

The Marvel of Logistics

Michael Jones, PhD
m.jones@uc.edu

Executive Director, KU Economics Institute
Associate Professor, Educator of Economics

University of Cincinnati

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Kautz-Uible Economics Institute
Carl H. Lindner College of Business
University of Cincinnati

2906 Woodside Drive
Cincinnati, OH 45221-0371



Recent stories shed light on the critical role that logistics and distribution play in our economy. When store shelves that were full of Clorox wipes, paper towels, and toilet paper are emptied in minutes, retailers and consumers turn to a highly resilient supply chain to quickly provide the next delivery of goods. [Recent disruptions](#) in the food supply chain have drawn attention to this crucial link between consumers and producers. Despite significant shifts in consumption patterns, Americans are still able to enter a grocery store every day and buy what they need to feed their families. This would not be possible without a highly complex, but decentralized, network of thousands of companies and freight carriers competing to deliver goods at the lowest possible price.

I am also guilty of taking our logistics network for granted. When I discuss supply and demand to first-year university students, I gloss over the details of how quantity supplied in a market actually matches the quantity demanded — a result that economists call an equilibrium. We see prices at the store shelves and quantities purchased at the checkout line; we do not see the logistics market behind the scenes competing to deliver the products to the grocery store. In a 19th century essay, [That Which is Seen and That Which is Not Seen](#), the French economist, Frédéric Bastiat vividly describes the role played by what he calls “intermediates” or “middlemen” to match supply with demand:

“When the hungry stomach is at Paris, and corn which can satisfy it is at Odessa, the suffering cannot cease till the corn is brought into contact with the stomach.”

Bastiat discusses three ways to procure this food. People themselves may go to Odessa. They may also pay for someone else to go and buy the food for them. Finally, they may tax themselves and have the government purchase and distribute the food to its own citizens. The first option is too costly and impractical, and the third option of government distribution is also inefficient, unresponsive, and incapable of transforming itself to quickly respond to market conditions. Bastiat praised the second option, a forerunner to the modern logistics industry, when he said –

“Commerce...is led by its own interests to study the seasons, to give daily statements of the state of the crops, to receive information from every part of the globe, to foresee wants, to take precautions beforehand. It has vessels always ready, correspondents everywhere; and it is its immediate interest to buy at the lowest possible price, to economize in all the details of its operations, and to attain the greatest results by the smallest efforts.”

A logistics company is just as capable of making a mistake as a government official, and the private sector does not have a monopoly on talent. The difference between these approaches to economic production and distribution is that when a private business operates inefficiently or is unresponsive to consumer demand, market competition forces it out of business and replaces it with another, more efficient company. If a government official makes a mistake, nothing changes until the next election. The evolution of this effective, yet sometimes brutal, market competition over the last century has produced a highly efficient and resilient supply chain in the American economy.

Decentralization and market competition does not imply a lack of planning, foresight, or organization of resources. A company that desires to deliver its products to the consumer must

find a freight carrier, initiate a contract, monitor the performance of the freight carrier, etc. The free market is not actually “free” to use. In fact, these transaction costs may explain how firms come into existence in the first place. When market transactions costs become too high, companies form in order to organize the production and distribution of resources. This transaction cost theory, [proposed](#) by the economist Ronald Coase in 1937, offers an explanation for the formation of a company in what would otherwise be a network of individuals.

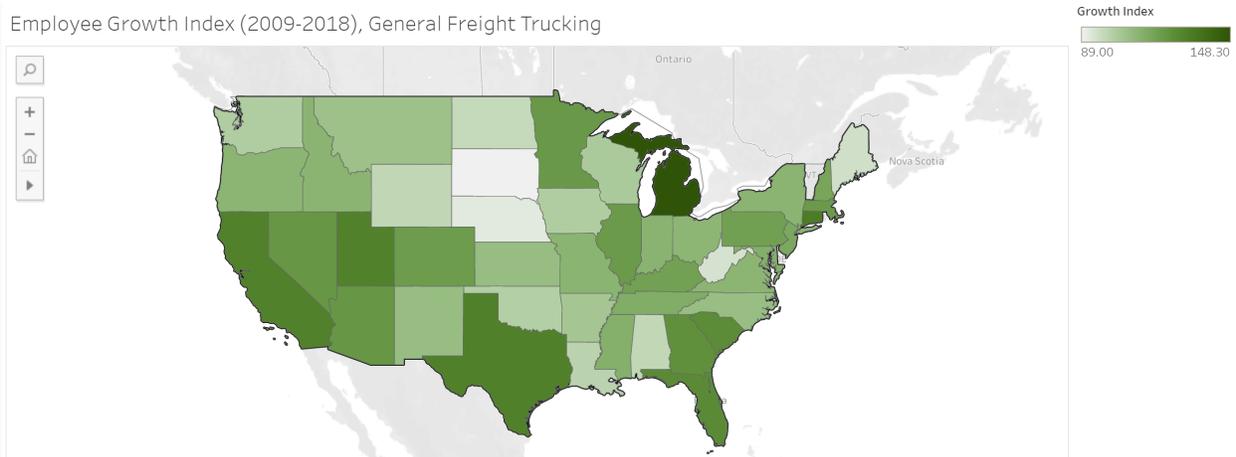
Consider a company like [Kingsgate Logistics](#), headquartered in Cincinnati, Ohio. Kingsgate Logistics tells its customers:

“We never stop working to make sure we’re always finding better, smarter and uncomplicated ways to ship their goods to the places they need to be.”

This description sounds quite similar to Bastiat’s description of middlemen nearly two centuries ago. Kingsgate Logistics exists to lower the transaction costs of product distribution from one part of the country to another part. As a freight broker, Kingsgate Logistics locates other carriers, negotiates payment terms and conditions, and collects, evaluates, and shares data on every shipment. This process encourages competition among freight carriers, promotes efficiency, and lowers market prices. However, the company itself competes in a larger market of third-party logistics providers and freight brokers. If Kingsgate Logistics fails to innovate or provide an effective, low-cost service, it will quickly lose market share to its competition. The company demonstrated this need to innovate when it engaged the [Kautz-Uible Economics Institute](#) and the [1819 Innovation Hub](#) at the University of Cincinnati to work with students on a blockchain research project. Blockchain technology provides a transparent and immutable record of transactions and data so that third parties can see movements within the transportation network for themselves.

At the same time that Kingsgate Logistics is driving innovative change, it must also adapt itself to a changing technological environment. Recent advancements in automation and self-driving vehicles have the potential to significantly disrupt the logistics industry. Despite the introduction of these labor-saving technology, employment in the general freight trucking industry has actually increased by 17 percent in the United States since 2009. According to the US Bureau of Labor Statistics, more than one million people were employed in the general freight trucking industry in 2018. Most individual [states](#) also saw an increase in employment since 2009 with Michigan growing nearly 50 percent. The full dataset can be downloaded [here](#).

Employee Growth Index (2009-2018), General Freight Trucking



Data compiled by the author from QCEW data from the US Bureau of Labor Statistics, April 30th, 2020.

We can see that employment growth in the logistics industry from population and economic growth is outpacing employment losses from technological advancements. We cannot see the full effects of COVID-19 on the future supply chain. Despite this uncertainty, companies like Kingsgate Logistics will continue to innovate, increase efficiencies, and lower prices. If it fails, the marvel of the market will create another company to take its place; and American consumers will continue to depend on a logistics network to distribute food to grocery stores across the country.