
UNIT 9 INDUSTRIALIZATION: 1750-1850

Structure

- 9.0 Objectives
- 9.1 Introduction
- 9.2 Characteristics of Modern Industrialization
- 9.3 Industrialization in Britain
- 9.4 Industrialization in Some Other European Countries
 - 9.4.1 France
 - 9.4.2 Germany
- 9.5 Let Us Sum Up
- 9.6 Answers to Check Your Progress Exercises

9.0 OBJECTIVES

After reading this Unit, you would learn about:

- the specificities of the modern form of industrialization,
- how and in what form the modern industrialization began and developed in Britain, and
- how did industrialization spread in other European countries, particularly in France and Germany?

9.1 INTRODUCTION

In Europe, the period between 1750 and 1850 is regarded as the period of first industrialization. During this period, consumer goods industries spread in certain parts of Europe. The growth of capitalism over a long period in Europe resulted in widespread development of industries in modern times. At a particular juncture in the development of capitalism the pace of industrialization became so fast and pronounced that it could be clearly recognized as a new stage of development encompassing all forms of production in certain areas of Europe and North America. Due to its transformative capacity it has also been referred to as 'Industrial Revolution'. The new machines, factories and industries replaced many of the crafts and agriculture based societies. However, from 1750 to 1850, modern industrialization was limited to only a few countries in Europe. It was only in the latter half of the nineteenth century and during the early twentieth century that industrialization spread to almost all regions of Europe. In this Unit, we will discuss the process of industrialization from the mid-18th to the mid-19th century as it occurred in Britain, France and Germany.

9.2 CHARACTERISTICS OF MODERN INDUSTRIALIZATION

Some technological innovations were present in almost all societies. Crafts persons, artisans and skilled workers were involved in different kinds of manufacture in almost all parts of the world. In some societies, large-scale workshop production was also undertaken to manufacture goods for consumption

of kings and aristocrats, sometimes even for export. However, modern industrialization is radically different from all the earlier forms of production because it was much more thorough-going and it changed the entire structure of the economy. It increasingly involved technological changes which led to mechanization and replacement of human labour by machines. Various inventions made possible the replacement of animal power (such as horses, bullocks, etc.) by inanimate sources of energy such as water, steam and later electrical energy. Scientific innovations were widely applied for production which became increasingly market-oriented. Local agricultural production was gradually replaced by commercial production. This resulted in the consolidation of land holdings and the displacement of a large number of workers who now moved from rural to urban areas. The modern factory, employing a large number of workers, became the fulcrum of this industrialization. There was an enormous growth in production owing to new technologies, increasing innovations and greater capital investment. New social groups such as the bourgeoisie, proletariat, middle classes, professionals, came into being.

From the sixteenth century in Europe, various developments resulted in economic growth. However it was in the eighteenth century that the foundations for modern growth were laid. In this period the internal market in many European countries was unified. Protection was provided to native industries against the import of foreign goods by raising tariff barriers. In Britain, the use of foreign 'printed, painted, stained and dyed calicoes' in any form was banned in 1722. In France, severe ban on such imports was imposed as early as 1686. In Spain and Prussia also, laws were promulgated to stop Indian imports. Export of manufactured goods was promoted and agricultural production was improved in order to increase the supply of food to urban areas. Active innovations in technology were undertaken to increase and refine industrial production.

Another important change was what has been termed as 'industrious revolution' by the Dutch historian Jan de Vries. In this system family labour was used more efficiently that is in a concentrated manner in particular trades. The European 'voyages of discovery' benefited most European countries in helping them amass much wealth through trade and plunder. The infamous slave trade also supplied them with cheap labour to work in plantations in various parts of the world. The rise and growth of modern science was another important factor which boosted the process of modernization and industrialization in Europe. Besides helping in devising innovative technologies for the growth of modern industry, it also gradually altered the mindset of most Europeans facilitating innovations and their quick acceptance.

