CHAPTER 7

Industries in India

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PART - I

Basic necessities for setting up factories

Industries are an essential part of a nation's development. You may recall what you studied in class VII about various kinds of manufacturing processes. The story of the paper industry was one example. You would have noticed how factories work and about the process of manufacturing whether at home, in a small shed or in a large factory. In this chapter, we will learn about how Indian industries have grown over the years and the role of government initiatives in promoting industries.

India's main industrial activity for a long time was handicrafts, particularly textile goods. Under the colonial rule, barring a few industries, India could not develop a sound industrial base. It did not have the capacity to produce a wide range of goods. Most industrial products had to be imported. The general policy of British government was not to develop modern industry in India but to ensure that India provided a market for British goods. This led to the destruction of India's traditional craft industries and massive unemployment of craft persons. After 1947, India began many initiatives to promote industrial activities in the country. One important driving force behind this idea was to become self sufficient in meeting our needs and to make the country an industrially developed nation.

For factories, you need machines. A modern factory manufacturing cloth, for instance, would use loom that runs on electricity as compared to hand looms. These looms produce a large quantity of cloth in a short time. Similarly, there are complex machines that produce cement, cars, edible oils etc. To run these machines, all factories require a source of power which is usually electricity. Hence, factories require machines and electricity to run them.

Further, all factories need raw materials from which goods can be produced. For example, steel is required to produce cycles. There are some factories which produce steel sheets from iron and coal. Other factories use these sheets to manufacture steel tubes. Finally, the cycle factory uses these steel tubes to manufacture the steel frame for the cycle. Note that the basic sources of steel are raw materials like iron and coal. As in the above example, minerals and ores form the basic source from which various raw materials required by factories are produced.

A large number of goods are produced by factories that are used by other factories. These are intermediate steps in the chain of production by many factories before we can get final goods that are directly used by people/ consumers/ producers.

Transportation is needed to bring raw materials to factories and transfer finished goods from them. Trucks, railways and ships are the various means of transport. For this, you require some essential facilities such as: a system of roads which are in good condition and which link a large number of towns and villages in the country; a system of transporting material by rail; ports which can accommodate a large number of ships and also organize the loading and unloading from them.

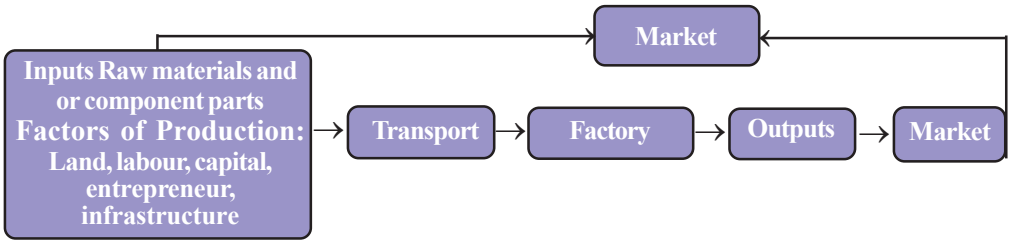
Hence, for industriali -sation, i.e. to develop a large number of different factories, we have certain basic requirements like machines, electricity, minerals and ores, and transport facilities.

- Can you make a list of the products that are produced by factories for other factories?
- Iron is the basic requirement for a large number of goods produced by various factories. Explain this with examples that you see around.
- Have you seen machines used in a factory? Make a collage of different kinds of machines that are used.
- Make a chart to show how petroleum is the basic requirement for a large number of products.
- Discuss what is meant by the word `basic'. What are the basic necessities for industries?
- At the time of independence, what were the objectives that were desired to be achieved through industrialization?

Factories producing these essential goods - machines, electricity, minerals and ores, and transport facilities - are basic industries. Basic industries produce essential goods that can form a base to support a large variety of factories.

Industrial Location

Industrial locations are complex in nature. These are influenced by availability of raw material, labour, capital, power and market etc. It is rarely possible to find all these factors available at one place. Consequently, manufacturing activity tends to be located at the most appropriate place where all the factors of industrial location are either available or can be arranged at lower cost. After an industrial activity starts, urbanisation follows. Sometimes, industries are located in or near the cities. Thus, industrialisation and urbanisation go hand in hand. Cities provide markets as well as services such as banking, insurance, transport, labour, consultants and financial advice etc. to the industry. Many industries tend to come together to make use of the advantages offered by the urban centres known as agglomeration economies. Gradually, a large industrial agglomeration takes place. In the pre-independence period, most manufacturing units were located in cities from the point of view of overseas trade such as Mumbai, Kolkata, Chennai etc. Consequently, there emerged certain pockets of industrially developed urban centres surrounded by a huge agricultural rural hinterland.



Activity

- Collect the wrappers of a few tea packets and tooth paste. Read the wrappers carefully and try to relate to the question below.

