The british industrial revolution: a period of incommensurable value to the weste...

History, Revolution

The British Industrial Revolution was immensely influential in contributing to the economic development of the West. This impact was so great in part to a number of factors. Technological innovations, such as textile mills, steam power, and railway transportation, were vital to influencing trade. These new technologies are what empowered the British military with new weaponry, such as improved rifles and iron based ships. This new military allowed for British imperialism to thrive, with Britain taking control of the Pacific, namely India, Australia, and New Zealand. These inventions, however, did not remain solely British. It seems, almost, as if the British Empire would have been unsuccessful or perhaps never occurred had the industrial revolution never taken place. The global influence Britain possessed allowed these ideas and inventions to spread, as did the new forms of communication. Industrialism rapidly spread through the United States, with textile mills providing employment and also transforming the nation from predominantly rural to majority urban. Thus, the British imperialism allowed for the technological inventions to spread to the West, and the technological inventions allowed for the the imperialization to occur. Without this industrial revolution and British imperialism occurring simultaneously, the United States would not have developed as soon nor as quick as it did.

British Industrial Revolution

The Industrial Revolution initially began in Great Britain and in the long run advanced to the United States in the mid-nineteenth century (History. com, 2009). It was initially made to raise individual’s’ way of life. Prior to the revolution, the greater part of Americans lived on farmland, residential areas, or towns where there was small manufacturing. A farmer more often

than not likewise could make items like shoes, and the ladies could make items such as cleanser and candles, or turning yarn or making clothing. The manufacturing that took place was in homes or rural areas and was all crafted and produced by hand. A few items made in the home included items of clothing, furniture, tools, textiles, machinery equipment, jewelry, leather, eating utensils, and weapons which were even traded for food (History. com, 2009). Yet, individuals feared that the products they grew may not prosper, the same number of them as of now experienced lack of healthy sustenance. Moreover, illnesses and other diseases were shockingly common. In the late 1700’s, the main indication of a revolution happened when the steam motor was produced. It presented the idea of organizations and manufacturing plants having the capability to make products utilizing tools and machinery, rather than a family working at home. One of the reasons for the Industrial Revolution was to have more products delivered at a lower cost. A prompt change incorporated the creation of goods; what was produced, and additionally where and how, its cost, and effectiveness. The Industrial Revolution was starting to transform an agricultural economy into one with machines and manufacturing.

The Industrial Revolution was flourishing quickly in the United States amid the mid nineteenth century. Private stockholders and financial buildings, for example, banks were expected to give cash to the general population who needed to begin a business (History. com, 2009). This cash would then permit industrialization to take place. The reason for it was to reduce the dangers of losing cash to the individual investors. This was particularly

pivotal on the grounds that the new machinery that was required was costly. Capital was initially presented as companies consolidated together their cash as “ business entities,” and not long after corporations were formally created. The benefit to this was the most a financial investor could lose is the initial amount they put in; instead of losing more cash than one at first began with.

Inventions & Technology

Textile manufacturing was perhaps the most important field in which technology first made gains. Britain was, at first, protective of its textile mills when they were first emerging. The spinning jenny was the first advancement, which helped individual weavers yield double than they were able to before. The first cotton mills were opened in 1742, but it was not until 1764 that Arkwright invented the first powered textile machine, which was water powered (Bond 2003). Preceding this, spinning frames were often powered by a mule or horse. It was this invention that allowed for pure cotton cloth to be made, which was significant as they competed against India (McNeil 1990). The spinning mule, which was a combination of the spinning jenny and the water frame, allowed for stronger threads to be made, which made for Britain finally beginning to have competitive textiles (McNeil 1990). The power loom was patented in 1785, which had faults such as high rates of thread breakage, but ultimately was improved upon and repatented for widespread use in 1813 by William Horrocks (Ayer 1989). Cotton goods had increased in production numbers ten-fold at this point (McNeil 1990), but Britain still held on tight to its homemade inventions.

It was not until 1789 that the first British man, Samuel Slater, brought his engineering and design skills to the United States to build textile mills in New England. While there was a ban on those who knew how to construct these machines emigrating, Slater evaded it (Heath 2011). The result was the first water-powered mill in the United States. Meanwhile, in England, Arkwright built the first steam-powered textile mill the following year. The cotton gin then was invented by Eli Whitney, in America, though inspired by Slater's influence . The cotton gin sped up the processing of raw cotton, which allowed for the processing of raw goods to speed up in order to become more available for the ever increasing speed of manufacturing. While the northern states of the United States were already thriving with new textile manufacturing industries, the invention of the cotton gin allowed for rejuvenation of the southern states, who grew cotton and now had an abundance of raw cotton to sell (Pierson 2016). Overall, the introduction of these technologies allowed for the American economy to grow while also no longer depend on Great Britain for manufactured textiles.

The use of steam power, which eventually drove the textile industries of Great Britain and of the United States alike, began in 1698 in London. This first successful stationary steam engine was only capable of producing low horsepower output. However, it was not until the first piston steam engine built in 1712 that steam power really brought about change (Hulse 1999). This engine allowed for deeper, previously unworkable mines to be made. Engine efficiency improved over the 18th century, and continued to be used in mining. It was not until the beginning of the 1800s that American engineer

Oliver Evans began constructing higher pressure, non-condensing steam engines, which were compact enough to be used in trains as well as on the steamboat, a new type of marine transportation (Evans, 1805). The use of railways undeniably shaped the economy and society of the United States, as it revolutionized shipping as well as passenger transportation.

