

2Pager: Industrialization

America emerged as an industrial and agricultural giant in the late nineteenth century.

1. Between 1869 and 1899 the nation's population nearly tripled, farm production more than doubled, and the value of manufactures grew sixfold.
2. Within three generations after the Civil War, the predominantly rural nation burst forth as the world's preeminent industrial power.
3. Bigness became the prevailing standard of corporate life, and social tensions and political chicanery worsened with the rising scale of business enterprise.

THE RISE OF BIG BUSINESS

The Industrial Revolution created huge corporations that came to dominate the economy—as well as political and social life—during the late nineteenth century. As businesses grew, their owners sought to integrate all the processes of production and distribution into single companies, thus creating even larger firms. Others joined forces with their competitors in an effort to dominate entire industries. This process of **industrial combination and concentration** transformed the nation's economy and social order. It also sparked widespread dissent and the emergence of an **organized labor movement**.

Many factors converged to help launch the dramatic business growth after the Civil War. A nationwide **shortage of labor** served as a powerful incentive, motivating inventors and business owners to develop more efficient labor-saving machinery. **Technological innovations** not only created new products but also brought about improved machinery and equipment, spurring dramatic advances in productivity. As the volume of production increased, the larger businesses and industries expanded into numerous states and in the process developed standardized machinery and parts which became available nationwide.

A group of shrewd, determined, and energetic entrepreneurs took advantage of fertile business opportunities to create huge enterprises. Federal and state politicians after the Civil War actively encouraged the growth of business by imposing high tariffs on foreign manufacturers as a means of blunting competition and by providing land and cash to finance railroads and other internal improvements. The American agricultural sector, by 1870 the world's leader, fueled the rest of the economy by providing wheat and corn to be milled into flour and meal.

With the advent of the cattle industry, the processes of slaughtering and packing meat themselves became major industries. So the farm sector directly stimulated the industrial sector of the economy. A national government-subsidized network of railroads connecting the East and West coasts played a crucial role in the development of related industries and in the evolution of a national market for goods and services. Industry in the United States also benefited from an abundance of power sources—water, wood, coal, oil, and electricity—that were inexpensive compared with those of the other nations of the world.

THE SECOND INDUSTRIAL REVOLUTION

The Industrial Revolution “controls us all,” said Yale sociologist William Graham Sumner, “because we are all in it.”

Sumner and other Americans living during the second half of the nineteenth century experienced what economic historians have termed the Second Industrial Revolution. The First Industrial Revolution began in Britain during the late eighteenth century. It was propelled by the convergence of three new technologies: the coal-powered steam engine, textile machines for spinning thread and weaving cloth, and blast furnaces to produce iron.

The Second Industrial Revolution began in the mid-nineteenth century and was centered in the United States and Germany. It was spurred by an array of innovations and inventions in the production of metals, machinery, chemicals, and foodstuffs. While the First Industrial Revolution helped accelerate the growth of the early American economy, the second transformed the economy and the society into their modern urban-industrial form.

The Second Industrial Revolution involved three related developments:

1. The first was the creation of an interconnected national transportation and communication network, which facilitated the emergence of a national and even an international market for American goods and services. Contributing to this development were the completion of the national telegraph and railroad systems, the emergence of steamships, and the laying of the undersea telegraph cable, which spanned the Atlantic Ocean and connected the States with Europe.
2. During the 1880s a second major breakthrough—the use of electric power—accelerated the pace of change. Electricity created dramatic advances in the power and efficiency of industrial machinery. It also spurred urban growth through the addition of electric trolleys and subways, and it greatly enhanced the production of steel and chemicals.
3. The third major aspect of the Second Industrial Revolution was the systematic application of scientific research to industrial processes. Laboratories staffed by graduates of new research universities sprouted up across the country, and scientists and engineers discovered dramatic new ways in which to improve industrial processes. Researchers figured out, for example, how to refine kerosene and gasoline from crude oil. They also improved techniques for refining steel from iron and spawned new products—telephones, typewriters, adding machines, sewing machines, cameras, elevators, and farm machinery—and lowered consumer prices.

These advances in turn expanded the scope and scale of industrial organizations. Capital-intensive industries such as steel and oil, as well as processed food and tobacco, took advantage of new technologies to gain economies of scale that emphasized maximum production and national as well as international marketing and distribution.

From: *America: A Narrative History* by Tindall and Shi