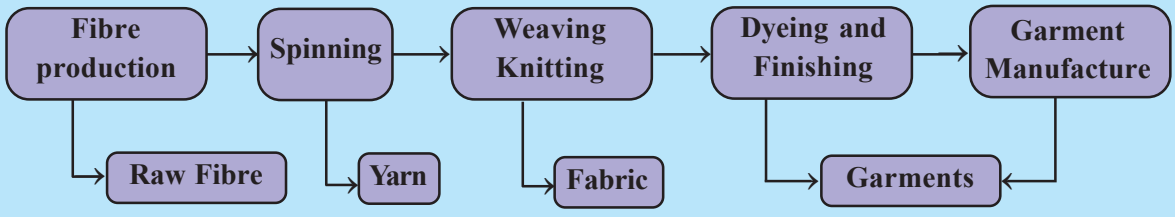
  _____ can be considered as a product of agro based industry. _____ can be considered a product of mineral based industry.
- Raw material for the tooth paste _____ and _____ are produced in another industry. That industry is called key or basic industry. Whereas the tooth paste is a consumer goods and the industry producing such goods is called consumer goods industry.
- The ownership of industries could be lying with individuals or groups of individuals such as _____ (for the tea packets) and _____ (tooth paste). Such an industry is called a private sector industry whereas if the ownership belongs to the government, it will be known as public sector industry. Two examples of public sector industries are _____ and _____.
- Some industries are also owned by large number of people who supply raw materials (milk / sugarcane) or supply their labour (coir) pool their resources to run them. Such industries are called cooperative industries.

Agro Based Industries

The industries which are based on agricultural products are called agro based industries.

Textile Industry: The textile industry occupies a unique position in the Indian economy because it contributes significantly to industrial production (14%), employment generation (45 million persons directly - the second largest after agriculture) and export earnings (about 15% in 2017-18). It contributes 4% towards GDP (Gross Demestic Product). It is the only industry in the country which is self-reliant and complete in the value chain i.e. from raw material to the highest value added products.

(Source: Ministry of Texttiles [September, 2018])

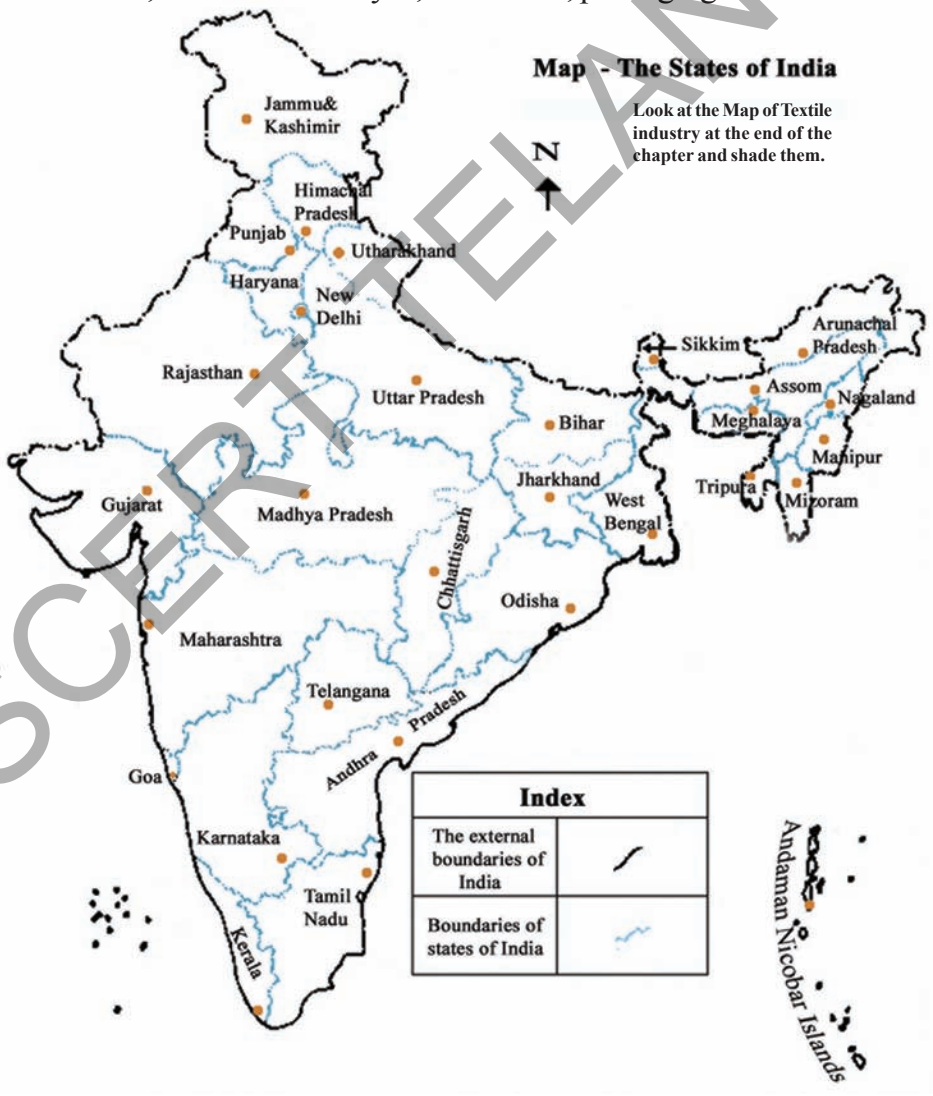


Value addition in the textile industry

Cotton Textiles: In ancient India, cotton textiles were produced using hand spinning and handloom weaving techniques. After the 18th century, power-looms came into use. Our traditional industries suffered a setback during the colonial period because they could not compete with the mill-made cloth from England. In England, cotton textiles were produced in large quantities with the help of power loom. Mill-made cloth was cheaper on account of large scale production and lesser taxes.

About 80% of these are in the private sector and the rest in the public and cooperative sectors. Apart from these, there are several thousand small factories with four to ten looms.