Military and Imperialism

The Industrial Revolution in the nineteenth century incredibly affected the conduct of war (Zapotoczny, 2006). It demonstrated the impacts of the innovative advances in industry and farming, which were to revolutionize warfare. To completely comprehend the influence of the Industrial Revolution, the rapid and drastic change must be analyzed, one in which new advances in industry, science, and innovation would be promptly connected to the direct of war. New innovations made it conceivable to mass-produce weapons with improved precision, power, and range. A hefty portion of the new weapons and relating strategies conflicted with the key originations of what constituted legitimate conduct of war, making improvements troublesome and unsettling. Military conditions were constantly unstable amid the modern age as new weapons were produced and transportation and communication technologies advanced (History. com, 2010). The American Civil War saw the passing of numerous customary methods of fighting, the selection of new weapons, and the introduction of new innovations. A large portion of the modern explosives were found in the nineteenth century. Huge numbers of the new innovations were put to use by the military. The new innovations caused the formation of another chapter of warfare, less mental and physical and more reliant on technical

ability. Innovations turned into the establishment of military while pressure between quick change and military conservatism developed.

It was not until the final half of the nineteenth century that changes in communication, transportation, and weapon innovations would essentially modify the conduct of war. Advancements in long-range, rapid firing rifles and cannons supplied a protecting adversary definitive advantages in firepower, and threatened to make the effective execution of an infantry assault, particularly a frontal one, unimaginable (History. com, 2010). The general and basic enhancements in infantry weapons alone required an adjustment in the strategies of all branches. The capability of an infantry platoon outperforms the range and ruinous impact of the case-shot of a six-pounder gun. In effect, change was the advancement of merging the advantages of flank assaults and the tactical defensive, encouraging the enemy to attack, then waiting for the precise moment and leading to a counter attack to finish of the enemy. This arrangement had clear limitation in that it required either an accessible flank for the ambushing force, or an enemy willing to strike first. Nineteenth-century warfare was without neither.

The weapons revolution produced during the Industrial Revolution and the insurgency in military tactics and strategies specifically influenced the conduct of warfare. Black powder cannons provided an increase to a full supplement of modern warfare positions. From the time when cone-shaped bullets and rifles took to the front line as the forerunner of the period of innovation, weapons instantly affected warfare (History. com, 2010). To begin with, it was the colossal steel-clad maritime vessels that controlled the

oceans, then the tank ruled land warfare, after which airplanes took over the skies, up until the nuclear bomb was made. Today, a huge number of new and propelled weapons continue to advance forward.

In effect of technology and innovation advancement, the Industrial Revolution made imperialism more possible. The Industrial Revolution made a circumstance in which the European nations, and eventually the United States and Japan, felt that they needed to acquire large empires (Ward, 1994). The British acquired these empires for two key reasons. The first reason, they needed new places to obtain raw materials. The industrialized economies of these nations required raw materials and government was viewed as an approach to get those materials. The second reason, they felt they needed captive markets in which to sell the merchandise produced in the factories.

The Industrial Revolution likewise made it much more feasible for these nations to take and hold empires. The Industrial Revolution incredibly expanded the military quality of these forces (Ward, 1994). It gave them better weapons. It gave them advanced ships that could travel to various parts of the world quicker and more dependably than cruising boats could do in pre-modern times. These factors made it less demanding for Europeans to conquer each side of the globe.

Trade

Trade was integral to British industrialization on the grounds of the textile revolution, cotton, was dependably an import that Britain was unable to develop at home. The industrialization of wool and flax spinning and weaving

grew more gradually than with cotton; more vital, Britain would never have provided itself with enough flax or wool to extend textile production as it did. (Pomeranz Topik, 2013) Flax was both immensely labor-intensive and rough on the land, so that in Western Europe it was considered to a great extent a garden crop, grown on a little scale where heavy populations gave both labor and fertilizer. In spite of various endeavors more than two centuries by Parliament to finance flax-developing throughout the British Isles and the North American provinces, the outcomes were entirely modest. With respect to wool, sufficiently raising sheep to replace only the cotton Britain imported in 1830 would have required pretty much the whole arable and field land of Great Britain. (Pomeranz Topik, 2013)

Conclusion

Ultimately, it was the technological innovations and imperialism that arose from the British industrial revolution that most significantly contributed to the West’s economic development. The United States experienced an economic transformation, developing new jobs quickly due to textile mills, which was developed at the hands of the British. The use of railways and trains also grew, providing employment of immigrants in United States. This new widespread use of large amount of iron opened up mining jobs as well. The standard of living went up, as wages became higher as well as more accessible. It also has been argued that the introduction of industry paved the way for women becoming a part of the work force, which enhanced the economy (Tilly 1978). Factories also helped implement the current American capitalist structure, with factory workers and farmers experiencing a wage

gap (Marx 1867). While the new technological inventions were the ones directly responsible for the development of the American economy, it was just as much due to British imperialism. Weapons of war, as well as improved battleships, allowed for Britain to obtain a state of dominance in the world's militaries, and secured the ability to obtain new territory. These technologies pushed Britain to stretch its boundaries, gave it an advantage in gaining influence, and allowed it to hold economic power across much of the globe. The ease of communication (via telegraph and telephone) also promoted empire building, making distant nations easier to govern. It was this imperialism that allowed for the technological innovations to spread to the West, and the technological innovations that allowed for imperialism to happen. This is why both factors are equally important when assessing the significant impact that the British industrial revolution had on the United States' economic development.