

The principal raw materials of the company are wheat, iron and steel and pigiron. The entire requirement of wheat is supplied by Government of India and its production, i. e., flour is exclusively meant for the State of Bihar. Iron and steel and pigiron are imported from Hindustan Steel, Ltd., Tata Iron and Steel, Ltd., Kumardhubi and Calcutta markets and its production, i. e., nut-bolts and machineries are exported throughout the country. The import and the export are done both by rail and road. The factory is worked with the power supplied by the Patna Electric Supply Company.

The average annual value of import received in the factory during 1961—66 was as follows:—

Article.					Value (in Rs.).
1. Wheat	..	..	..	..	35 Lacs.
2. Iron and Steel	..	..	..	..	8 Lacs.
3. Pigiron	..	..	..	..	50,000

*Source.—Report of the factory.

The average annual value of production during 1961-66 was as follows:—

Article.	Value (in Rs.).
1. Wheat product	40 Lacs.
2. Nut-bolts	15 Lacs.
3. Machinery and machinery parts	1 Lac.

The average number of workers employed during five years (*i. e.*, 1961-66) was 300 males and 2 females yearly. The factory provides to its workers house-rent, uniform, two bonuses in a year, provident fund and gratuity. The workers are registered under the Employees' State Insurance Scheme*.

Shree Beharji Mills, Ltd.—It is situated at Mohalla Malsalami (Patna City) about 7 miles east of Patna. It is a very old concern, becoming a public limited liability concern in 1941. It has three sections, *viz.*, (i) Roller Flour, Rice, Dal and Chhanti Mills, (ii) Oil Mills, and (iii) Iron Foundry and Engineering Section.

The principal raw materials, *i. e.*, wheat is supplied by Government of India ; oilseeds are purchased in open market in Bihar, Uttar Pradesh and Punjab ; and pig iron from Hindustan Steel, Durgapur and also from local markets. The production, *i. e.*, wheat flour is exclusively meant for the State of Bihar; oil and oil-cakes and machineries and machinery parts are exported to various destinations in the country. The imports and exports are done by rail and road. The factory is worked with the power supplied by the Patna Electric Supply Company.

The average annual value of import received in the factory is as follows:—

Article.	Value(in Rs.).
1. Wheat	50 Lacs.
2. Oil-seeds	20 Lacs. .
3. Pigiron	25,000

*SOURCE.—Report of the factory.

The average annual value of production is as follows:—

Article.	Value(in Rs.)
1. Wheat products	56 Lacs
2. Oil and oilcakes	23 Lacs
3. Machineries and machinery parts	50,000

The annual average of workers employed during the years (1961—66) is 150 males and 5 females. The factory provides its workers house rent, 25 free quarters, uniforms, yearly bonus, provident fund and gratuity. The workers are registered under the Employees' State Insurance Scheme*.

Patna Roller Flour Mills.—This factory is situated at Digha, about 4 miles west of Patna and manufacturing wheat products. It was started in 1962 and is a partnership concern. The investment of capital is over 10 lacs of rupees. The requirement of wheat† is supplied by Government of India. Its production, i. e., flour is exclusively meant for the State of Bihar. The import and the export are done by rail and road. The factory maintains its own transformer of 250 K.W.H. to supply power to it. The production for three years (i.e., 1963-64 to 1965-66) was 7,000 tons valued at about Rs. 40 lacs.

The average number of workers employed in the factory during the said period was 50 (all males). The factory provides its workers medical facilities, bonus and other allowances.

The mill is fully automatic. No hand process is involved. All the processes, viz., cleaning of wheat, its washing, brushing and storing in bins and maintenance of appropriate percentage of humidity are all done by machines. The factory maintains a laboratory for testing the moisture and acidity contents of the wheat products‡.

*Source.—Report of the factory.

†To the extent of 30 per cent to 35 per cent only of the total capacity of the plant.

‡Source.—Report of the Mills.