In the early years, the cotton textile industry was concentrated in the cotton growing belts of Maharashtra and Gujarat. Availability of raw cotton, market, transport including accessible port facilities, labour, moist climate etc. contributed towards its localisation. This industry has close links with agriculture and provides a living to farmers, cotton ball pluckers and workers engaged in ginning, spinning, weaving, dyeing, designing, packaging, tailoring and sewing. The industry, by creating demand, supports many other industries such as, chemicals and dyes, mill stores, packaging materials and engineering work.



- The first successful textile mill was established in Mumbai in 1854.
- When the two world wars were fought in Europe, India was a British colony. There was a demand for cloth in U.K. Hence, they gave a boost to the development of the cotton textile industry.

While spinning continues to be centralised in Maharashtra, Gujarat and Tamil Nadu, weaving is highly decentralised to provide scope for incorporating traditional skills and designs of weaving in cotton, silk, zari, embroidery etc. India has world class production in spinning, but weaving supplies low quality of fabric as it cannot use much of the high quality yarn produced in the country. Weaving is done by handlooms, powerlooms and in mills.

The handspun khadi provides large scale employment to weavers in their homes as a cottage industry. India also exports yarn to Japan. Other importers of cotton goods from India are U.S.A., U.K., Russia, France, East European countries, Nepal, Singapore, Sri Lanka and African countries.

- Why did Mahatma Gandhi lay emphasis on spinning yarn and weaving khadi?

Jute Textiles: India is the largest producer of raw jute and jute goods and stands at second place as an exporter of Jute after Bangladesh. There are about 70 jute mills in India. Most of these are located in West Bengal mainly along the banks of the Hugli river 98 km long and 3 km wide.

Factors responsible for their location in the Hugli basin are: proximity of the jute producing areas, inexpensive water transport, supported by a good network of railways, roadways and waterways to facilitate movement of raw material to the mills, abundant water for processing raw jute, cheap labour from West Bengal and adjoining states of Bihar, Odisha and Uttar Pradesh. Kolkata, as a large urban centre, provides banking, insurance and port facilities for export of jute goods.

Do you know?

The first jute mill was set up near Kolkata in 1859 at Rishra. After Partition in 1947, the jute mills remained in India but three-fourth of the jute producing area went to Bangladesh (erstwhile East Pakistan).

The jute industry supports 2.61 lakh workers directly and another 40 lakhs small and marginal farmers who are engaged in cultivation of jute and mesta. Many more people are associated indirectly.

Challenges faced by the industry include stiff competition in the international market from synthetic substitutes and from other competitors like Bangladesh, Brazil, Philippines, Egypt and Thailand. However, the internal demand has been on the increase due to the Government policy of mandatory use of jute packaging. To stimulate demand, the products need to be diversified. In 2005, National Jute Policy was formulated with the objective of increasing production, improving quality, ensuring good prices to the jute farmers

and enhancing the yield per hectare. The main markets are U.S.A., Canada, Russia, United Arab Emirates, U.K. and Australia. The growing global concern for environment friendly, biodegradable materials has once again opened up the opportunity for jute products.

Sugar Industry: India stands second as a world producer of sugar but occupies the first place in the production of jaggery and khandsari (The raw material used in this industry is bulky and in haulage its sucrose content reduces). There are over 460 sugar mills in the country spread over Uttar Pradesh, Bihar, Maharashtra, Karnataka, Tamil Nadu, Telangana & Andhra Pradesh and Gujarat along with Punjab, Haryana and Madhya Pradesh. 60% mills are in Uttar Pradesh and Bihar. This industry is seasonal in nature so it is ideally suited to the cooperative sector. Can you explain why this is so?

- Where should the sugar and jaggery mills be ideally located?

In recent years, there has been tendency for the mills to shift and concentrate in the southern and western states, especially in Maharashtra. This is because the cane produced here has a higher sucrose content. The cooler climate also ensures a longer crushing season. Moreover, the cooperatives are more successful in these states.

Major challenges include the seasonal nature of the industry, old and inefficient methods of production, transport delay in transporting cane to factories and the need to maximise the use of bagasse.

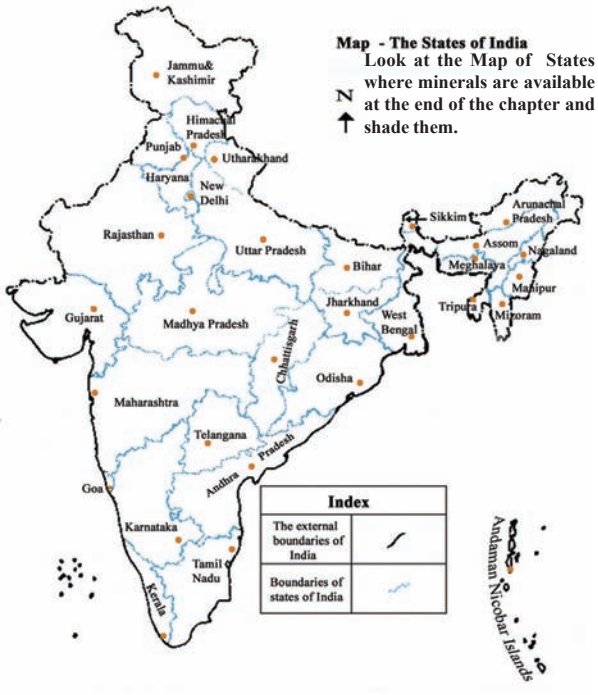
Mineral based Industries

Industries that use minerals and metals as raw materials are called mineral based industries. Can you name some industries that would fall in this category?