9.3 INDUSTRIALIZATION IN BRITAIN

As is quite well known, it was in Britain that modern industrial production was first realised, reaching its high point in the middle of the nineteenth century. Britain was the first industrial nation which was able to sustain a balance between production and population. For the first time during the nineteenth century, rapid increase in population was accompanied by rise in per capita. For more than fifty years, Britain remained in the forefront of the industrial world. In this period, according to Eric Hobsbawm, Britain was the world's 'only workshop, its only massive importer and exporter, its only carrier, its only imperialist, almost its only foreign investor ... its only naval power and the only one which had a

genuine world policy' [Hobsbawm 1969: 13]. Modern industrialization propelled Britain to an unparalleled position of power in world affairs, and this prompted or even pushed other countries in Europe to industrialize. It was during this period that structure of economy changed, technological innovations took place and organization of the manufacturing industry, particularly in cotton and iron, was transformed.

According to various indicators of growth France and Netherlands were not behind Britain during the 17th and 18th centuries. It is, therefore, argued by some historians that the British success should not be assumed as inevitable, and the fact that Britain industrialized first did not mean that it was predetermined to be so. For example, Crafts argues that 'The fact that Britain was "more advanced" in 1790 and had a much superior likelihood of further progress ... than France does not of itself necessarily imply *ex ante* (in, say, 1740) Britain had the greater probability of achieving the first Industrial Revolution' [Crafts 1977: 438]. Nevertheless, it cannot be denied that the trajectory of British economic growth since the 16th century, and particularly during the 18th century, varied from the rest of Europe, resulting in the first burst of modern industry. Between 1750 and 1850, Britain industrialized and became the most developed industrial economy in the world. Initially, its industrialization was basically geared around cotton textiles, iron and mining industries. The main factors which propelled this first major industrialization were as follows.

Agrarian Structure: The crucial characteristic of modern industrialization was the shift of human and material resources from agriculture to industry. In this respect, we find that Britain was far ahead of other European countries in the mid-nineteenth century. Agrarian changes were quite fast-paced leading to increased production to feed a population engaged mostly in non-agricultural activities. This transformation of English agriculture over a certain period is termed as 'agricultural revolution'. This process started much earlier in Britain than in any other country. It involved four important features – farming in bigger enclosed units replacing the medieval open-field system, absorption of common land for cultivation and promotion of livestock husbandry, ejection of peasantry from the land and their transformation into agricultural workers, and big increase in agricultural productivity. Even in the beginning of the 18th century, the aristocracy and gentry possessed around 70% of all cultivable land which they increased to over 75% by the end of the 18th century. Most of these lands were leased out to large tenant-farmers who had resources to keep sufficient number of agricultural implements, animals and skilled labour for productive farming. By the late 18th century most of the land in England was farmed by large tenant-farmers and the rural labour force consisted of wage-labourers. In its orientation towards market and profits, English agriculture was capitalist. It was an agrarian structure unparalleled in the world, and was premised upon increased production with a significant decrease in use of manual labour. Due to various methods of crop rotation, productivity in agriculture was quite high releasing a large number of labourers for industrial work. The physical productivity of British male labour in 1840 is calculated to be 50% more than labourers in France and 100% more than those in Switzerland, Sweden, Germany or Russia. The increasing concentration and relatively efficient management of agricultural land enhanced food production and released a large labour force which was absorbed in the upcoming industries. [Deane 1965: 36-7, Deane 1996: 27-32]. In this period, increase in productivity was so much that Britain was known as the 'granary of

Europe'. By 1750 it exported to the Continent about 13 per cent of its grain production.