Divisional Workshop of Eastern Railway, Danapur.—The workshop is situated near the Danapur Railway Station of the Eastern Railway. It was started in 1928 and is managed by the Eastern Railway. The principal raw materials, i.e., timber, is imported from Bengal, Gujarat and Chota Nagpur (Bihar) and steel from different stores of Eastern Railway, Calcutta. The average volume of timber received during the last five years (1962-63 to 1966-67) is 25,000 cft. worth about Rs. 5,00,000 and 50 tons of steel worth Rs. 50,000. The workshop takes power from the Power House of Eastern Railway, Danapur. Repair works of hand signal lamps, station equipments, platform trolley, rubbish carts and old furniture are mostly done. New furniture is also manufactured. The average annual value of repair and new manufacture is worth about Rs. 2,00,000. The articles after repairs and new manufactures are sent to the different railway stations under Danapur Division of the Eastern Railway through its own railways.

On average the workshop employs 150 workers per month. They are both skilled and unskilled and mostly local. The workshop provides rest house, medical assistance and toilets to its workers.

Loco Shed of Eastern Railway, Danapur.—The Loco shed is situated within the railway campus of the Danapur Railway Station of Eastern Railway. The principal raw materials, i. e., spare parts are imported from Jamalpur, Kanchrapara, Howrah, Lilluah and Khanna Junction Store Depots.

The Loco Shed takes power from the Danapur Railway Power House. Only overhauling and repairing of railway engines are done here. There are 49 engines of different classes in this Loco Shed. On average 25 engines are repaired or overhauled daily. There are 312 workers employed here.

Central Workshop of Bihar State Road Transport Corporation, Phulwarisharif.—The workshop is situated in the premises of the Camp Jail, Phulwarisharif about 4 miles west of Patna. It was started in 1954 and is managed by the Bihar State Road Transport Corporation. The principal raw materials, i.e., aluminium sheets, aluminium extruded sections, angles, sheets, paints, automobile spare parts, both indigenous and foreign are imported through vehicle manufacturers from Madras, Bombay and Jamshedpur. The import is received through road transport agencies and railways. The average value of import received during the last five years (1962-63 to 1966-67) was worth about Rs. 4 lakhs. The workshop takes power from Patna Electric Supply Company. It has got its own transformer of capacity 6.6 K. W. Only repair and overhauling work is done here. The annual average of

vehicles, repaired and overhauled comes to 422, the work being valued at Rs.22 lakhs approximately. The vehicles after repair and overhaul are sent to various divisions of the Bihar State Road Transport Corporation. There are 414 workers both skilled and unskilled in the Workshop. They are mostly local. The Workshop provides rest rooms, canteen, toilets, water taps, etc. Loans are also given to needy workers from the welfare fund.

Ferry Workshop of North-Eastern Railway at Mahendru Ghat (Patna).—There is a small workshop near Mahendru Ghat Jetty where minor repairs and servicing are done to steamers and tug numbering 3 and 1 respectively at present (1967). There are 45 workers employed in this workshop. The work is supervised by an Assistant Mechanical Engineer, a Ferry Superintendent and three Marine Engineers.

Police Workshop.—There is a workshop maintained by the District Police Department in the New Police Line near Bansghat where only the motor vehicles of the Police Department are repaired. The workers are all Government servants equivalent in rank to constables.

Classification of Industries.—The following statement gives a classification of the Large and Medium Size Industries in the Patna district with total units of each and labour employed in them :—

Sl. no.	Nature of industries.	Units.	Total number of workers employed.	Remarks.
1	Metallurgical	3	1,290	One of these units is the South Bihar Sugar Mills in the off-season employing 83 workers.
2	Electrical Equipment.. ..	3	453	
3	Transportation	2	499	
4	Industrial Machinery (Textile Machinery).	1	100	
5	Agricultural Machinery	3	179	
6	Drugs and Pharmaceuticals	1	290	
7	Textiles	4	822	Includes 45 female workers.
8	Sugar	1	791	
9	Food Processing Industries	3	507	Includes 7 females.
10	Vegetable oils and Vanaspati	2	457	Ditto.
11	Leather, leather goods and pickers	2	1,616	
12	Class	1	367	
TOTAL		26	7,371	