The minerals are widespread in Indian subcontinent based on their geological structures. The minerals essential for iron and steel industries are located predominantly in Peninsular India.

Therefore, iron and steel plants are also distributed in the same places as the minerals are located. The industry is dependent on power resources which are equally essential for the operation of industries. Conventional energy resources of coal, petroleum, gas are also available in the same regions which further helps in mineral based localisation of industries.

Map - The States of India
Look at the Map of States where minerals are available at the end of the chapter and shade them.



Iron and Steel Industry: The iron and steel industry are the basic industries since all the other industries-heavy, medium and light,

depend on them for their machinery. Steel is needed to manufacture a variety of engineering goods, construction material, defence, medical, telephonic, scientific equipment and a variety of consumer goods.

Make a list of all such goods made of steel that you can think of Production and consumption of steel is often regarded as the index of a country's development. Iron and steel is a heavy industry because all the raw materials as well as finished goods are heavy and bulky, entailing heavy transportation costs. Iron ore, coking coal and lime stone are required in the ratio of approximately 4 : 2 : 1. Some quantities of manganese are also required to harden the steel. Where should the steel plants be ideally located? Remember that the finished products also need an efficient transport network for their distribution to the markets and consumers.

Today with 32.8 million tons of steel production, India ranks ninth among the world crude steel producers. It is the largest producer of sponge iron. In spite of large quantity of production of steel, per capita consumption per annum is only 32 kg.

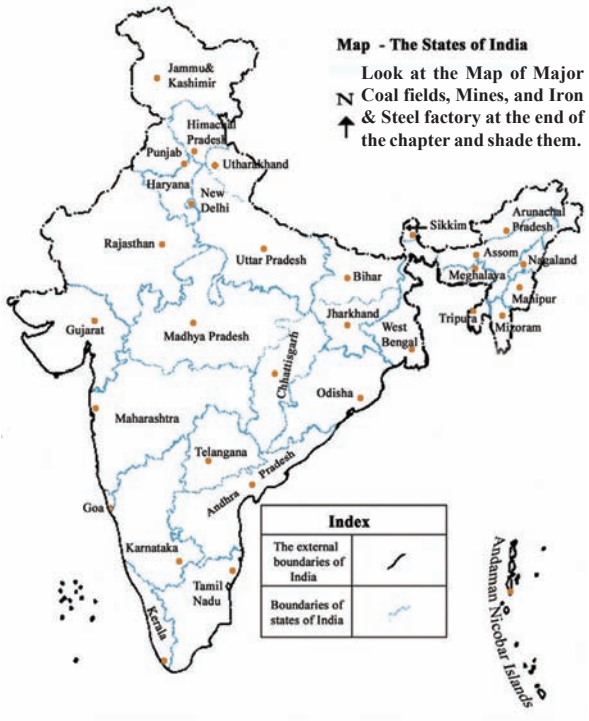
- Why is the per capita consumption of steel so low in India?

Aluminium Smelting: Aluminium smelting is the second most important metallurgical industry in India. It is light, resistant to corrosion, a good conductor of heat, mallable and becomes strong when it is mixed with other metals. It is used to manufacture aircraft, utensils and wires. It has gained popularity as a substitute of steel, copper, zinc and lead in a number of industries.

There are 8 aluminium smelting plants in the country located in Odisha (Nalco and Balco), West Bengal, Kerala, Uttar Pradesh, Chattisgarh, Maharashtra and Tamil Nadu. In 2004, India produced over 600 million tons of aluminium.

Bauxite, the raw material used in the smelters, is a very bulky, dark reddish coloured rock. Regular supply of electricity and an assured source of raw material at minimum cost are the two prime factors for the location of the industry.

Chemical Industries: The Chemical industry in India is fast growing and diversifying. It contributes approximately 3% to the GDP. It is the third largest in Asia and occupies the twelfth place in the world in term of its size. It comprises of both large and small



scale manufacturing units. Rapid growth has been recorded in both inorganic and organic sectors. Inorganic chemicals include sulphuric acid (used to manufacture fertilisers, synthetic fibres, plastics, adhesives, paints, dyes stuffs), nitric acid, alkalies, soda ash (used to make glass, soaps and detergents, paper) and caustic soda. These industries are widely spread over the country. Why do you think is it so?

Organic chemicals include petrochemicals, which are used for manufacturing of synthetic fibers, synthetic rubber, plastics, dye-stuffs, drugs and pharmaceuticals. Organic chemical plants are located near oil refineries or petrochemical plants.

The chemical industry is its own largest consumer. Basic chemicals undergo processing to further produce other chemicals that are used for industrial application, agriculture or directly for consumer markets. Make a list of the products you are aware of.

Fertiliser Industry: The fertiliser industry is centred around the production of nitrogenous fertilisers (mainly urea), phosphatic fertilisers and ammonium phosphate (DAP) and complex fertilisers which have a combination of nitrogen (N), phosphate (P), and potash (K). The third, i.e. potash, is entirely imported as we do not have commercially usable potash or potassium compounds in any form. India is a large producer of nitrogenous fertilisers. There are 57 fertiliser units manufacturing nitrogenous and complex nitrogenous fertilisers, 29 for urea and 9 for producing ammonium sulphate as a by-product and 68 other small units produce single superphosphate. At present, there are 10 public sector undertakings and one in cooperative sector at Hazira in Gujarat under the Fertiliser Corporation of India.

