

INDUSTRIES IN INDIA DURING 18TH AND 19TH CENTURY

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The period of 18-19th century was characterised by the industrial revolution in Europe. This was marked with increase in wealth, population and production. The rapid development of industries demanded markets for the goods. The race of monopolising markets consequently established colonies and colonial empires in lesser developed countries of the world which also resulted in the British domination over India. Imperial policy, to a large extent, affected and controlled the development of entire Indian industry during the period.

During the 18th century, main industries in India were textile, cotton and silk, ship-building, handicrafts, and other arts and crafts such as tannery, perfumery, paper making etc. These were mainly in the hands of Indians. The decay of Indian trade and industry set in towards the end of the eighteenth century. Prominent causes of decay were: the Imperial policy to protect British industries, the competition with cheaper goods produced by machines, growth of new habits and tastes towards luxury goods from West. With this began an era of development of new industries in India. In the present paper, the status and development of some important industries in India during the period has been outlined.

INTRODUCTION

The published accounts of European travellers show that India in the seventeenth and early part of the eighteenth century was economically more advanced than most of the European nations. She had flourishing industrial centres, the products of which were well-known all over the world for their quality, low cost and craftsmanship. Traders from various parts of the world visited India and exchanged their gold, silver and precious stones with cotton textiles, saltpetre, tobacco, indigo, silk, brocades, etc. The balance of trade was always in India's favour. This unique feature of her economy attracted widespread notice and comments by almost all foreign observers. Thus, at a time when the commercial and industrial revolution broke in Europe, India was regarded as the richest nation of the world.

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India's trade prosperity was pinching the Europeans bitterly. During this period, mercantilist European statesmen looked with great disfavour upon the export of bullion in exchange with Indian goods. Daniel Defoe in 1708 wrote in his weekly review about this wealth drain from England to India and asked the government to take stern measures against it. For the prohibition of Indian goods, Acts 11 and 12 of William III Cap. 10 were introduced. Other European countries also made similar efforts to penalise the import and use of Indian goods. Baines wrote that all the European governments thought it necessary to prohibit or load the Indian goods with heavy duty to protect their own manufacturers.

The legislation could not help much in this matter but the victory of Plassey and exercise of political power in India changed the conditions drastically in less than 75 years (1757 to 1829). India was reduced from the position of manufacturing country to that of a supplier of raw materials. By 1830, the English people began to look to India for rendering a considerable portion of raw material upon which Great Britain's most valuable manufactures depended.

DECLINE OF THE INDIAN INDUSTRY

There were several factors responsible for the decline of Indian industry in the eighteenth and nineteenth centuries. In the first place the political disintegration that followed with the fall of Mughal Empire adversely affected the economic condition of India. The success of British power in the battle of Plassey in 1757 paved the way for Europeanisation of trade and industry of the country. At the time of British conquest of India, the industrial revolution occurred in England. The capitalist class of England was ready to take full advantage of the technological inventions while India, although had a commercial class, had no industrial traditions. In the early days of the conquest, the East India Company was eager to make money quickly and in the process ruthlessly exploited Indian manufacturers. Heavy tariffs were imposed on various Indian goods. Moreover, fast rate of increase in the production of power—driven machines further deteriorated the conditions of Indian industry. The market of the chief Indian exports began to fail and, therefore, Company took up the supply of raw materials to England at cheaper rates to augment their revenue. By the second half of eighteenth century India became a raw material supplier at the rates fixed by the Britishers according to their interests and a market for the finished goods produced in European countries.

Lastly, the introduction of European Agency Houses led to the ouster of Indian bankers who then turned themselves to zamindari. As a result of the decline of Indian trade and industry, a process of ruralisation started in the country. Thus at the time when Europe started industrialising herself, an opposite trend began in India.

ESTABLISHMENT OF NEW INDUSTRIES

During the period the Indian industry was on its fast decline, the policy of free trade was being advocated in Europe. British Government then threw the Indian market

open to the European world. Foreign capital began to flow in the urban industrial sector. It was initially invested in foreign trade and plantation industries. After 1848, large amount of foreign capital was invested in India for the construction of railways and communications which revolutionised the entire process of industrialisation of the country. Various industries such as cotton plantation, coal mining, paper, iron and steel, etc. which came up during the later half of the nineteenth century are discussed in the following sections.

Cotton Industry

India is a birth-place of cotton manufacture. It probably flourished here before the dawn of authentic history. Indian Cotton trade was extensive from the earliest times to the end of the eighteenth century. In the beginning of nineteenth century, British Industry started flourishing while Indian Industry declined. Generally attributed causes for the decline of the Indian cotton industry are—the invention of powerloom and other mechanical appliances, monopoly of trade created by East India Company in their own favour, the imposition of a heavy tariff on Indian cotton and cotton goods in England, exemption of duty on British staples imported in India, and raising of duties on Indian goods from time to time.