*Small-scale Industries**—There are 302** registered units in the district engaged in small-scale industries. Their distribution is detailed below:—food products—17 ; *hukka* and chewing tobacco—1 ; hosiery, mufflers, caps, etc.—3 ; footwear and readymade garments—4 ; furniture and fixtures—14 ; exercise books, note books, registers, etc.,—2 ; printing press—1 ; chemical products like paints, varnishes, soaps, boot-polish, camphor tablets, etc.—38 ; non-metallic products like mirrors, tiles and cement products, lenses, reinforced cement concrete spun pipe, etc.—13 ; metal products like sieves, nuts-bolts, machine parts, hand operated machines, aluminium utensils, agricultural implements, etc.—1 ; electrical machinery, apparatus, appliances, etc.—25 transport equipments—11 and small articles like combs, paper pins, buttons, bangles, etc.—26.

Cottage Industries.—The main industries under this head are weaving, iron-ware, cutlery, basket-making, rope-making, etc.

Cotton Weaving.—The *jolahas* and *tantis* manufacture coarse cloth. There are a number of small establishments for weaving *durries* specially in Patna. *Lungis*, curtains, etc. are manufactured in Biharsharif. The Biharsharif subdivision, specially Biharsharif town is the main centre of weaving in this district.

Ironware.—Ironwares are manufactured in nearly every village of the district wherever a blacksmith resides. The main articles manufactured by these blacksmiths are *karchhul*, *chholni*, *tawa*, *khurpi*, *hansua*, plough-share, etc. Some of these blacksmiths also manufacture knives, scissors and such other articles.

Basket-making.—Basket-making has been carried on from time immemorial by *doms* who manufacture not only baskets, but also *chiks* from bamboo. They also manufacture winnowers (*soop*) from reeds. This cottage industry is distributed throughout the district.

Rope-making.—Rope is manufactured mainly from *sabai* grass by a section of people called *chains* in this district. The *sabai* grass is imported from the jungles of Santal Parganas, Shahabad and Palamau districts. The main centre of this cottage industry is Patna town.

Silk Industry.—Cloth woven out of a mixture of cotton and silk yarns called *bafta* is manufactured in the Biharsharif subdivision. The village Naipura in Silao P. S. of the Biharsharif subdivision is the main centre of this industry.

Bidi-making.—*Bidi-making* is a cottage industry which has permeated throughout the district even into remote villages. It gives livelihood to a large number of persons. The Biharsharif town is the main centre of this industry. There is a good home market. Sometimes surplus is exported.

*The capital investment in an unit of small-scale industry is Rs. 10,000 and below Rs. 1,00,000.

** *Industrial Directory of Bihar*, 1966, pp. 44—64.

Trunk manufacture.—Trunks are manufactured as a cottage industry in all the towns of the district. Besides manufacturing trunks the workers engaged in the business manufacture also small racks, mouse traps, etc.

There is an Institute of Industrial Designs at Digha which manufactures cottage goods and also supplies design to persons engaged in cottage industries*.

Bihar Cottage Industries, Gulzarbagh.—An organisation known as the Bihar Cottage Industries was established at Gulzarbagh, Patna in 1935 for promoting the cottage industries. The main function of this organisation is to develop the handloom industries in the State of Bihar. It purchases manufactured goods from the different weavers' co-operative societies and markets. There are 26 co-operative societies in the State, i. e., four in Gaya, five in Saran, 12 in Biharsharif (Patna) and five in Madhubani (Darbhanga) from where the organisation takes manufactured goods.

