

The second industrial revolution history essay

[History](#), [Revolution](#)



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New technologies changed the look of manufacturing in late nineteenth century, which led to new heights of economic growth. The second Industrial Revolution was relied on steel, electricity and chemicals; were in The First Industrial Revolution it engrossed on coal, steam and iron. Electricity benefits were pretty well-known during that time. By the end of the century, large power stations were capable to send current over vast distance. The third important new technology that contributed to this industrial revolution was the chemical industry. Alongside sudden developments in industries, many other changes were taking place. Heavy industry and mass marketing productions were improving. The production was going through very big changes. Overall there was a significant drive towards larger business enterprises because of want of increased profits. Aside from products, demand and supply, as well as strong desire of bigger business sparked the second industrial revolution.

In the aftermath of the civil war and reconstruction, the American economy grew considerably as it entered “ the second industrial revolution” generally recognized as the period between 1870 and 1914. The second industrial revolution took local communities and their new products out of the shadow

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of large regional agricultural based economies which was assisted by new labor forces and production techniques. New technologies played an important role in the daily lives of working and middle class citizens. By 1920 about 11 million people moved to city from farms. And other 25million immigrants arrived from overseas.

The economic growth during this time period was extraordinary but unstable. The world economy experienced harsh depressions in 1873 and again in 1897 business competed intensely with each other and corporations battle to gain control of the industries. The second industrial revolution was highly profitable. The second industrial revolution fueled the gilded age, a period of great extremes: great wealth and widespread poverty, great depression, new opportunities and greater standardization. Economic insecurity became a basic way of life as the depressions of the 1870s and 1890s put millions out of work or reduce pay. Skilled workers received high wages in industrial work and oversaw a great deal of production process.

The visual map of the United States was transformed by unprecedented urbanization and rapid territorial expansion. These changes mutually fueled the second industrial revolution which peaked between 1870 and 1914. After the invention of steam power many products were shipped to different countries. For the first time, goods from the American interior could be shipped directly to the Atlantic and vice versa. Begin able to ship products great distances transformed the nature of economic activity in the United States. During the second industrial revolution, innovations in transportation,

such as roads, steamboats, the Erie canal and most notably railroads, link distant, previously isolated communities together.

BODY:

The Second Industrial Revolution marks a milestone in industrial and technological leadership in the world. Since the First industrial Revolution Britain had been the farthest in the world's leading industrial realm as well as in the Second Industrial Revolution. Later in the nineteenth century, Britain lost its lead to German and American industries. United States had advantages of having vast supplies in natural resources, especially iron and coal. German chemical industry relied completely on imported raw materials. Transport developments made transportation of food, materials and other goods easier. Trades were also largely expanded. Steam engines freed transportation from water power dependence. More than half of the American population lived in in urban center by 1920.

Second revolution was followed from first industrial revolution, which began in Britain in late eighteenth century and then extended all the way through Western Europe and North America. The Bessemer process was the first industrial progression in mass production. Later this process was followed to develop hearth process, which later became the leading steel making process in the twentieth century. Electricity also made major developments possible. In the twentieth century, electricity was called the most important engineering achievement. The U. S saw its highest economic growth during this period of Second Industrial Revolution. United States was a world leader in applied technology. American manufacturing productions exceeded Britain

and took world leadership during the Gilded Age. Increase in production prepared new and cheaper ways to produce the products.

STEEL:

The Second Industrial Revolution was naturally related to the first. The growing textile industry encouraged most 19th century chemical research which for on dyes, bleaches, and cleaning agents. The second industrial Revolution was much more a product of science and organized research. The age of steel was started in first industrial revolution; in second revolution it reached new developments in steelmaking. In the first half of the nineteenth century, steel was very expensive refinement of iron. All kind of innovators naturally turned their thoughts to produce steel directly from pig irons. From 1840s, commercial production of steel was choosing this process. Scientists were making their efforts to determine the chemical composition of different ores, and chemical reactions that occurred in iron and steelmaking.

Henry Bessemer of Britain, in 1856, developed an outwardly simple solution to the problems of steelmaking. He developed a solution which only took less than hour to make steel from pig iron, before which took days. The next advancement in steelmaking was the Siemens Martin open hearth process. This process was able to reach higher temperatures by using waste gases to reheat interior bricks, but agonized from the same deficiency of being unsuited to phosphoric ores. The first successful process that didn't have this flaw was made in Britain. U. S steel industry produced a series of important improvements. From 1887 new process were developed continuously, from one process to the next one. This lowered the cost and also enhanced the

final output. Cheaper steel and specialist alloys transformed American industry.

ELECTRICITY:

In 1821, the Electromagnetic induction was discovered by an Englishman name Michael Faraday. His discovery made possible to generate electricity mechanically. Electricity was mainly used in communications; it started with telegraph then to telephone and later in electroplating. The quantity of electrical power generated was very small compared to what water and steam generators generated. In 1870s two key advances took place, the translating of the mechanical energy of the rotating magnet and the development of the light bulb. The light bulb remained the key source for decades. Thomas Edison in 1879 was able to produce number of advances made in the previous couple of decades. “ The cost of the electricity to users was further decreased by a number of innovations. Cables and insulations were improved. Switches, fuses, and lamp sockets were refined. Meters for accurate measurement of electricity usage were introduced.” Electric lighting was applied to areas outside lighting. Electricity was also very useful in chemical and steel productions. This broadening range of use of electricity caused the cost of lighting to fall to fraction of its past level.

CHEMICAL & COMBUSTION:

The American chemical industry developed quickly 1900. It heavily depended on German technology but took access to patents after World War I. After this American chemical forms significantly extended their research

establishment. The major benefit behind American firms was that they had access to raw materials. Americans were the first who applied chemical engineering. Chemical engineering built up a scientific understanding of each step that could then be applied to manufacture of any chemical. Advances like these in chemical engineering provided an additional motivation to the development of new chemicals.

Electric and steam powered vehicles, both delivered solid competition into the early twentieth century. Huge numbers of steamers were produced around the century in United States. But soon internal combustion took over steam powered engines. It is said that if inventors drove much effort as they did to the internal combustion, even steam powered vehicles could have been proven superior. Invention of gasoline engines played a huge role in enhancement of transportation. Internal combustion engines supplied greater force than the extensive power of steam could ever reach. These gasoline engines were dependent on a spark generated electrically to ensure irregular ignition. These engines substantiated larger in terms of both startup time and its range.

CONCLUSION:

The Second Industrial Revolution was known as the Technological Revolution. The Second Industrial Revolution saw rapid growth in industrial development in Britain, Germany, United States, Japan and many more. I learned a lot while I was writing and researching for this paper. Being an engineering major student, I was more interested in this paper than the last one. It involved a lot of engineering products like engines, machines...etc. It

was very interesting to read about how these engines worked and how they were invented by these great scientists and engineers. I was able to grow my knowledge in how the technology revolution, which is mainly known as The Second Industrial Revolution, was started and how this world became this advance as I see and live in today. I wondered sometimes about what would have been the breakthrough which led the world to today's position. After writing this essay I feel more knowledgeable in this information than I was before.

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