After the Green Revolution, the industry expanded to several other parts of the country. Gujarat, Tamil Nadu, Uttar Pradesh, Punjab and Kerala contribute towards half the fertiliser production.

Cement Industry: Cement is essential for construction activity such as building houses, factories, bridges, roads, airports, dams and for other commercial establishments. This industry requires bulky and heavy raw materials like limestone, silica, alumina and gypsum. Coal and electric power are needed apart from rail transportation.

The first cement plant was set up in Chennai in 1904. After Independence, the industry expanded. Decontrol of price and distribution since 1989 and other policy reforms led the cement industry to make rapid strides in capacity, process, technology and production. There are 128 large plants and 332 mini cement plants in the country.

- Where would it be economically viable to set up the cement manufacturing units?
- The industry has strategically located plants in Gujarat that have suitable access to the market in the Gulf countries. Find out where the plants are located in other states of India. Find their names.

Improvement in the quality has found the produce a readily available market in East Asia, Middle East, Africa and South Asia apart from a large demand within the country. This industry is doing well in terms of production as well as export. Efforts are being made to generate adequate domestic demand and supply in order to sustain this industry.

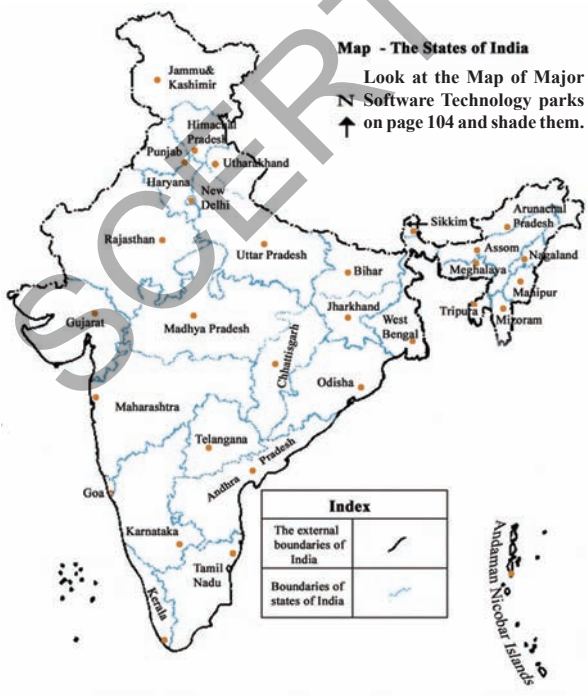
Automobile Industry

Automobiles vehicles provide quick transport of goods and passengers. Trucks, buses, cars, motor cycles, scooters, three-wheelers and multi-utility vehicles are manufactured in India at various centres. After liberalisation of economic policies in 1991, many MNCs were set up for the production of automobiles in India to take the advantage of the availability of labour in India for export. This gave domestic market for automobiles in India. Usage of vehicles is polluting the atmosphere. Lack of efficient public transport may be another cause for the increase of automobiles in India. The industry is located around Delhi, Gurgaon, Mumbai, Pune, Chennai, Kolkata, Lucknow, Indore, Hyderabad, Jamshedpur and Bangalore.

- What are the major concerns for the starting of automobile industry? Discuss.

Information Technology and Electronics Industry

The electronics industry covers a wide range of products from transistor sets to television, telephones, cellular telecom, pagers, telephone exchange, radars, computers and many other equipments required by the telecommunication industry. Bangalore has emerged as the electronic capital of India. Other important centres for electronic goods are Mumbai, Delhi, Hyderabad, Pune, Chennai, Kolkata, Lucknow and Coimbatore. Software technology parks provide single window service and high data communication facility to software experts. A major impact of this industry has been on employment generation. Upto 31st March 2018, the IT industry employed nearly 3.8 million persons. This number is expected to increase on an average at about one lakh per annum in the next 3 to 4 years. It is encouraging to know that 30% of the people employed in this sector are women. This industry has been a major foreign exchange earner in the last two or three years because



of its fast growing Business Processes Outsourcing (BPO) sector. The continuing growth in the hardware and software industries is the key to the success of IT industry in India.

In this section, we read about various types of major industries, their geographical distribution and the localising factors. However, the industries are also posing environmental threat in terms of land, air and water pollution.

Fill in the blanks in the following table. For some industries, you may need to discuss with the teacher.

Industry	States in which they are currently concentrated	Why are they concentrated in those states?
Chemical Industry		
Fertiliser Industry		
Cement Industry		
Automobiles industry		

PART - II

Government and Industrial Development – The Early Years

In India, a few large factories are operated by government and most others by private companies. This kind of existence of industries run by both government and private industrialists has emerged because of the policy decided by the Indian Parliament.

This kind of arrangement was made keeping in view the huge amount of capital required to set up large industries at that time in India. As we read above, for a large number of industries to come up it is important to provide basic inputs. Hence it was presumed that government can invest in basic goods industries and this would also help privately-owned industries for their expansion. Basic goods industries not only require more money but also take a long time to be set up. Private industrial groups or families were not willing to invest in such industries. For example, for setting up a power plant – production of electricity, it would require five to ten years. The government had to undertake this responsibility.