The organisation purchases grey yarns from mills and gets them dyed at its own dye house at Gulzarbagh. It issues dyed and grey yarns to the societies and supplies specification for the manufacture of cloth and accepts the manufactured cloth at its own costing. There is a Central Warehouse in the premises of the industries where manufactured goods are stocked and supplied to selling agents in different parts of India and foreign countries. The organisation has its sales emporia at Patna, Ranchi, Bhagalpur, Jharia, Gaya, Jamshedpur, Rajgir, Bombay and Calcutta. There is a mobile van for carrying on propaganda and sale. The organisation also deals in handicraft goods manufactured at different centres, namely, Ranchi, Patna, Manigachhi (Darbhanga), Banmankhi (Purnea) and Lalganj (Muzaffarpur).

The head of the organisation is the Business Manager who is assisted by one Marketing Officer and 30 other staff with their headquarters at Patna. The Business Manager is under the administrative control of the Director of Industries, Bihar, Patna.

REFRIGERATION.

Cold Storage.—In the wake of the industrialisation of the country cold storage industry has made rapid strides in this district, the first one having been set up in 1940. At present (1967) there are 48 units of cold storage in this district with a total storage capacity of 11,23,000 maunds.

The saturation point in this industry is not in sight. By the side of the Patna-Ranchi by-pass, south of Gulzarbagh, a cold storage plant is under construction even in a deep depression. Another is

*See, "Cottage Industries - Past and Present" in Patna City.

being set up at Mokameh. All these plants have been constructed in the private sector and are either private limited or partnership concerns. The capital has been provided by individuals as well as raised through loans from banks as also from Government, both Central and State. The geographical distribution of these plants is not even throughout the district. While they are concentrated in and about Patna and also quite a few of them have come up in the Bihar subdivision, there is none west of Danapur. Potato, onion, green vegetables, mango and jackfruit are usually kept in cold storage. Potato and onion are the major occupants. There is no cold storage for fish, meat or beef. Nor can these be kept in the cold storage where vegetables and fruits are kept. The productivity and need for preservation of these stuffs for good market govern the geographical distribution of the plants.

Cinema.—There is no air-conditioned cinema house in the district.

Public Buildings.—The High Court premises have been made air-conditioned as also those of the Reserve Bank of India.

Public or Private Vehicles.—So far there are no refrigerated public or private vans in the district.

Patna Industrial Estate.—The Patna Industrial Estate was started in 1958 at Digha off Patliputra Colony. It covers an area of 57.96 acres. The land was acquired at a total cost of Rs. 2,47,426. It is an administrative unit for the development of small-scale industries. Till March, 1967, the estate has constructed 41 worksheds. Out of 41 units, 10 are Government units and the remaining 31 private. The estate is taking bulk supply of electricity from the Patna Electric Supply Company. The sub-station at this estate has a capacity of 400 K. W. The electric supply to the small industries in the estate is maintained by the management of the Patna Industrial Estate. The power supply is available to all the different units since 1st August 1959. Tube-well having a capacity of water discharge of 24,000 gallons per hour has been constructed. The construction of a Water Tower having a capacity of 50,000 gallons has also been completed. The water-supply in this estate is available since 1959.

An Industrial Raw Materials Depot has been started in the estate with a working capital of Rs. 3.25 lacs.

The depot has been appointed as a registered stockist under Iron and Steel Control Order.

The industries located in the premises of the Industrial Estate are detailed below :—

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Serial no.	Name of the units.	Size of each unit.	Rent per month.	Principal item of products.	Remarks.
		Sq. ft.	Rs.		
1	M/s. Pravat Udyog Mandir ..	3,000	225.00	Sheet-metal parts, wiremesh, Building hardware, Stainless steel wares, Air containers.	
2	M/s. Bhartiya Audyogic Pratishthan.	3,000	225.00	Bolts, Screws, Rivets, Studs, Automobile and Precision components and Light Engineering goods.	
3	M/s. Bihar Steel Products Co.	3,000	225.00	Cycle Brake, Stay sets, Rahat pumps, Pipe fittings, Nail and Non-ferrous castings, Wire nettings, Paddy-threshers, Paddy Weeders, Stay sets.	
4	M/s. Abhiyants Private, Ltd. ...	3,000	225.00	Lathe all geared, Taper turning attachment, Dividing head, Coolant Pump, Milling attachment, Tool Post Grinder, Compound slide, Universal Rice, Stainless Steel utensils, Wiremesh, Crates.	
5	M/s. Model Indian Non-Ferrous Foundry.	3,000	225.00	Though the unit is registered as non-ferrous foundry, they are doing the work of steel fabricator.	
6	M/s. Associated Consultant Engineering Corporation.	3,000	225.00	Bicycle Hub cons, Trailers, Tankers, Insulator Pins, Pin, Axles, Ball Pen Hammer, Sledge Hammer, Steel Cabs and General Fabricators.	
7	M/s. Shanker Sewing Machine Co. (P), Ltd.	6,000	450.00	Sewing Machine and Parts.	