Following tables show the imports and exports of cotton goods in India. It is quite clear from the tables that by 1835, Indian manufactures were almost displaced from the market.

Year	1814	1821	1828	1835
British cotton, imported, '000 yards	81.8	1913.8	4282.2	5177.7

Year	Exports, '000 £	Imports, '000 £
1815	1,300	26.3
1832	100	400.0

By 1840, the East India Company ceased to be directly interested in Indian trade. In its new role as an administrator, it presented a petition to British Parliament for removal of invidious duties which discouraged and repressed Indian industries. Company's capitalists and Indian capitalists were encouraged to establish industries in India.

The nature and extent of this new industrial awakening in India is well illustrated by the history of cotton mills. By 1850, the European factory system became sufficiently developed and coordinated to be transplanted to the east. First cotton mill was started in Bombay in 1854 and by the end of nineteenth century, their number was increased to 193 of which 82 were in Bombay area alone. After 1877 several cotton mills were started in number of other places namely, Nagpur, Ahmedabad, Sholapur, Kanpur, Calcutta and Madras. Jamsetji Tata and Morarji Gokuldas were the first Indian manufacturers who started mills in Nagpur and Sholapur respectively.

The mills were built mainly on Manchester and Lancashire designs. These designs, however, were not according to the requirements of the Indian climate. Most of the machines installed in these mills were of British make. India slavishly followed the practice of Lancashire and used mule spindles and plain looms while for coarse, cheap and plain goods woven in India there was no justification in using such looms and spindles. It was Jamsetji Tata who, for the first time in India, installed ring spindles in his mill at Nagpur.

An investigation made on the conditions in the Textile Industry of India by British United Textile Factory Worker's Association has reported in 1926: "Taken as whole, the mills in India compare favourably as regards building construction, modern machinery, and up to date labour-saving devices, with the mills in Lancashire".

A large amount of capital was invested in cotton than in any other Indian industry. Most striking fact about it is that the foreign capital which had dominated other industries, had only a small place in cotton industry. The profits from these mills were fairly satisfactory. In the eighties, some mills returned all the capital in the first four years. Before the First World War, these mills paid 11 to 12 per cent dividends on the investments.

The production of these cotton mills had undergone a great change since their establishment. In the beginning they were mainly spinning coarse yarn but with the dawn of twentieth century, these mills started consuming the yarn for weaving clothes. There was a tendency to install looms to capture home market for cloth rather than foreign market for yarn. The *Swadeshi* movement and boycott of foreign goods gave further impetus to the cotton industry in India.

Plantation Industries

Various plantation industries namely, indigo, tea, coffee and rubber were developed during 18th-19th century. Their status during the period is outlined in the following sections.

INDIGO: India from time immemorial had been famous for its dyes. Indigo was chiefly used for textile dyeing. In the earlier part of eighteenth century, Indian indigo

trade was on its decline because the production from West Indies and Southern American colonies was more efficient. With the growth of cotton manufacturing by power in England and American and French revolutions towards the end of eighteenth century, the production of indigo began to be developed in India mainly under the influence of Europeans.

Indigo remained an important article of export for quite some time and European planters reaped large profits. In 1831, there were 300 to 400 indigo factories in Bengal and in 1887, 415 factories were reported to be in Azamgarh district alone. In 1829, about 1.3 million acres were under indigo plantation and about 9 million pounds of indigo were exported. Chief centres for indigo plantations in India were Bengal, Bihar, Eastern U. P., Orissa and Madras. England was the principal market from where it was re-shipped to other parts of the world.

In the earlier days, processing of indigo was carried on manually. By the mid of nineteenth century steam was being used as a source of heat for the tanks and power for stirring and pumping.

Towards the end of nineteenth century, the sharp competition offered by synthetic dyes produced in Germany made the cultivation of natural indigo unprofitable. The acreage and production of indigo fell rapidly from 1897. In 1901-02, the exports became less than half of those in 1896. In 1904-05, the area under cultivation was about one third of that in 1894-95. End of nineteenth century, thus led to the virtual extinction of indigo industry.