Similarly, government also took the responsibility to provide infrastructure activities – building roads, maintaining transport services such as railways, roadways, airways, water supply, production of gas, oil and other petroleum products.

Government also introduced many restrictions so that small producers could be helped. Many industrial activities were allowed only for small producers. For

example, production of cloth of a specific quality was restricted to handlooms. Many craft production or small scale manufacturing that people could do in their homes or workshops were not allowed to be produced in factories.

Government made laws so that the large factory owners get prior permission-license-to set up factories. This was done so that there would be better planning and co ordination. Government was wary of one industrial unit dominating in producing specific goods. In such a situation, it is possible that the factory owners may charge higher price from consumers for his or her goods when there is no competition. The government regulated the quantity of goods produced by factories. For some goods, the price at which they can be sold was also fixed.

Emerging Problems

Over the years, many of these industrial policies became a hindrance to the growth of the industry. Those aspiring to set up an industrial unit were required to follow so many procedures and had to wait for many years to get the approval from the government offices. There were administrative hurdles, such as delays in processing applications, which gave rise to the unhealthy practice of bribes.

There were many instances of misuse of the licensing system. Licenses were not always given to the most efficient producers. The selection was biased in favour of people with political connections and those who were economically powerful. Thus, the big and influential people would corner not one but several licenses. Some of these would be in very different and unrelated products. For example, a textile manufacturer having secured a license for cement would start a cement factory, even though the firm had no special competence in the area of cement production. During the 1970s and 1980s, many of the industrial families in India had licenses for production of almost all major industrial goods and only few new people could get into industrial production.

All this discouraged new entrepreneurs, those who were willing to take the risk of investing money in industrial production and who would work with the latest technology available.

Write an imaginary dialogue between the big factory and the potter's wheel in the context of industrilation.

When government controlled the price of certain goods, the producers of these goods felt that there was no incentive in producing more goods. Rather, control on prices led to shortage of goods. For example, to buy a scooter, one had to book and wait for several years before the scooter was actually delivered. There was always a greater demand for scooters than was the availability in the market. Such shortages were also common for important basic goods like coal and cement, which in turn, caused a lot of delay to production of other goods. The shortages were blamed on the government's policy of control on Indian industry, particularly its licensing policy. If only these restrictions on industry were removed, industrialists complained, production could increase and shortages would be removed.

The protective measures towards small producers also met with little success with many large producers producing goods clandestinely as small producers.

Another problem faced by Indian industry was the lack of quality of some of its products. For example, compared to the topmost brand of car produced in India, there were many other car producers in the world whose cars were of better quality and also cheaper. One of the reasons for low quality was said to be the lack of competition among producers in the Indian industry. Even among industries that were run by private producers, competition was limited due to the government controls. There were controls on opening new factories and buying new machinery. Import and export of industrial goods, including machinery and raw materials, were controlled. Private manufacturers needed the government's permission (license) for all such activities. Prices of important industrial goods were laid down by the government and the producer had to sell only at that price. Many people were of the view that Indian industry, as a result of government's controls, wasn't modernizing fast and was producing goods at high cost and not making technological improvements.

In the case of government industrial enterprises, government used to allocate a specific amount every year to operate these industries. In the long run, these were expected to become independent and generate revenue for the government. However, it was the other way around for many government run factories they continually required government assistance and there was regular interference in running them. Their functioning was much below what was expected.

New Policy for Industries

In the 1990s, the country began to relook at the industrial policies till then. A new industrial policy was announced in India. Many activities which were earlier restricted only for the government were now allowed for the private industries.

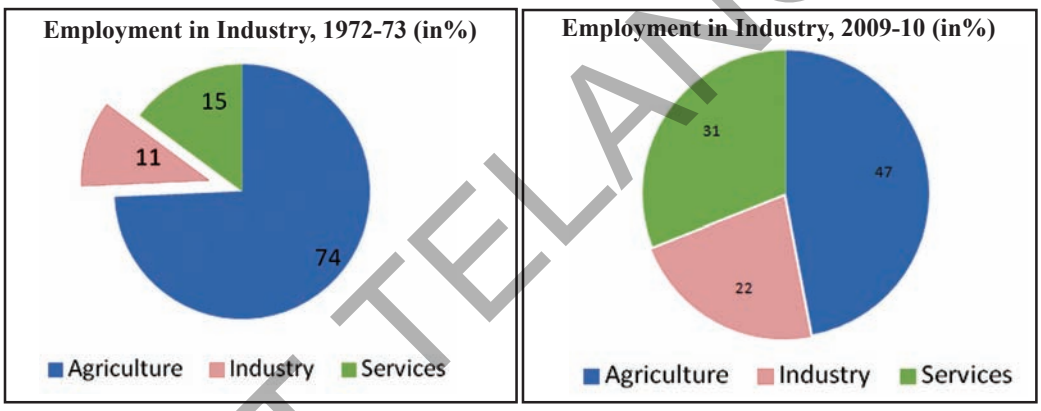
Government also relaxed laws so that factory-made consumer goods were also imported from other countries. Many government rules were simplified to encourage industrial activities in India especially for new entrepreneurs.

In order to improve the efficiency of public sector companies, government sold some of them. The financial support provided by government to run these companies has also got reduced. These companies are also allowed to take decisions independently without interference from government.

Private or government companies from other countries are now encouraged to come and set up factories in India so that new technology would become common and more goods could be exported to markets outside the country.