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8	M/s. Brahmchari & Co.	..	1,500	112.50	Automobile Sheet-metal parts, Light Engineering goods.	
9	M/s. Sita Ram Rice Mill	..	1,500	112.50	Barbed wire, Cycle Bell (Bell Metal and Sheets) Stands, Carriers, Rahat, Pumps, Trailer and Water Tankers, Electroplating.	
10	M/s. Electric Power Equipments		1,500	112.50	Electrical Transformers	.. They have been allotted a unit from 1st November, 1966. Production not yet started.
11	Small Industries Service Institute (Government of India).		1,500	112.50	Training of Machine Shop Practice (six months' duration).	
12	M/s. Ava Engineering Industries	1,500 } 1,500 }		225.00	Cycle Mud guards, Collapsible Gates, Window Grills, Hospital Beds, Steel Almirahs.	
13	M/s. Associated Metal Industries		1,500	112.50	Barbed wire, Wiremesh, Steel Almirahs.	
14	M/s. Gwalior Metal Industries	..	6,000	450.00	Steel Re-rolling Mill products.	
15	M/s. Bihar Body Builders M/s. United Industrial Enterprises.	..	3,000	225.00	Truck and Bus Body. Ammunition Boxes, Campkhat, and items of defence.	
16	M/s. Machine Tools Manufacturing Corporation.		3,000	225.00	G.I. Pipe, Conduit Pipe, Hand Tools.	
17	M/s. Singh & Co.	..	3,000	225.00	Steel furniture, Window and Gate Grills, small non-ferrous and ferrous castings, Nightsoil Trolley and buckets and Light Engineering goods, Hospital Beds and Lockers.	
18	M/s. Arun Chemicals	..	3,000	225.00	Zinc oxide.	
19	M/s. Elite Light Engineering Corporation.		3,000	225.00	Fittings and tools for aluminium conductors and ground wires, air brakes switches, Stay sets.	

Serial no.	Name of the units.	Size of each unit.	Rent per month.	Principal item of products.	Remarks.
		Sq. ft.	Rs.		
20	M/s. Trivedi Industries	.. 3,000	225.00	Spinning machines for Silk Industry, Conduit pipe, Steel Almirahs and Furnitures.	
21	M/s. Jupiter Electricals	.. 3,000	225.00	Auto and G.L.S. Lamps, Brass Lamp cap, Soldering wire.	
22	M/s. Industries & Works	.. 3,000	225.00	Copper and Aluminium wire drawing and Rivets.	
23	M/s. Gurumukh Singh & Sons	3,000	225.00	Trailers, Axles, Load chains, Gate and Grills, etc.	
24	M/s. Standard Fabricators	.. 3,000	225.00	Repair of Automobile Van	.. The unit is registered for manufacturing electrical accessories, but presently it is doing the repairing work of automobile equipments.
25	M/s. Binny & Company	.. 3,000	225.00	Foundry (Ferrous) Powerlooms and Light Engineering Works.	
26	M/s. Vankos & Co.	.. 3,000	225.00	Tools, Jacks and Dies Pipe Bending Machine and Hand Shearing Machines.	
27	M/s. Jai Shree Udyog, Private, Ltd.	240' x 70'	..	Powerlooms, M/C Tools, Hydraulic Jacks, Tools and Dies, Centrifugal water pumps.	They have been allotted open land on lease basis.
28	M/s. Punjab Metal Works	.. 240' x 70'	..	Aluminium utensils, Sanitary Fittings	Ditto.

