



Why the United States Has the Most-Advanced Rail System in the World

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On my first visits to most other countries, including Australia, Britain, France, Italy, Japan, Korea, New Zealand, and Switzerland, I’ve spent much of my time riding trains. Many of my friends who visit these countries return to the United States wondering, “Why can’t we have trains like that?”

There are many ways to answer this question, but the best way is to see how well the trains in those countries actually work.

The key difference between the United States and these other countries is not that America has some sort of irrational love affair with the automobile but that American railroads are mostly private, while railroads in the high-speed rail countries are mostly or entirely public or state-owned corporations. Where private companies seek profits, politicians seek visibility, so state-owned railroads focus on highly visible passenger service rather while for-profit railroads focus on freight.

As a result, far from being behind the rest of the world, the United States actually has the world’s most efficient railway system. Though they are one of the least-subsidized forms of transportation in the country, America’s railroads move well over 5,000 ton-miles of freight per person per year. This compares with 500 ton-miles per person in the European Union and less than 170 ton-miles per person in Japan.

In order to emphasize passenger service, other countries have given up on profitable rail freight service, allowing most freight to be shipped by truck, while railroads in the United States have given up on unprofitable passenger trains and emphasized freight.

Table 1

Percent of Passenger Travel, by Mode

	EU-27	USA	Japan
Auto	74%	85%	56%
Bus	8%	3%	7%
Rail	6%	0%	30%
Tram/Metro	1%	0%	*
Water	1%	0%	0%
Air	9%	11%	7%

*Included in Rail

Source: *Panorama of Transport: 2009 Edition*, Eurostat, Brussels, 2009, p. 100.

A review of 2006 transportation statistics published by the European Commission found that, despite the emphasis on passenger trains, the automobile was the dominant form of passenger travel in the Europe and Japan as well as the United States (**Table 1**). Intercity rail was important in Japan but only marginally important in Europe. About one quarter of European intercity rail travel, or 1.5 percent of the total, was by high-speed rail.

Table 2

Percent of Freight Shipments, by Mode

	EU-27	USA	Japan
Road	46%	30%	60%
Rail	11%	43%	4%
Pipeline	3%	14%	0%
Water	41%	13%	36%

Source: *Panorama of Transport: 2009 Edition*, Eurostat, Brussels, 2009, p. 57.

The trade-off for attracting a greater share of passenger travel to trains was a huge loss in rail’s share of freight movements (**Table 2**). Rail ships more freight than any other mode in the United States, but is rather minor in Europe and Japan, where highways are the dominant form of freight shipments.

The notion that Europe is somehow more environmentally sound than the United States because more people ride trains is a myth. As New York University historian Peter Baldwin notes, “Ecologically speaking, there is no advantage in sending passengers by rail if freight is sent by road.” Because the difference in energy consumption between rail and truck freight is far greater than the difference between passenger rail and cars, the United States saves more energy shipping freight by rail rather than truck than Europe saves by moving passengers by rail rather than by car or air.

One argument made for building new high-speed rail lines is that it would “free up” the conventional rail lines for more freight trains. But it hasn’t worked out that way in practice: As high-speed rail lines have been built in both Europe and Japan, rail’s share of freight has declined at least as fast as rail’s share of passengers. Between 1991 and 2014, rail’s share of freight in the EU-15 declined from 8.4 percent to 8.1 percent.

Table 3

Passenger Miles Per Capita

	EU-27	USA	Japan
Auto	5,775	15,090	3,540
Bus	683	559	435
Rail	497	62*	1,925
Tram/Metro	124	62	0
Water	62	0	0
Air	683	1,987	435
TOTAL	7,825	17,761	6,334

*Note: The 62 miles the average American travels by rail includes both Amtrak and commuter trains. Amtrak’s share is about 22 miles, and commuter rail is the other 40.

Source: *Panorama of Transport: 2009 Edition*, Eurostat, Brussels, 2009, p. 100.

The other cost of emphasizing rail is a decline in total mobility. In part to promote rail over autos, Europe and Japan heavily tax motor fuel. The result is less driving, but that reduction in mobility is not made up for by an increase in rail and bus travel. As **Table 3** shows, the average

American travels 9,000 more miles per year by car than the average European, while the average European travels only about 400 more miles per year by rail than the average American.

Visitors often leave Europe thinking trams (streetcars and light rail) and metros (rapid transit) are highly popular, yet the average European rides them only 124 miles per year, or 62 more miles than the average American.

This means that, overall, the average American travels more than twice as many miles per year as the average European, and close to three times as many miles as the average Japanese. Residents of even the wealthiest countries in Europe do not average more than 10,000 miles per year. This isn't because the United States is such a big country: although data are not available for every country in the world, the second-most mobile people may be Icelanders, who also happen to have the one of the highest rates of car ownership in the world.

The notion that Europe is somehow more environmentally sound than the United States because more people ride trains is a myth. As New York University historian Peter Baldwin notes, "Ecologically speaking, there is no advantage in sending passengers by rail if freight is sent by road." Because the difference in energy consumption between rail and truck freight is far greater than the difference between passenger rail and cars, the United States saves more energy shipping freight by rail rather than truck than Europe saves by moving passengers by rail rather than by car or air.

In short, far from being technologically backward, America's rail system is the envy of the world, carrying more than six times as many ton-miles of freight each year as all of the EU-27 nations combined. Railroads offer advantages for freight that they can't match for passengers. Freight doesn't care about being crammed into tight spaces, delayed a few hours, or being jerkily transferred from ship to rail to truck. Rails will continue to play a dominant role in freight movement, but for passengers, rail travel can't compete with planes that need almost no infrastructure to go faster than any train or soon-to-be driverless cars that will be able to go anywhere on America's 2.7 million miles of paved roads.

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