Impact of Industrialisation Policies

There has been a rise in the number of industrial units due to the industrialisation policies. Employment has increased but less than expected and of low paying quality. Today, nearly 2 lakh large factories, also called organised manufacturing units, and nearly 3 crore small (also called unorganised) manufacturing units are operating in India. These industrial units, both large and small, employ nearly about one-fifth of India's 460 million workers today.



Look at the following pie charts. These show employment in the three kinds of economic activities as percentage of total workers at that time.

One important point in industrial development after the new policies were introduced was that the role of small firms has declined with many big industries coming up to produce factory-based goods.

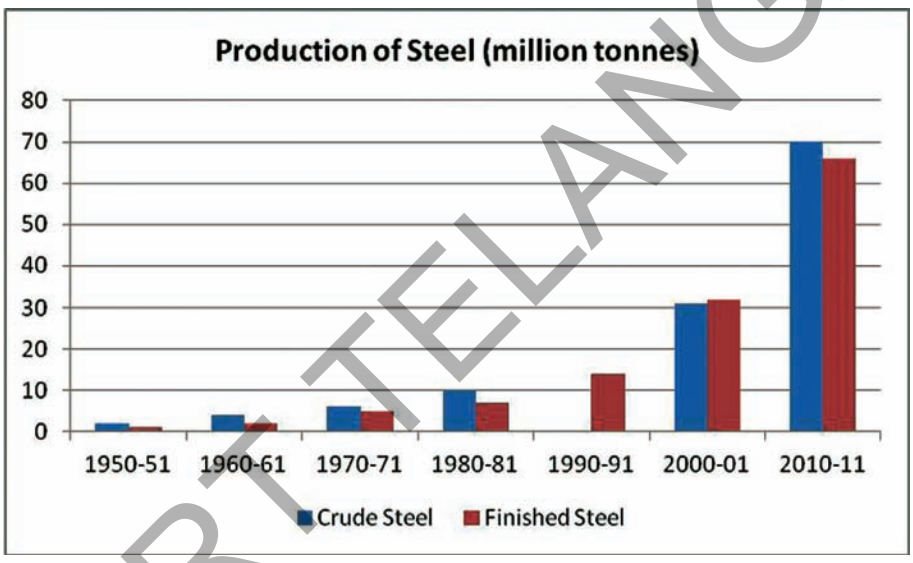
Another important goal of industrial policies in India was to generate employment opportunities in industrial activities. Raising the proportion of people employed in factories is also generally seen as an important indicator of economic development of a country. Many laws were enacted in India to streamline industries so that they provide better salary to workers, provide safety to workers at the workplace and ensure health and medical benefits. It was envisaged that more and more industries would get established and most workers would earn better incomes in due course. This did not happen in India. Even after seven decades of Indian Independence, the share of employment in industrial sector has not gone up as much as expected. A large section of workers without having required skills and training are employed in small industrial units which generally pay a very low salary and are devoid of safe working conditions and health benefits.

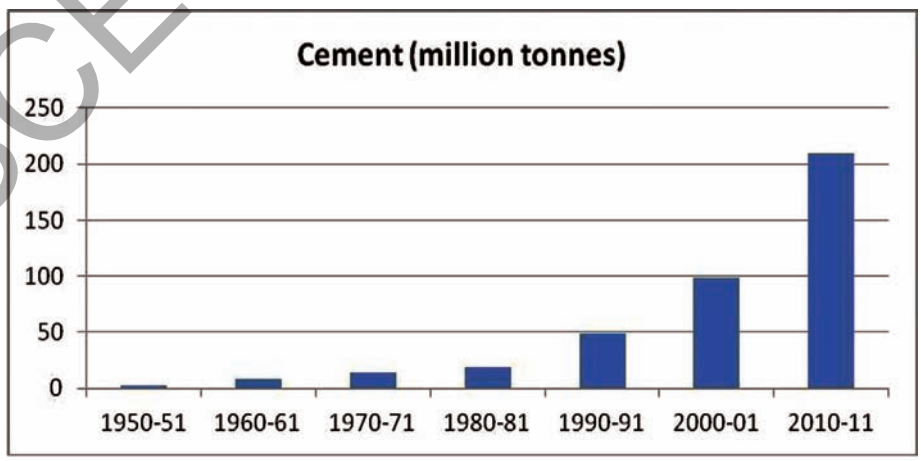
In contrast to the expectation, large industries began to replace workers with technology. More and more automation has taken place. This has led to almost zero additional employment in large factories.

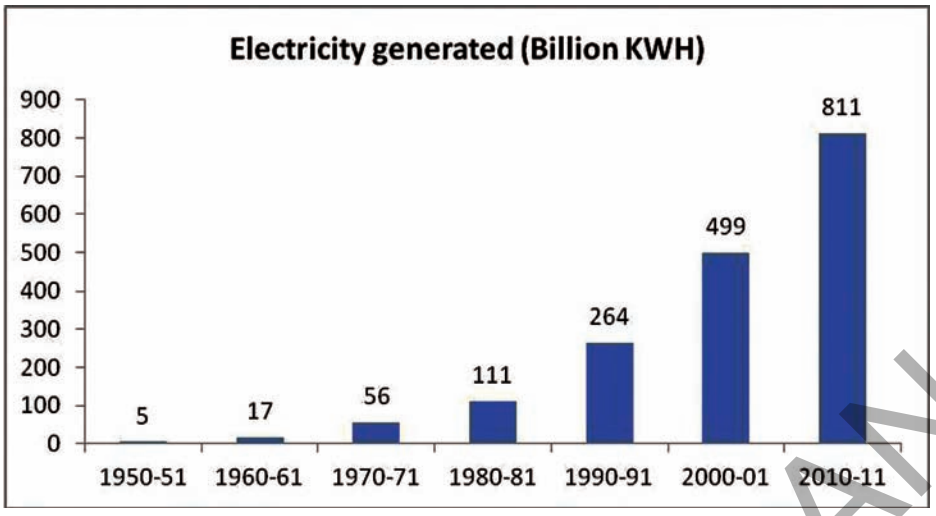
- What are the differences in employment in the three kinds of economic activities that you notice from these pie charts?
- What is the percentage of change in employment by industry?
- Discuss with your teacher: Did we expect to see a greater change in employment by industry that did not happen?