TEA: In addition to indigo plantation, Europeans were attracted towards the cultivation and manufacture of tea in India. During the eighteenth century, the company had proposed for the introduction of tea, but it was turned down by the directors in England. In 1834, the plans for the introduction of tea in India were accorded sanction. Seeds, plants and labourers were brought from China and experimental gardens were started at a number of places along the south slopes of the Himalayas and in Assam. Indian tea was marketed to London for the first time in 1838 and the Assam Company was formed in 1839. During the first decade of its operations, the Assam Company made no profits and lost a considerable capital. In the early fifties, it began to yield large profits and with this began the extension of tea plantation. The following table shows the increase in area under tea cultivation and production in Assam for the period 1850-1871.

Year	Area under Cultivation, acres	Output of tea '000 pounds
1850	1,876	216
1853	2,425	366.7
1859	7,599	1205.7
1869	25,174	4714.7
1871	31,303	6251.1

Tea plantation gave opportunity of employment to a large number of persons since most of the processes were carried out manually. It was estimated that in 1887 about 500,000 workers were employed in tea plantations.

COFFEE: Coffee is another plantation industry which was developed under the influence of Europeans. East India Company took interest in coffee growing as early as 1823. Great inducements such as grant of land on long lease were given for coffee planting. In 1830, some 4000 acres were under coffee cultivation but the yield was poor. Some experiments in the highlands of Southern India proved to be successful and within few years Mysore and the surrounding hilly region became an important coffee producing area and remains the sole source of coffee supply even today.

The growth of the industry remained steady between 1850 and 1860 and later there was a regular boom when many Europeans set out plantations. However, during the period 1877-1887, as many as 263 plantations were abandoned because of competition offered by cheap coffee from Brazil. During the next decade coffee suffered still more. With the rise of prices during the First World War and post-War period, the industry became more profitable and area under cultivation rose gradually.

RUBBER: Rubber is the most recently developed plantation industry. It was introduced from Brazil in the 1870's at the instance of the Government. Maharaja of Travancore introduced rubber into his state in about 1900. From there the planting spread to the neighbouring territories of Cochin, Coorg and Malabar. Leadership in planting was taken mainly by Europeans. Progress in the beginning was very slow but became more rapid after 1906.

Coal Mines and Mining

Coal is one of the most essential commodities of modern economic life. Although it has been known since ancient times, its production on large-scale has a short history. The British Magistrate of Chhota Nagpur, Mr. S. G. Heatly, was perhaps the first adventurer who undertook large-scale coal mining. In 1774, Mr. Heatly together with Mr. John Summer obtained the privilege of mining coal in Pachete and Birbhum from Warren Hastings, the then Governor General of Bengal. Later, Mr. Redferne also joined this venture and they were given exclusive right to mine and sell coal in Bengal and its dependencies. The joint enterprise operated six mines and produced 90 tons of coal in 1777. This venture suffered a great set-back due to the transfer of Mr. Heatly.

In 1814, Mr. Jones, a retired mining engineer was sent to India at the suggestion of Warren Hastings to explore the possibilities of coal mining in India. Mr. Jones found the prospects of coal mining in India very bright. He then, opened a mine at Raniganj with a financial advance of Rs. 40,000/- from the Government. He soon died and a Calcutta firm which had acted as guarantor, took over the mining operations. By 1831, this Company was mining 15,000 tons of coal annually. Subsequent to the success of this mine, several other mines were opened at Raniganj. In 1843, a few consolidations resulted in the formation of the Bengal Coal Company.

The progress of coal mining in the beginning remained slow due to lack of demand for coal. The transportation of coal through Damodar River could not take place round the year as the water remained shallow for most part of the year. Still, in 1831, the East India Company has sent coal to Singapore, Madras, Ceylon, and Penang for its steamships. The output of coal was 36,000 tons in 1839 and 91,000 tons in 1846.

The turn of the half century opened up new horizons for coal mining also. Establishment of industries and its auxiliaries resulted in increased demand for coal. Moreover, the introduction of rail transport between Calcutta and Raniganj in 1854 also helped in regular transportation of coal. By 1860, 50 collieries were functioning in the Raniganj. The number of coal mines in India rose to 555 in 1905. The table below shows the total production of coal in India.

COAL PRODUCTION IN INDIA

Year	1831	1839	1846	1868	1880	1900	1912
Coal Production (Thousand Tons)	15	36	91	500	1,000	6,000	12,000

The table clearly shows that the production of coal in India steadily increased. The increase in production had been much faster towards the later half of the nineteenth century. Increased demand of coal during this period exemplifies that the process of industrialisation had set-in by that time.

Paper Industry

The manufacture of paper by hand had existed in India for centuries but the production of paper through machines had started sometimes in 1870 with the establishment of Bally Mills in Hooghly. It started producing paper with a single machine only. The popularity and demand of machine-made paper encouraged Bally Mills to install 4 more machines. Bally Mills produced nearly 5,000 tons of paper per year. Due to certain reasons this company was liquidated in 1905. The second paper mill was established at Titagarh in 1884 and the third at Hooghly in 1894. The paper mill at Hooghly was subsequently taken over by Titagarh Paper Mill.

