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## FREIGHT RAILROADS BACKGROUND

Flexibilities from the **Staggers Rail Act of 1980** have led to reduced rates for shippers (after adjusting for inflation) and enhanced railroad maintenance and capital expenditures on track and rolling stock. Railroad productivity has increased substantially as more freight is moving over a smaller network with a smaller workforce.

In 2011, the railroad freight industry generated a record \$65.0 billion in revenue. The seven Class I railroad systems account for over 90 percent of the industry’s total. The railroad industry produced 1.73 trillion revenue ton-miles (a unit of measurement that incorporates both weight and distance) down nearly 3 percent from its 2008 peak.

**Structure.** In 2011, in addition to the 7 Class I freight railroad systems—systems with annual operating revenue of \$433.2 million or more—operating in the United States, there were 21 regional railroads (line-haul railroads operating at least 350 miles of road and/or earning revenue between \$40 million and the Class I threshold), and over 500 local railroads (line-haul railroads smaller than regional railroads).

	Class I RRs		Regional RRs		Local RRs	
	1990	2011	1990	2011	1990	2011
<b>number</b>	14	7	30	21	486	539
<b>employment</b>	209,708	158,623	11,578	5,443	14,257	11,874

Class I employment fell by 24 percent between 1990 and 2008, because retirees weren't being replaced – traffic levels were sustained without additional hires. Faced with growing traffic levels and an aging workforce, the railroad industry ended its decades-long goal of reducing the number of workers and added nearly 13,000 employees from the 154,652 in 2003 to 167,581 in 2006. With demand for rail service declining in late 2007, the employment level (annual average) was unchanged from 2006, and declined in 2008 by nearly 3,000, accelerated in the recession of 2009 falling by nearly 13,000, and was substantially unchanged in 2010, and rose by nearly 7,000 in 2011 to 158,623.

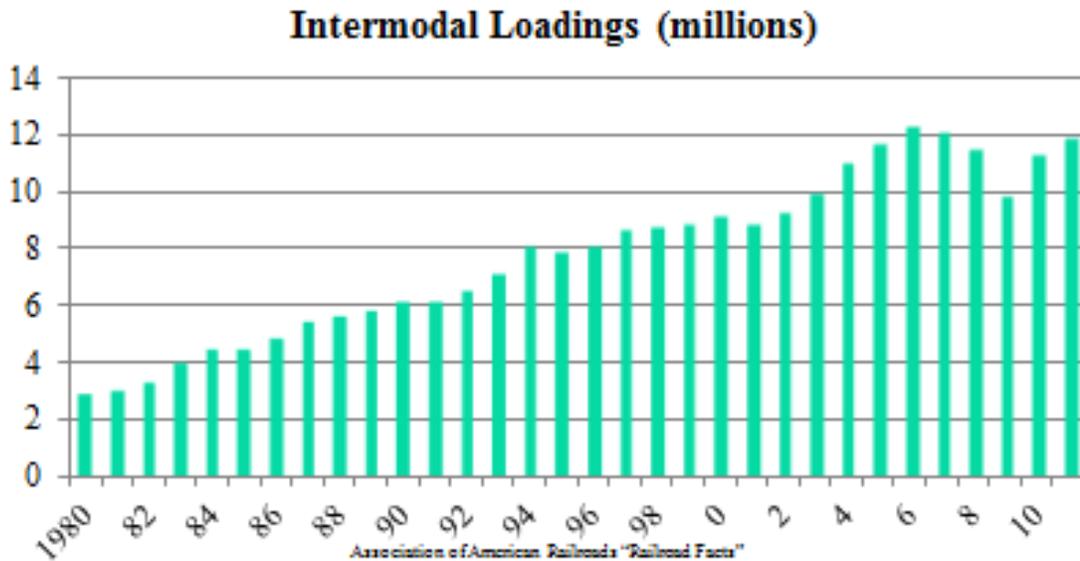
Not only is the workforce aging, but recent changes in the Railroad Retirement Act reduced the age and time-in-service requirements for retirement. Nearly one-quarter of the work force will be eligible to retire by 2015. The challenge facing the railroad industry is recruiting and retaining the needed employees to replace these large numbers, while at the same time meeting the forecasted demand for freight service.

Between 1990 and 2011, regional railroad employment declined 53 percent, partly as a result of mergers, such as the Canadian National's acquisition of the Wisconsin Central and the Canadian Pacific's acquisition of the Dakota, Minnesota and Eastern. Local railroad employment declined by 17 percent due, in part, as with the Class I railroads, to mergers and consolidation of functions, such as purchasing.

**Commodities.** In 2011, the major rail-carried commodities (in terms of tonmiles) included coal (39 percent), intermodal traffic (trailers and containers on flat cars) (15 percent), chemical products (11 percent), and farm products (predominantly grain and soybeans) (10 percent). The fastest growing segment of rail traffic has been intermodal traffic, with the number of trailers and containers increasing substantially from an average of 3.4 million

loadings in the early 1980's, when doublestack container trains were introduced, to 12.0 million in 2007. In 2008, intermodal units were down by more than 4 percent from 2007 and another 14 percent during the recession in 2009. In 2010, there were 11.3 million units. In 2011, units rose to 11.9 million or by 5 percent, to a level just below that of 2007. The highest traffic corridor for intermodal traffic is between California and Illinois reflecting the land portion of container shipments of goods moved from Asia to the U.S.