Thus, the gradual transformation of British economy from agrarian to industrial, significant changes in income patterns, and emergence and growth of new social groups were part of the overall structural changes materializing in the wake of industrialization. The shift of labour from agriculture to industry was achieved quickly. By 1840, 48.3 per cent of Britain's population lived in urban centres and only 25 per cent of workforce was in primary sector, only 28.6 per cent of male labour force was in agriculture, and only 24.9 per cent of income was from the primary sector. On the other hand, it had 47.3 per cent of workforce in industry, and 31.5 per cent of income was from industry [Crafts 1990: table 3, p. 36]. Considering the fact that the proportion of male labour force in industry was 23.8 per cent in 1759 and 29.5 per cent in 1801, this constituted a major structural change.

Demographic Changes: The rate of population increase in Britain was faster than on the European continent. During the 18th century, irreversible growth in population occurred and the number of people in England and Wales increased almost three-fold from about 5.8 million in 1701 to about 14 million in 1831. While the population increase in the first half of the 18th century was modest, it rose very fast during the late 18th and 19th centuries. Between 1781 and 1911, an average of 10% increase per decade was recorded. Demographic growth in England far exceeded those of other European countries. While the English population increased by 133% between 1680 and 1820, comparable increase in France was 39% and in the Netherlands just 8%. There was a close connection between the new economy and industrialization on the one hand and growth of population on the other. The expanding population supplied a cheap and increased labour force along with an enlarged market to growing industry. On the other hand, the process of industrialization supported the growing population by increasing income levels. Urban population also increased rapidly in the eighteenth century and London around 1750 had about 750,000 people, which marked it as the largest city in Europe. The level of urbanisation was also much advanced in England. Thus, in 1801, 27.5% of English people lived in urban areas whereas in France it was only 11%. By 1871, around two-thirds of English population was urban which was at least twice as high compared to any other European country. [Deane 1965: 20-35; Deane 1996: 24-7].

Technological Innovations: The practical use of mechanical devices for enhancing production was of revolutionary consequence in the process of industrialization. Moreover, it was not the adoption of a single invention but a series of innovations which marked the first wave of modern industrialization. Rather, the increasing adoption of a cluster of innovations was eventually decisive in radically transforming the economy in late eighteenth and early nineteenth century Britain. At the technological level, British entrepreneurs were relatively more innovative and risk-taking. Various kinds of labour-saving machines were designed and tested in production. Spinning jenny (invented by James Hargreaves in 1764) was extremely important in increasing the pace of spinning by mechanically twisting the spun yarn which was earlier done by human labour. Any operative now could simultaneously spin a number of threads. In its earliest form it could hold 8 spindles, in 1770 16 spindles, by 1784 80 spindles and by the end of the eighteenth century a large jenny operated with 120 spindles. Since

one jenny containing many spindles could be operated by a single worker, the enormous expansion in productive capacity is evident. Another important invention was the water-frame by Richard Arkwright in 1769 which strengthened the yarn. Both these machines were combined in a significant invention by Crompton in 1779. The Crompton's mule completely superseded the Indian technique of manual spinning by making it possible to spin finer and better yarns much faster and at extremely low costs. Combined with water and steam power, this great invention dominated the cotton industry for the next century. These technological innovations in textile industry, which was the pioneer industry of the industrial revolution, created conditions for saving labour costs, producing faster and at cheaper rates. The refinement and application of steam power in running the machines improved efficiency.

It is, however, important to understand that much of the technology in the eighteenth century which heralded the modern industrialization was a culmination of earlier developments rather than new departures. But what is important is that in the late eighteenth and early nineteenth centuries a trend towards innovations was started on a hitherto unprecedented scale. The perfections of earlier techniques made them more potent and workable in the new environment and structure of industrial organization.

