



## EconoMag

The Show that demystifies Economics

Transport Economy – part 3

**Railways** ©

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Railways have been used since the 18<sup>th</sup> and 19<sup>th</sup> centuries as a reliable and efficient source of transportation. With the invention and development of the steam engine, which fueled the Industrial Revolution, railways became an important and powerful aspect of the economy and a key component of a country's transportation network. Early on, rail lines were used to extract and transport ore and coal from mines, and they made it possible to exploit newly discovered quarries that were hard to access. Railroads were also used in the settlement of new territories, like in America during the 19<sup>th</sup> century and the westward migration. Today, railways remain to be a highly attractive method of transporting goods, as they are more flexible and cheaper than air transport, although less adaptable than highway transport.

Rail transport really took on its modern importance when the British developed the steam locomotive, which became the most viable source of mobile power in the late 18<sup>th</sup> century. With this new power source it was possible to vastly develop and expand railways to cover ever-longer distances. The first practical steam locomotive was designed in 1811 by John Blenkinsop in Leeds and was built by Fenton, Murray and Wood in Holbeck. In 1830 the first intercity railway in England was built between Liverpool and Manchester, while in France the first line was built in 1823, connecting Saint Etienne and Andrézieux.

During the Industrial Revolution, railway lines were an enormous boost to the economy making possible the efficient transportation of goods, as at the time there were, of course, no planes, and no trucks, and the only alternative way to ship goods was by horse-drawn carriage or by boat, which proved difficult for certain landlocked countries or regions without a navigable river or waterway. Over the years and decades, however, transport by air and road, and mainly by sea, has evolved to become more efficient than rail transport, which hasn't actually changed that much over time. Trains, of course, have certainly become faster and more powerful, and are now mostly run on electricity, but the total amount of goods carried by rail is still far lower than the other means of transport.

So, how does rail freight compare to other modes of transportation? In some ways it can be more efficient than highway transport and air cargo because there are more rail stations than there are airports, and there are no traffic jams on the rail lines so it can also be faster than the road networks. And in terms of energy consumption, it is much cheaper over long distances.

Rail freight transport, is also based on the same system and units of shipping containers that we saw with marine transport. Shipping containers have standardized measurements, which

allows them to be unloaded from ships directly onto trains and trucks. This has revolutionized cargo shipping, and in some countries, like the United States, it is possible to have double stack rail transport where containers are packed on top of each other, with the effect of doubling the capacity that can be shipped.

In terms of revenue, the largest rail network business is the Chinese Railway Corporation with 154.6 billion dollars, followed by the Deutsche Bahn with 50 billion, and in France, the SNCF had a revenue of around 35 billion dollars in 2013.

Well, that's it for today's profile on railway transport.