The oldest of the up-country mills the Upper India Couper Paper Mills Company Limited was established at Lucknow in 1879. Another Mill with a single machine was erected by Maharaja Scindia at Gwalior in 1881. This had eventually to be closed down as it could not be run at profit and later on its management was taken over by Bengal Paper Mill Co. Ltd. It was finally shut down in 1922. The Deccan Paper Mill Co. Ltd. commenced production in 1887 at Poona but ceased to operate in 1924 owing to the depressed conditions of the trade.

Bengal Paper Mill Co. Ltd. had been the most important paper mill which was situated at Raniganj. This company was formed in 1891 at first with one machine but three more machines were subsequently added in 1892, 1900 and 1922. Of three other paper mills of minor importance, two were in Bombay and one was at Punalur in the Travancore State. Only common and cheaper kind of paper was produced at these mills.

Iron and Steel

Steel was used in India for weapons, for decorative purposes and for various tools and implements. Remarkably high grade articles were produced. The famous iron column at Delhi is one of the examples. Remains of old smelting furnaces have been found throughout the country. Iron was produced by widely scattered communities in their age old traditional way.

The history of production of iron and steel in the country by modern techniques date back to 1777 when M/s Farguhar and Motte sought permission to bore cannon and to cast shot and shell in Jharia in the neighbourhood of the coal mine of Mr. Heatly. The enterprise had to be abandoned after nearly two years. In the year 1808, Mr. Duncan established a small factory under the protection of the East India Company but this too was closed down. Mr Josiah Marshall Heath was granted exclusive right to smelt iron and produce steel in the Company's domains in 1825 on the request of the Government of Madras. Mr. Heath was advanced loan also by the Company. He could not perform well. By 1835, his debt rose to Rs. 5,71,000 and by 1849 the debt further rose to Rs. 8,22,240. No appreciable quantity of iron could be produced. The East India Iron Co. took over its property in 1853. Although it manufactured 2150 tons of pig iron in 1855, it suffered a loss of £ 392. The holdings were finally taken over by the Government in 1874.

Investigations were made to know the causes of failure of these ventures. Iron samples were sent to England for testing. These were found to be better than those imported from Sweden. One of the investigation reports stated that the failure was due to inexperience, defective machinery and lack of capital. It was also felt that Indian iron industry could succeed only by means of thoroughly modern methods and in regions in which coal and iron were in proximity.

In 1839, M/s Jessop and Co. established an experimental iron works near Barakar in the Raniganj coal field area but it was soon closed. In 1855, another firm M/s Mackay and Co. started the Birbhum Iron Works. It produced 2 tons per day of pig iron in 1858 but was closed in 1860 owing to lack of availability of charcoal. M/s Burn and Company undertook the operation of the same works in 1875 but soon gave it up. Another attempt was made by the Government to operate an iron works on the Nerbudda River, nearly 200 miles above its mouth on the Gulf of Cambay. In 1864, Captain Keatings who was in-charge of the project was transferred. The Government, although had spent nearly Rs. 7.5 lakhs on the project, decided to close the works.

This marked an end of a long series of attempts, by the Government and by European firms, to introduce blast furnace smelting of iron with charcoal.

Subsequently attempts were made in 1875, to smelt iron by means of coal. Mr. Nees experimented with coal and ores of the Chanda District in Central Provinces. He was deputed by the Government. However, the great ash content in the coal proved to be a biggest drawback. In the same year Bengal Iron Company started operations near Asansol but were forced to close down due to insufficient capital and lack of support from the Government. This plant was then taken over by the Government in 1881 and was managed by Mr. Von Schwartz for eight years. It was reported to have produced 30,000 tons of pig iron during 1884-1889. The plant was finally sold out to Bengal Iron & Steel Co. Ltd. This company got sufficient support and aid by the Government. Still, till the end of the century, the Company could not do well. Later on in the beginning of 20th century, other iron and steel manufacturing concerns came up with up to date equipment and could stabilize.

It may thus, be observed that the efforts were being made to establish iron and steel industry in the country despite of a number of failures.

CONCLUSIONS

A brief review of the state and development of industries in India during 18th-19th century reveals that during the second half of the nineteenth century, railways reached out from Calcutta, Bombay and Madras; Coal mines began to be seriously worked in Bengal and Bihar; the first Cotton mill in Bombay and the first Jute mill in Bengal were started: serious attempts were made to manufacture of paper through machines. With this was laid the foundation of industrialisation of India.

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