Factory System

The factory which evolved from the manufactory system of production was another important characteristic which defined the era of modern industry. Some of the new technological innovations, particularly in spinning such as water-frame and mule, were too large and expensive to be put in artisanal homes. They required larger sources of energy, such as water or steam, to operate them. To be feasible and more profitable they had to be installed in factories built around a central power source – initially water wheels and later large steam engines. This resulted in the most revolutionary change in the structure of the industry by concentrating a large number of workers in a factory under a single roof. Evolving out of artisans' workshops or merchant-controlled manufactories, the factories brought a sizable group of workers together to operate bigger machines under the vigilant eye of supervisors. The production was now broken into several routine operations performed by machines operated by workers. In Britain the factory system became predominant in the cotton industry, particularly spinning, and later in weaving, between 1815 and the 1840s. Thus, industrial capitalism in Britain, particularly in cotton industry such as Lancashire, was characterized by division of industrial population into capitalists and workers, production in factories and a profit-oriented economy.

Role of Government: The role of the government was also significant in creating an overall environment for entrepreneurship, investment and trade. The British government supported entrepreneurship at all levels, worked towards eliminating internal barriers, provided parliamentary support for enclosure of land, kept the resentment of the dispossessed sufferers in check by maintaining strict law and order, and invested heavily in the pursuit of foreign and military policies. Growth of the British navy, which was capable of defeating its rivals and defending its trade, helped in great measure the capital accumulation and expansion of an overseas market. This was one of the most significant achievements of the government.

Besides factors mentioned above, the structure of international trade in which Britain exported mostly manufactured goods, the extensive canal-based efficient system of transportation, availability of capital from its own agriculture, colonial plunder and slave trade, easy and abundant availability of crucial natural resources such as iron and coal contributed significantly towards propelling it on the road to industrialization.

Thus, in the mid-nineteenth century, the British economy was the most commercialised, urbanised, monetised and industrialized in Europe. However, the boundaries of this first phase of industrialization were quite limited. Except for cotton no other industry was fully mechanized by the 1840s. By the 1850's, only 6 per cent of the total workforce was employed in textile factories, the most mechanised sector of the economy. The majority of industrial workers still used hand implements. An important factor supporting more intensive industrialization was rapid building of railways from the 1830s onwards, leading to enormous rise in production of iron, steel and coal. From the 1840s onwards till the end of the nineteenth century, a new phase of industrialization occurred in Britain which was based on capital goods industries, primarily iron & steel. It was also during this period that factory production was generalised using new technological innovations across industries. The onset of industrialization in many countries of Europe since the mid-nineteenth century, and in many other countries of the world in the late nineteenth and early twentieth centuries, created massive demand for British iron and steel, capital goods, and capital investments. British exports increased enormously between 1840 and 1860, benefiting particularly the capital goods industry. This fuelled further industrialization in Britain. A lot of British capital was also invested abroad reaching a figure of 700 million pounds by 1870. Overall, during this period between the 1830s and the 1880s, the British economy achieved full industrialization expanding its industrial base from two or three pioneering industries such as cotton and coal to almost all industries [Hobsbawm 1969: 109-19].

Check Your Progress 1

- 1) Why is the modern industrialization different from all other forms of industrialization which preceded it?

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- 2) Briefly discuss the importance of agricultural changes in England in sustaining the 'industrial revolution'.

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- 3) Write a short note on the Factory System.

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- 4) How did the British government help the process of industrialization?

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9.4 INDUSTRIALIZATION IN SOME OTHER EUROPEAN COUNTRIES

According to W.W. Rostow, modern industrialization may be considered a revolution representing a total break from the past. It begins with a ‘take-off’ and heralds a new age of sustainable growth. This is characterized by a shift of the workforce from agriculture to industry, a high level of savings and investment, development of factory system and rapid increase in urbanization. First example was that of Britain which established a set pattern for other countries. Rostow’s thesis is challenged by many scholars. The most famous is Alexander Gerschenkron who, in his book *Economic Backwardness in Historical Perspective* (1962), argued that other European countries did not exactly emulate the British model. Instead, they followed a different path of development. Gerschenkron proposed a thesis about industrialization in backward economies according to which industrialization in relatively backward economies was accompanied by rapid growth in industrial output facilitated by a supportive government and banking sector. In fact, he argued that the more backward the economy, the more interventionist is the role of the government and banks. Several scholars now argue that although the British model was unique and not replicated, there was nevertheless a process of diffusion. Transfer of British technologies, import of British machineries, and migration of engineers, skilled workers and entrepreneurs from Britain to the continent occurred over a period. However, instead of imitation, this was ‘a complex process of creative adaptation’ [Crouzet 2001: 117]. In this section, we will discuss industrialization in two large European countries – France and Germany – and study similarities and differences with each other, and with Britain.