## INTERMODAL GROWTH: TOFC/COFC LOADINGS IN MILLIONS OF UNITS

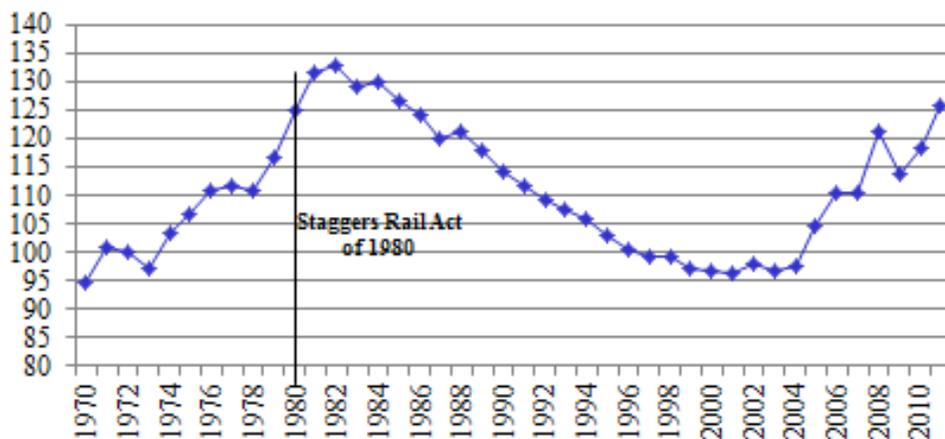


With the opening of the Powder River Basin in Wyoming in the late 1970s, U.S. coal shipments have grown dramatically as the railroads delivered low sulfur coal to help electric utilities achieve Clean Air Standards. The largest rail coal movements are from the Powder River Basin to generating plants in Illinois, Missouri, and Texas.

**Rates.** Freight rates adjusted for inflation were the same in 1981 and 2011 compared to an average increase of 2.9 percent per year in the 5 years prior to 1980. The period of declining rates ended in 2000. Through late 2007, due to increased demand and little excess capacity, freight rates began to move higher. Much of the increase in 2008 was due to the run-up in fuel prices. The decline in 2009 was associated with a fall in fuel prices, while the increase in 2010 and 2011 were driven by an increase in fuel prices.

## Railroad Rates After Inflation

1972=100



Sources: U.S. Dept. of Labor, Bureau of Labor Statistics, Producer Price Index of Line-Haul Operating Railroads; U.S. Dept. of Commerce, Bureau of Economic Analysis, Implicit Price Deflator for Gross Domestic Product

Between 1990 and 2011, the Class I freight railroads averaged nearly 8 percent return on their net investment, up from the 2 percent average in the 1970s. The STB's cost of capital for the railroad industry averaged over 11 percent for this period.

**Productivity.** The railroads are responsible for maintaining their track, rights of way, and locomotives. Over the years, through mergers and rationalization of their plant, numerous low density or

redundant lines have been abandoned or sold to smaller railroads. Since 1980, the Class I railroads have increased their traffic (ton-miles) by 88 percent (93 percent through 2008) while their network (miles of road owned) declined by 42 percent. This has increased traffic density by concentrating traffic over a smaller network. However, sustained increases in traffic (despite decline in 2009) seen since the turn of the decade have reversed the trends of the 80s and 90s; because of increased density, the railroads are now expanding capacity in their highest density corridors by double-tracking major routes.

Between 1981 (a few months after the Staggers Rail Act partially deregulated rail rates and services) and 2011, the railroads spent \$566 billion on capital and maintenance of their track and equipment. Capital expenditures tripled, from \$3.6 billion in 1990 to \$11.6 billion in 2011, while the price level of railroad purchases of inputs rose by only 124 percent. Capital expenditures on roadway and structures tripled from \$2.6 billion in 1990 to \$7.9 billion in 2011, as railroads increased the percentage of rail weighing 130 pounds per yard or more from 50 percent of mileage in 1990 to 71 percent in 2011 to accommodate heavier loadings, such as increased coal shipments.

In terms of the capacity of railroad equipment, the industry reported that at the end of 2011 total horsepower of the railroad-owned locomotive fleet increased by 76 percent since the end of 1990 enabling the railroads to haul heavier trains, particularly trains moving coal out of the Powder River Basin, and high speed long distance intermodal trains. Of the 1,283,225 freight cars in service at the end of 2011, the majority was owned by car companies and shippers (806,544) followed by Class I railroads (380,699) and non-Class I railroads (95,972).

Between 1990 and 2011, freight railroads made major strides in improving productivity; revenue ton-miles per employee has

more than doubled, from 4.8 to 10.9 million, as traffic increased and employment dropped. Less labor has been needed in the last several years, because of smaller crew sizes and the need for fewer interchanges between railroads due to mergers. In addition, technology and elimination of duplicative administrative jobs have reduced the amount of labor needed. More traffic, as measured by revenue ton-miles, has resulted from more frequent and heavier traffic moving longer distances. For example, increased coal shipments from Wyoming are moving further east to electric utility plants.

Freight railroads are also making more efficient use of fuel. Between 1990 and 2011, ton-miles per gallon of fuel consumed rose from 332 to 469. To make their operations more fuel efficient, the railroads have been moving longer trains, longer distances between interchanges, rebuilding equipment and buying more fuel-efficient locomotives, using innovative equipment (for example, aluminum freight cars and double-stack cars), and reducing locomotive idling time.