

VISUAL 26.1

ECONOMIC GROWTH IN THE UNITED STATES, 1870-1900

The U.S. economy expanded rapidly between 1870 and 1900.

- At the end of the Civil War, Americans produced approximately \$531 worth of goods and services (Gross National Product, or GNP) per person.
- By 1900, this amount doubled.
- Transportation advancements between 1870 and 1900 played an important role by advancing the size of the U.S. marketplace.
 - ✓ Transportation costs fell. It became cheaper to move things and people from one place to another.
 - ✓ Speed of delivery increased. Things and people moved more quickly from one place to another.

VISUAL 26.2

MAIN LINE RAILROAD TRACK IN OPERATION IN THE UNITED STATES, 1870-1900

Year	Miles of Track	Percentage Increase Over a Five-Year Period
1870	53,000	
1875	74,000	40
1880	93,000	26
1885	128,000	38
1890	167,000	30
1895	180,000	8
1900	207,000	15

QUESTIONS FOR DISCUSSION

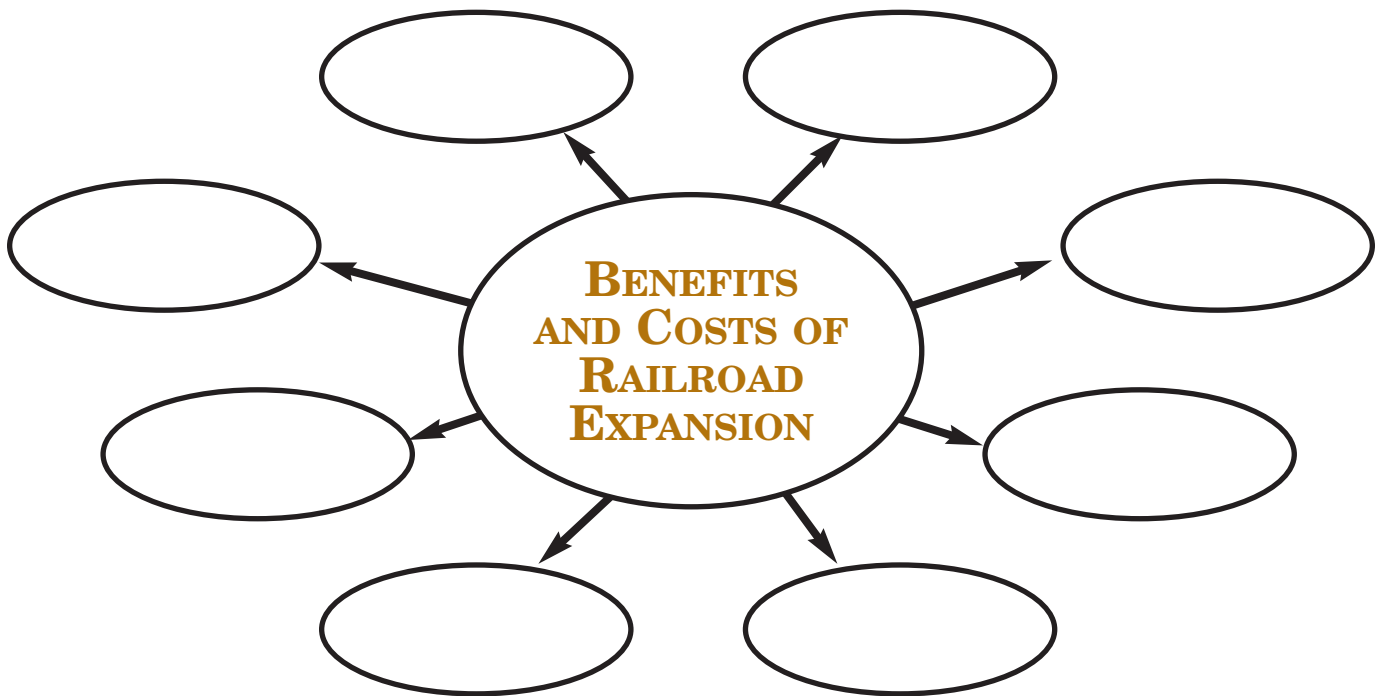
- A. Did the railroad network expand or contract between 1870 and 1900?

- B. By what percentage did the miles of track servicing the U.S. economy increase between 1870 and 1900?

Source: Adapted from U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970* (U.S. Government Printing Office: Washington, D.C., 1960), Part II, Series Q287, page 321.

VISUAL 26.3

**BENEFITS AND COSTS OF RAILROAD EXPANSION
FOR DIFFERENT MARKET AGENTS: RAILROAD
INDUSTRIALISTS, OTHER INDUSTRIALISTS,
CONSUMERS, FARMERS AND GOVERNMENT**



VISUAL 26.4

VALUE OF FARM GROSS OUTPUT AND PRODUCT IN CONSTANT (1910-14) DOLLARS, 1870 - 1900

Year	Gross output total as measured in constant (1910-14) dollars <i>(The numbers below represent millions of dollars.)</i>	Farm gross product, including improvements and manufactures <i>(This statistic is a measure of agricultural output. The numbers below represent millions of dollars.)</i>
1870	2,694	2,597
1880	4,129	3,906
1890	4,990	4,638
1900	6,409	5,837

Source: Adapted from U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970* (U.S. Government Printing Office: Washington, D.C., 1975), Part I, Series K240-250, page 482.

VISUAL 26.5

PRE-CIVIL WAR TRANSPORTATION

In the period before the Civil War, waterways and turnpikes provided efficient transportation for people, goods and services.

- Shipping cost by water — through canals — was often lower than the cost of shipping by railroads.
- Most railroad lines ran north and south, and many were located in close proximity to rivers and canals.
- At this time, railroad lines were small. They were privately owned and they used non-standardized technology.
- Customers faced relatively high transportation costs when using railroads.

It is plausible that extending the system of public roads — turnpikes — and canals could have helped the United States economy to expand after the Civil War even if the railroad network not been developed.


 VISUAL 26.6**THE OPPORTUNITY COST OF RAILROADS**

One way to measure the opportunity cost of developing the railroads is to compare the impact of railroads, as they existed, to the second-best alternative.

The second-best alternative to railroads at the time was the expansion of waterways and roads that existed before the Civil War.

HOW TO MEASURE THE IMPACT OF RAILROADS

The net contribution of railroads to the U.S. economy during industrialization can be determined by two steps:

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- Estimate the value of total output (Gross National Product or GNP) produced in the presence of railroads
 - Subtract the estimated GNP produced in the hypothesized presence of the second-best alternative — waterways and turnpikes.

VISUAL 26.7

ESTIMATING THE CONTRIBUTION OF RAILROADS TO ECONOMIC GROWTH

- Economic historians Albert Fishlow and Robert Fogel estimated that railroads boosted GNP in 1859 (Fishlow) and in 1890 (Fogel) by no more than 5 percent.
- They concluded that industrialization would have proceeded in the absence of railroads.
- According to this line of analysis, railroads were important, late in the nineteenth century, but they were not an indispensable form of transportation.