9.4.1 France

In the early eighteenth century, income level in France was almost on par with Britain, its pool of scientific resources was equal to Britain, and its population

was about three times more numerous. But it took a much longer time to industrialize. Its slow pace of industrialization was in marked variance with both Britain and Germany.

Although France began industrializing almost simultaneously with Britain, various factors impeded its growth. Agricultural changes started in France during 1750-60, but they were stalled during the latter period when the peasantry became more deeply entrenched in the wake of the French Revolution. Moreover, the techniques of production in agriculture were also not advanced. Thus, as one scholar has argued, the 'continued predominance of agriculture in the economy and the weight of the peasantry in the agrarian system acted as a brake on industrialization' [Kemp 1985: 57].

The pioneer character of British industrialization and its relatively fast pace threatened the French market by producing low-priced manufactures. Moreover, the loss of the overseas colonies also deprived the French manufacturers of captive markets. These conditions handicapped the French industrial entrepreneurs to a large extent. Many of them tried to move into areas of quality production, not mass production as was the case with British manufacturers. By aiming at the high-end market both in Europe and the world, several French entrepreneurs focused on skill and craftsmanship rather than on machine technology. Even the machine-made textiles catered to refined tastes rather than to mass consumers.

The other factors responsible for the slow pace of French industrialization were scarcity of coal and iron deposits, a weak banking system and absence of an organized credit network. In addition, cheap labour and restricted market made investment in industrial innovations unattractive. This was coupled with a much lower demographic growth, relatively high cost of transport, limited internal market and elite which retained its interest in land as well as in bureaucratic positions.

Despite these handicaps, however, France began to industrialize in the late eighteenth century. The share of industry in national production gradually increased. To compete with British goods, French manufacturers adopted British innovations. The government was also quite supportive in this venture. The main industry in the initial stage, as in Britain, was cotton textiles. British innovations such as spinning jenny, water frame, mule and carding machines were obtained either through espionage or purchase and used in modern industries. Flying shuttle was introduced in weaving; steam engines were also introduced in some concerns. Even the British innovation in iron-making (puddling) was utilised. During the 1770s and 1780s, a few cotton mills were erected using Jennies and water frames. There were innovations in other areas also: soda-making began in 1791; and workshops for rolling copper sheets were established. However, it was limited and by 1790, there were only about 900 Jennies in the entire country. Similarly, although in 1785, the pioneering coke-smelting ironworks was set up at Le Creusot, it was not followed up [Crouzet 1996: 44; Landes 2003: 139-40]. This constituted the initial phase of French industrialization which went on until the Revolution occurred, in particular until 1793, when the war with Britain disrupted the transfer of technology.

In the period up to 1814, the cotton-spinning industry received a big boost and the number of cotton mills increased from 37 in 1799 to 266 in 1810. The hand-spinning of cotton almost ceased, with mechanized factories almost entirely in

charge of cotton spinning. However, other industries such as iron and coal did not develop. On the whole, in the initial stage of French industrialization up to 1814, the rate of growth in industrial production remained small at about 0.56 per cent per year between 1781/90 and 1803/12, compared to British rate of 2.1 per cent from 1780 to 1801 [Crouzet 1996: 44-46].

