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[Business](#), [Strategy](#)



The difference between factory and outwork system is the efficiency of production of a certain item. As there needed to be an increase of production, an outwork system was created in Lynn Massachusetts during the 1820s and 1830s. The new system transformed workers into strong “shoe bosses” and destroyed laborers wages and independence.

However, expansion of shoe production created job opportunities, and the split up of labor increased both cut prices and output. In contrast, factories were a concentrated production under one roof. The two examples of how technology used in American factories were the Pork Packing in Cincinnati and the creation of an automated flour mill driven by water power.

During the 1830s, Cincinnati businessmen established large slaughterhouses that processed thousands of hogs every month. The technology was kept easy: Overhead rails moved the hog carcasses, past workers. First, one worker would split the animals, then another would remove the organs, and trim the carcasses into pieces. When the process was completed, packers would stuff the pork into barrels and pickled it to prevent spoilage. By having such efficient production, it allowed Porkopolis to create over 300, 000 hogs in the year of 1850. The second impressive new technology was the automated flour mill driven by water power, which was created by Oliver Evans in 1780s.

The machine lifted the what to the top of the mill, in which it then cleaned the grain as it fell into hoppers and ground into flour. Competition between American and British textile manufacturers was intense. First, British textile manufacturers persuaded the British governments to block the export of

textile machinery and emigration of mechanics. Also, British mechanics disguised themselves as normal sailors to sneak into the United States. Therefore, around 1812, about 300 British mechanics had successfully snuck into Philadelphia. Samuel Slater, a notable British Mechanic that invented the most advanced British machinery for spinning cotton. In competition with British Mills, American manufacturers had an abundance of cotton and wool, and quick flowing rivers that originated from the Appalachian mountains to Atlantic coastal plains, in which provided a cheap source of energy. Some of the advantages of the British had included the cheap transatlantic shipping, low-interest rates in Britain, ability to import raw materials, and a large population (12.

6 million) willing the take low paying jobs. As for the Americans, they persuaded the Congress to pass tariff bills that taxed imported cotton and woolen cloth, improving on British technology, and finding a cheaper source of labor. In the early 1800s, Francis Cabot Lowell toured British textile mills to record detailed drawings of the power machinery, in which he allowed Paul Moody to renovate.

A few years later, Lowell collaborated with Patrick Jackson and Nathan Appleton to establish a textile plant in Waltham, Massachusetts for the Boston Manufacturing Company. In order to attract cheap laborers, Boston Manufacturing Company recruited thousands of young women from farm families by providing them housing, evening lectures, and cultural activities. The Waltham Plan was a strategy formed by the Boston Manufacturing Company to get cheaper labor. The company attracted young girls by

providing them with rooms in boarding homes and cultural activities and evening lectures. In order encourage parents to send their children away, the company promised that mill owner would enforce strict curfews, prohibit alcoholic beverages, and the requirement of regular church attendance. The labor systems were new cotton factories established in certain areas in New Hampshire and Massachusetts, places like Lowell and Chicopee. The plan allowed young girls to have better living conditions than in crowded farm families, and greater independence.

Some reasons why young girls wished to participate would be something like trying not to be a burden to their family or paying mortgages and debt.

During the 1800s, some of the mechanical innovations include the birth of mechanical institute, issue of patents, an increase of machines. One of the mechanicals institutes that were established included the Franklin Institute of Philadelphia by the Sellars, where they encouraged innovation and creativity and educated students with some technical skills. In the time span of 40 years (1820-1860), US Patent Office went from 200 patents to 4000 patents. And during the 1800s, machines helped to massively produce metallic products, like weapons. However, the setback of the mass production was that it lowered the skill level of laborers and lowered the value and time of production, which allowed more products be accessible to the public easily.

Some ways the American Labor force changed was that laborers saw themselves as dependent wage earners from the artisan republic ideology. In the early 1830s, factory workers formed a mutual benefit society to seek an

increase of wage and slightly better working conditions, when both the American and British common law was against labor unions in raising wages. Soon, in 1834, the National Trades Union, the first regional union of different trades were established. A chain of factory unions agreed to not hire the people on the blacklist (union members). Roughly around the mid-1830s, laborers had to work 10 strenuous hours a day, which led to the Commonwealth vs. Hunt case. The case was protesting for higher wages, than in the 1850s, there was an overload of workers, which then resulted in the Panic of 1857 and recession form the ten percent unemployment rate.

The National Road was federally funded freeway that connected the Ohio and Potomac River; however, the government found that it was too expensive and inefficient to support. Since maintaining the National Road was too overbearing, companies sought water to travel to the West, in which one attempt was at Erie Canal. The canal is a 364-mile water connecting Lake Erie and Hudson River, which was supported by local businessmen and government. The money earned through the business done from the canal was brought to New York and joined the East and West economies by enabling shipment between them.

Steamboats were invented by Robert Fulton, increased some interest in interstate water travel by speeding up the process of Midwest River transport system.