29	M/s. United Industrial Works	240' x 70'	..	Stainless Steel Hospital equipments, Bowls, Tray, kidney tray, etc., and Utensils and electrical equipments.	Ditto.
30	M/s. Ferro Fabrik	240' x 70'	..	Shoe Hardwares, Safety Toe Caps, Pins for Boots (Ammunition and Miners), Tracks for Boots and Shoe.	Ditto.
31	M/s. Indo Engineering Works	1,500	112.50	Production not yet started.	
<i>Name of the Government Units.</i>					
1	Bicycle Assembly Workshop	12,000	900.00	Bicycle assembling and manufacture of cycle parts.	
2	Common Facility Service Work- shop.	7,200	540.00	As per name of the unit.	
3	Electroplating Scheme	3,600	270.00	Ditto.	
4	Industrial Raw Materials Depot	4,800	360.00	Ditto.	
5	Automobile Battery Scheme	3,600	270.00	Ditto.	
6	Carpentry Unit	3,600	270.00	Ditto.	
7	Radio Components Scheme	1,800	135.00	Repair of electrical machines.	
8	Electrical Accessories Scheme	..	..	..	Not functioning.
9	Model Foundry Scheme	..	..	..	Not functioning.
10	Electric Motor Scheme	..	..	..	Not functioning.

TRADE UNIONS.

The following is a list of the industrial trade unions registered till 30th April, 1966 which relates to workers employed in the various industries in the Patna district :—

Serial no.	Name of the Unions.	Registered no.	Date of registration.	Affiliation with Central Organisation.
1	The Patna Electric Supply Workers' Union, Jakkanpur, New Area, Patna-1.	15	16-12-1939	U.T.U.C.*
2	The Patna Waterworks Union, 12 L.F., Block-2, Boring Road, Shreekrishna-puri, Patna.	19	4-3-1939	I.N.T.U.C.**
3	The Patna Press Workers' Union, Annie Besant Road, Patna-4.	21	1-4-1939	
4	The South Bihar Sugar Mill Workers' Union, Bihta, Patna.	26	8-10-1939	I.N.T.U.C.
5	The B. C. E. Workshop Employees' Union, Annie Besant Road, Patna-4.	63	13-7-1945	
6	The Bata Mazdoor Union, P. O. Dighaghat, Patna.	82	10-6-1946	I.N.T.U.C.
7	The Mokamehghat Bata Workers' Union, Mokamehghat, P. O. Hathidah, district Patna.	88	28-7-1946	I.N.T.U.C.
8	The Bihar Government Press Employees' Association, Gulzarbagh, Patna-7.	120	4-2-1947	I.N.T.U.C.
9	Cottage Industries Institute Employees' Association, Annie Besant Road, Patna-4.	236	11-1-1949	
10	Baidyanath Ayurved Bhavan Karmachari Sangh, Chirayatanr, Patna-1.	251	4-8-1948	I.N.T.U.C.
11	Engineering Patna Mazdoor Union, P. O. Mithapur, Patna.	273	1-4-1948	I.N.T.U.C.
12	Bihar Survey Office Employees' Union Association, Gulzarbagh, Patna.	310	18-12-1948	
13	Bihar Provincial Electric Workers' Federation, Jakkanpur, New Area, Patna-1.	435	5-4-1950	

*United Trade Union Congress.