After 1815, that is, after the Napoleonic wars, a new phase of industrialization started which continued till the 1860s. This period witnessed the consolidation of modern industries in France. To counter the threat of cheap British goods, the Restoration regime in France imposed heavy duties on foreign manufactured goods. Even in French colonies, trade with foreigners was banned. Such protectionist measures supported French manufacturing industry but also reduced its competitive edge. Cotton textile industry advanced but it specialized mainly in quality and luxury products geared to high-end markets. Nevertheless, after 1815, industrialization and economic growth accelerated due to peace, possibility of importing modern industrial technology from Britain, improved agricultural production, increased mobility of capital and improvement in transport. Cotton industry still remained in the forefront. The consumption of raw cotton rose five times between 1820 and 1860. French spinners began to produce finest quality yarn. The wool industry also grew with growing success in foreign markets.

Since the 1840s, France was decisively moving to capital-intensive production in cotton industry. During the 1850s, factory production in cotton increased by largely eliminating handicraft production. By 1870, Alsace attained a comparable level of mechanization and sophistication to Lancashire in Britain. Coal production also increased massively: 5 million metric tons in 1853 and 13 million metric tons in 1869. Another area, in which development occurred, though initially to a limited extent, was the iron industry. Coke-smelting and puddling and rolling technology was introduced on an increasing scale. By 1869, the iron industry in France underwent an almost total transformation becoming the largest producer of iron, after Britain, in Europe. Construction of railways on a huge scale after 1840s created big demand for the product of French iron industry. Modern industrialization in France was accomplished during this period [Crouzet 1996: 49-50].

However, compared to Britain or Germany, the pace of French industrialization was slow. Moreover, even in 1870, France did not quite fulfill the crucial indicators of completed industrial revolution. More than 50 per cent of its male labour force remained in the primary sector, while industry absorbed only about 29 per cent. Urbanization was only about 31 per cent, and the income from industry amounted to only 36 per cent, which was equal to the primary sector (34 per cent). However, compared to many continental European countries, France did not perform badly.

9.4.2 Germany

While in France the process of industrial development was rather slow, Germany proceeded very fast on the highway of modern economic growth. It acquired an advanced industrial base within a span of about 30 years. Its rate of growth was faster than Britain. Instead of starting with the consumer industries, as was the case in Britain and France, Right from the beginning Germany relied on heavy industries for the big push forward. The role of state and big banks was particularly

pronounced as was the entrenched nature of agricultural interests, in the form of German *Junkers*, throughout the nineteenth century.

In contrast to France and Britain, which were compact political units, Germany was divided into several independent states until the unification of 1870. In the late eighteenth and early nineteenth centuries, Germany was economically backward compared to its advanced neighbours. After 1815, there were more than thirty distinct political states with their own separate laws, administration, currencies, weights and measures, and customs barriers. Labour mobility was restricted due to prevalence of serfdom in some areas, and also limited by supply of capital. Its educational institutions and intellectual resources were advanced and could compete with the best. It possessed a credible credit network and well developed craft traditions. It also possessed raw material resources such as iron and coal required for early stages of modern industrialization. Also from the beginning of the nineteenth century German nationalism was strong and assertive.

German industrialization went through three phases: i) a period of early industrialization, from the late eighteenth century to the 1830s, when industrial technologies were borrowed from other countries and institutional reforms were introduced, particularly in Prussia; ii) a period of big surge in industrialization, from the late 1830s to the early 1870s, which was initially driven by railway-construction on a massive scale, accompanied by huge foreign and indigenous investment of capital, great mobility of labour, significant rise in productivity and increase in per capita income; and iii) the phase of mature industrialization from 1870s to 1914 when Germany took a great leap forward on several fronts, becoming the second biggest industrialized country in Europe and the biggest on the continent.

