

## King Cotton and the Semiconductor Supply Chain

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Before the Civil War, Britain's cotton textile industry relied heavily on "King Cotton" from the United States, specifically, the Southern states. At the onset of the U.S. Civil War in 1861, the Union Navy blockaded Southern ports, thus cutting off the flow of cotton to support the textile industry in Britain. A major supply chain disruption occurred through forces outside the control of the British. The supply chain of cotton hit a major discontinuity.

King Cotton was the main source of income for the Southern states. When the Union blockaded Southern ports (for example, Charleston, South Carolina), the Southern economy was severely compromised, and the Confederacy's ability to finance its war effort was significantly weakened. But that is a topic for another time.

A direct analogy between the cotton supply chain disruption and the semiconductor supply chain disruption during the COVID-19 pandemic in the early 2020s can be drawn. Today, many countries and industries rely heavily on Greater China's semiconductors, which are crucial components in modern electronics, including those embedded in late-model automobiles and trucks. As was demonstrated during the COVID-19 pandemic, Greater China's exports of semiconductors declined, causing huge disruptions in the supply chain. The discontinuity significantly impacted industries that depend on these exported components and harmed global industries.

The cotton supply chain discontinuity in the 1800s caused the price of cotton to increase dramatically, and textile mills in Britain were forced to cut back production, lay off workers, and search for or develop alternative sources of cotton. This led to a severe economic downturn in Britain's textile industry, known as the Lancashire Cotton Famine, which lasted from 1861 to 1865.

The Lancashire Cotton Famine had a profound social effect, as thousands of workers were thrown out of work, and many people faced severe hardship. The cotton famine had broader economic consequences as well in Britain. A resultant economic recession put pressure on the government

to implement social and economic programs. The British government provided some relief, including food aid and public works programs.

The disruption of King Cotton also had political ramifications in Britain. Many in the British government were sympathetic to the Confederacy and saw the blockade as an attempt to deprive Britain of its cotton supply. Some even advocated for Britain to recognize the Confederacy as an independent nation, which could have led to British intervention in the Civil War.

Overall, the disruption of King Cotton during the Civil War had a significant impact on Britain's textile industry and had broader economic and political consequences. As the supply of cotton from the Southern United States to Britain was disrupted, cotton plantation owners in other countries, including India, Egypt, and Brazil, saw an opportunity to increase their cotton exports to Britain. These countries ramped up their cotton production, and their exports to Britain increased dramatically during the Lancashire Cotton Famine.

The Lancashire Cotton Famine provides several lessons that can be learned from this historical event:

**Diversification of supply chains:** The Lancashire Cotton Famine highlights the importance of diversifying supply chains and avoiding over-reliance on a single source of goods. The disruption of cotton supplies from the Southern United States had a significant impact on Britain's textile industry, which had been heavily dependent on this source of cotton. It is essential to have multiple sources of supply to avoid disruption to the supply chain.

**Resilience in times of crisis:** The Lancashire Cotton Famine also underscores the importance of resilience during times of crisis. The textile mills in Britain had to adapt to the disruption in cotton supplies and find alternative sources to keep their businesses running. This required innovation, creativity, and flexibility to adjust to new circumstances.

**The role of government in economic crises:** The Lancashire Cotton Famine also highlights the role of government in addressing economic crises. The British government provided some relief measures, including food aid and public works programs, to alleviate the suffering of the unemployed workers in the textile industry. Governments can play a role in mitigating the impact of economic crises.

Today, the cotton industry is dominated by several countries, with China and India being the two largest cotton producers in the world. According to the International Cotton Advisory Committee, China and India account for over 50% of global cotton production, with China producing approximately 24% and India producing approximately 26% of the world's cotton. Other major cotton-producing countries include the United States, Pakistan, Brazil, and Uzbekistan. While the Southern United States was historically the largest cotton-producing region in the world, today, it ranks fourth in terms of cotton production.

Like the cotton industry, the semiconductor industry is vulnerable to disruptions that have a significant impact on the global economy. As the world becomes increasingly reliant on

technology and digitalization, the importance of the semiconductor industry will continue to grow. Global industries that use semiconductors are even more vulnerable to disruptions and changes. As with the cotton industry, businesses downstream of semiconductors in an industry's value chain, survival depends on resiliency and the ability to innovate quickly and overcome supply challenges.