**Indian National Trade Union Congress.

Serial no.	Name of the Union.	Registered no.	Date of registration.	Affiliation with Central Organisation.
14	Patna Electric Supply Mazdoor Union, C/o Shri N.P. Agrawal, Advocate, Gorla Toli, Station Road, Patna-1.	494	1-3-1951	I.N.T.U.O.
15	The Bihar Electric Supply Workers' Union, Jakkampur, New Area, Patna-1.	569	3-11-1952	
16	The Patna Steel Trunk Factory Workers Union, Annie Besant Road, Patna-4.	684	16-2-1953	
17	Patna Zila Sonachandi Karigar Sangh, Durikhi Lane, Patna-4.	633	6-9-1953	A.I.T.U.C.
18	Polson Workers' Union, Jakkampur, New Area, Patna.	635	18-9-1953	U.T.U.C.
19	Bihar Rajya Transport Karamchhari Union, Annie Besant Road, Patna-4.	642	31-10-1953	
20	Bihar State Cold Storage and Refrigeration Service Workers' Union, Annie Besant Road, Patna-4.	681	3-7-1954	
21	Shri Baidyanath Ayurved Bhawan Mazdoor Union, Anant Shaw-ke-Thakurbari, Kadamkuan, Patna-3.	734	28-6-1955	A.I.T.U.C.*
22	The Newspaper and Publications, Private, Ltd., <i>Indian Nation</i> and <i>Aryavarta</i> Karamchhari Union, Shankar Hotel, Brajkishore Path, Patna-1.	832	24-4-1957	
23	Biscuit Karamchhari Union, Patna City, Dahuchak, Nagla, P.O. Patna City, Patna.	835	14-9-1957	
24	Pradeep Lamp Workers Union, Annie Besant Road, Patna-4.	867	8-10-1958	
25	Phulwarisharif Suti Mill Mazdoor Union, P. O. Phulwarisharif, Patna.	906	16-6-1959	A.I.T.U.C.
26	Bihar State Electricity Board Employees' Union, Annie Besant Road, Patna-4.	908	9-7-1959	
27	Hindustan Vehicles Mazdoor Union, P. O. Phulwarisharif, district Patna.	926	5-11-1959	A.I.T.U.C.
28	Britannia Engineering Mazdoor Congress, Mokameh, Patna.	932	11-1-1960	

*All-India Trade Union Congress.

Serial no.	Name of the Union.	Registered no.	Date of registration.	Affiliation with Central Organisation.
29	Automobile and Engineering Workers' Union, Jakkampur, New Area, Patna-1.	933	11-1-1960	
30	Biharsharif Silica Mines Worker's Union, Patna Road, Azad Bihari House, Mohalla Mohanpur, Biharsharif, Patna.	959	4-6-1960	
31	Industrial Estate Employees' Union, L.F./2 Block, Shri Krishnapuri, Boring Road, Patna-1.	1027	18-11-1961	U.T.U.C.
32	Industrial Estate Karamchari Congress, Jakkampur, New Area, Patna-1.	1028	13-11-1961	
33	Bata Karamchari Sangh, Digha, Patna ..	1047	20-6-1962	
34	Hindustan Vehicles Karamchari Union, P. O. Sahay Nagar, Patna.	1048	20-11-1962	I.N.T.U.C.
35	Bihar Co-operative Weaver Spinning Mills Mazdoor Congress, Mokameh, P. O. Mokameh, Patna.	1059	20-11-1962	
36	Patna Automobile and Repairing Workshop Workers' Union, Cinema Chauk, Darbhanga, (Branch Office, Shri B. K. Bhattacharya Road, Patna-1).	1071	20-8-1963	
37	Pradeep Lamp Works Karamchari Sangh, Mohalla Chauk Shikarpur, Patna City, Patna-9.	1093	28-3-1964	
38	Shri Banshi Industries Mazdoor Union, Kankarbagh Road, Patna.	1101	20-6-1964	
39	Patna Biscuit Udyog Karamchari Sangh, C/o Bhartiyaamazdoor Sangh, Kadamkuan, Patna-3.	1102	25-6-1964	
40	Patna Press Karamchari Sangh, Khazanchi Road, Patna-4.	1106	1-8-1964	
41	Howrah Motor Company Workers Union, L.F. 12, Block-2, Shri Krishnapuri, Boring Road, Patna-1.	1123	27-2-1965	
42	Bihar Rajya Cold Storage Karamchari Sangh, Kadamkuan, Patna-3.	1154	27-9-1965	

Generally, there has been peace in the industrial undertakings of this district.