Napoleon's victory over German armies in 1806 and subsequent French rule paved the way for several institutional changes conducive to industrial growth. Agrarian reforms from 1807 to 1821 abolished serfdom, freed peasants and introduced individual property rights in land and labour. These reforms benefited landowners and substantial peasants by linking their holdings to the market, resulted in differentiation among peasantry, and focussed on individual mobility. Common land and pastures were divided and occupied by individual landowners. Since the peasants were required to pay the lord for securing independence, a lot of money changed hands. It is estimated that between 1821 and 1850 there was a huge transfer of wealth to landlords almost to the tune of about 327 million marks or about 10 million marks per year which was more than the annual net investment in Prussia's industrial sector during this period. A surplus labour force was also created which could move to the cities when required. Guilds were abolished, removing restrictions on mobility of labour and capital. All these measures created the conditions for capitalist industrialization.

Another important step was the creation of a common market by introducing Prussian custom union in 1818, and finally the creation of the Zollverein or Customs Union among some German states in 1834. The establishment of a single free trade zone in most of Germany was a major factor in economic development. This also led to Prussia-controlled monetary integration making inter-state trade within Germany less costly. The free movement of goods in most parts of Germany reduced price of commodities and facilitated investment.

The construction of railways at this stage played a great role in political and economic integration, besides providing a great boost to transportation. It also worked as the prime mover in German industrialization. This was in contrast to Britain and France where the cotton textile industry was the pacemaker. Railway construction also led to the expansion of other heavy industries such as iron and coal by greatly increasing their demand. From the 1840s onwards, railway building proceeded at a great pace. The length of railway network in Prussia increased from 1,600 km in 1844-5 to 20,700 km in 1879-81. The capital-intensive nature of this enterprise provided direct employment to a lot of workers and engineers, and created significant backward linkages, particularly for the iron and steel, and coal industries.

Initially, foreign companies invested capital in metal and coal mining. However, soon German capital took over and German businessmen were active in these fields. Another sector of economy, which benefitted from railway construction, was banking. Banks mobilized huge sums of money needed for railways. Railways also helped realize technological and organizational talent, which was a product of the advanced German educational system. In a brief period, scientific and technical education at various levels poured out qualified individuals to work in advanced industries. The German achievement was so impressive that even before unification in 1870 German industrialization was proceeding apace. The economic prosperity was reflected in increase in population, which rose from 25 million in 1820 to 40 million in 1871 and 65 million in 1910. Real income rose (at dollar 1970) from 418 in 1850 to 602 in 1880. The rate of industrial growth further intensified after 1870 leading to the development of large-scale business enterprises in industries like steel, coal mining, chemicals and heavy engineering.

Check Your Progress 2

- 1) What were the factors responsible for slow pace of industrialization in France?

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- 2) Discuss the nature of industrialization in France during the revolutionary and Napoleonic periods.

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- 3) In what ways was industrialization in Germany different from that in Britain and France?

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- 4) What was the role of railways in German industrialization?

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9.5 LET US SUM UP

During 1750-1850, industrialization was limited to certain regions of Europe and North America. It introduced a radical transformation in economy and society initially of Europe and North America but eventually it affected other parts of the modern world. In its developed form, it involved a shift from agriculture to industry, from handicrafts to mechanized manufacturing, from workshop to factory, and the transformation of a significant number of peasants and artisans to proletarians. Britain was the first country to achieve a structural transformation of its economy and society. Some other European countries followed in its wake finding their own path to industrial development. The economic and social changes were different in each country and varied in terms of timing and form. Nevertheless, by around 1914, much of Europe experienced industrialization breaking the shackles imposed by earlier forms of production.

9.6 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) See Section 9.2.
- 2) See Section 9.3, Sub-section on 'Agrarian Structure'.
- 3) See Section 9.3, Sub-section on 'Factory System'.
- 4) See Section 9.3, Sub-section on 'Role of Government'.

Check Your Progress 2

- 1) See sub-section 9.4.1.
- 2) See sub-section 9.4.1.
- 3) See sub-section 9.4.2.
- 4) See sub-section 9.4.2.