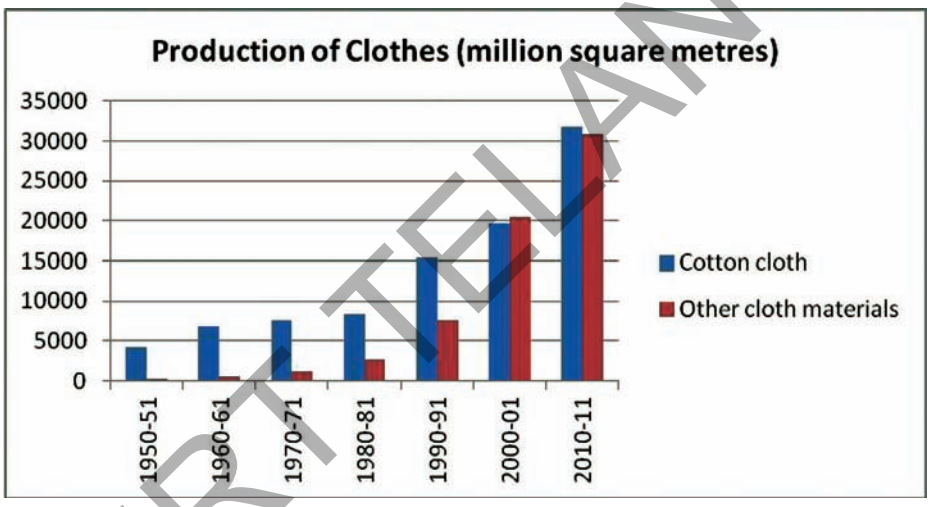
Production of factory-based goods has increased over the years

You may recall that establishing basic industries was the first step that Indian leaders took to industrialise India. Establishment of those industries resulted in increased production of these goods. Look at the following charts.









It was not only the production of steel, cement and other important raw materials that increased tremendously over the last six decades. This also resulted in the production many other intermediate and consumer goods. Look at the following table which show the number of different transport vehicles, pump sets produced in India. You will notice that each good serve different purpose. Draw four separate bar diagrams and discuss in the class the probable impact of the increased production of each of these goods.

Table 3: Production of transport vehicles and pumps, 1950-2011

Year	Commercial vehicles (million)	Motor cycles (Million)	Pumps (power driven) (million)	Tractors (million)
1950-51	9	-	35	-
1960-61	28	1	105	-
1970-71	41	97	259	-
1980-81	72	447	431	71
1990-91	146	1843	19	142
2000-01	152	3756	482	284
2010-11	753	10527	3139	465

1. Can you point out some examples of increase in production of goods that are used in the production of many products by different factories?
2. What has been the increase in production of cloth over the past 30 years? What would be the impact of this? Discuss in your class.
3. Refer the chart that shows the production of cement and steel. Draw a table to show the increase from 1980-81 to present times. Discuss some positive and negative effects of this increase in production.

Increase in the environmental problems and pollution

The production process in industries involves the use of electricity and application of different chemicals. In the course of production, these industries release a lot of other materials. These residual materials are causing pollution in the industrial locations. One such instance is given in the biological science textbook in chapter X of Class IX .

Keywords

1. Colonial rule
2. Consumer goods
3. Infrastructure facilities
4. Basic goods industries
5. Self sufficiency
6. Per capita consumption
7. Liberalisation

Improve your learning

U7E5U5

1. Why did the government take up the responsibility to set up basic goods industries?
2. Why are industries located in specific areas?
3. What are the basic goods industries? How are they different from consumer goods industries?
4. Give a list of towns / areas in which some conventional mineral resources are found and identify the possible industries which can be set up.

Sl. No.	Minerals/ Resources	Towns/areas in which these resources are available	List the kind of industries that can be set up in this area
1	Iron ore		
2	Coal		
3	Jute		
4	Crude oil		
5	Natural Gas		
6	Forests		
7	Manganese		
8	Bauxite		

5. Why did the government in 1990s allow private industries in many areas which were earlier restricted only to government?
6. What is the impact of industrial development on employment generation and on revenue?
7. 'Industrial activities increase environmental problems.' Discuss.
8. Write a few slogans on the prevention of environmental pollution.
9. Read the paragraph 3 on page 83 and comment on it.
10. Observe the map given on page 95 and locate the iron and steel plants in the outline map of India.

Project

Select one agro-based and one mineral based industry in your area.

(i) What are the raw materials they use?

(ii) What are the other inputs in the process of manufacturing that involve transportation cost?

(iii) Are these factories following environmental norms?