INDUSTRIAL POTENTIAL.

As we have observed above, Patna district has practically no minerals. There is no possibility of harnessing water resources to produce hydro-electricity. The Barauni Thermal Power Station opposite Mokameh, on the other side of the river Ganga, provides power to this district. There is, however, little scope for land being spared for industrial undertakings as the density of population mitigates against it. An industrial complex has been coming up around Mokameh, particularly to avail of the facilities in respect of power, technical and industrial services and easy means of communications between North and South Bihar and proximity to Calcutta. Round about Patna small industries, particularly of engineering type are coming up. Small industries have been set up in private sector, mostly in post-1960 period, but their growth is not planned.*

*See, Chapter XVII 'Other Social Services' for general condition of industrial labour and Employees' State Insurance Scheme and Chapter VIII 'Economic Trends' for wage levels, etc.

APPENDIX I.

The following table shows the nature of production of small-scale industries, their units, labour employed, capital investment and annual installed capacity* :—

Nature of production.	Units, of workers employed.	Total no. Capital invested (in Rs.).	Annual installed capacity.	Remarks.						
					1	2	3	4	5	6
1. Food Products ..	17	252	9,17,650	22,969 M/T 12 lakh number. 12,500 boxes. 36,000 gallons.	(Lodges, etc.)					
2. Tobacco and Tobacco Products.	1	10	10,000	12.5 M/T.						
3. Textiles ..	3	49	5,10,691	30,000 numbers 1.86 lakh pairs. 1,080 looms.	(Towels, etc.) (Dhoti, Sari, etc.)					
4. Footwear, other wearing apparel and Made-up Textile Goods.	4	112	6,12,345	1,30,000 numbers. 48,000 pairs.						
5. Furniture and Fixture.	14	153	5,57,900	90,296 numbers. 260 M/T.						
6. Paper and Paper Products.	2	24	3,07,000	720 M/T. 17,000 numbers.						
7. Printing Industries	1	20	97,027							
8. Chemical and Chemical Products.	38	357	23,27,690	1,02,320 K.G. 600 K.G. 51,600 gallons. 60,000 gross. 16,800 boxes. 1,39,22,920 phials.						
9. Non-Metallic Mineral Product except Petroleum and Coal.	13	284	9,07,933	3,37,500 numbers. 89,36,000 rft. 1,968 M/T. Worth Rs. 60,000. 40,00,000 sq. ft. 40,800 cft. 11,400 dozen.						

*Source.—*Industrial Directory of Bihar, 1966*, issued by Public Relations Department, Government of Bihar, Patna, pp. 44-64.

1	2	3	4	5	6
Nature of production.	Units, of workers employed.	Total no. of workers employed.	Capital investment (in Rs.).	Annual installed capacity.	Remarks.
10. Metal Products ..	147	2,591	1,52,64,008	2,35,746,504 M/T.	63,750 dozen. Worth Rs. 4,40,000. 27,000 sets. 1,16,000 sq. ft. 72,000 boxes. 10,000 lbs. 96,000 P.C.S. 1,62,75,600 ft. 3,600 rolls. 6,000 poles. 30 pairs.
11. Electrical Machinery, Apparatus, Appliances and Supplies.	25	339	32,10,440	21,28,260 numbers. 24,000 coils of 100 yds. each. 10,116 sets. 1,053 M/T. 20,760 P.C.S. 10,800 (capacity not mentioned).	1,26,252 numbers. 18,000 sets. 3,064 gross. 48,000 rupees. Worth Rs. 60,000. 192 M/T.
12. Transport Equip-ment.	11	175	7,40,000	1,26,252 numbers.	97,976 numbers. 480 sets. 24,000 sq. ft. Worth Rs. 1,03,200. 600 K.G. 7,200 K.G. 1,80,000 (capacity not mentioned).
13. Miscellaneous Manufacturing Industries.	26	220	12,82,960	3,63,178 gross.	747 M/T.