

Presentation to the National Surface Transportation
Policy and Revenue Study Commission
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The Role of Transportation in the U.S. Economy

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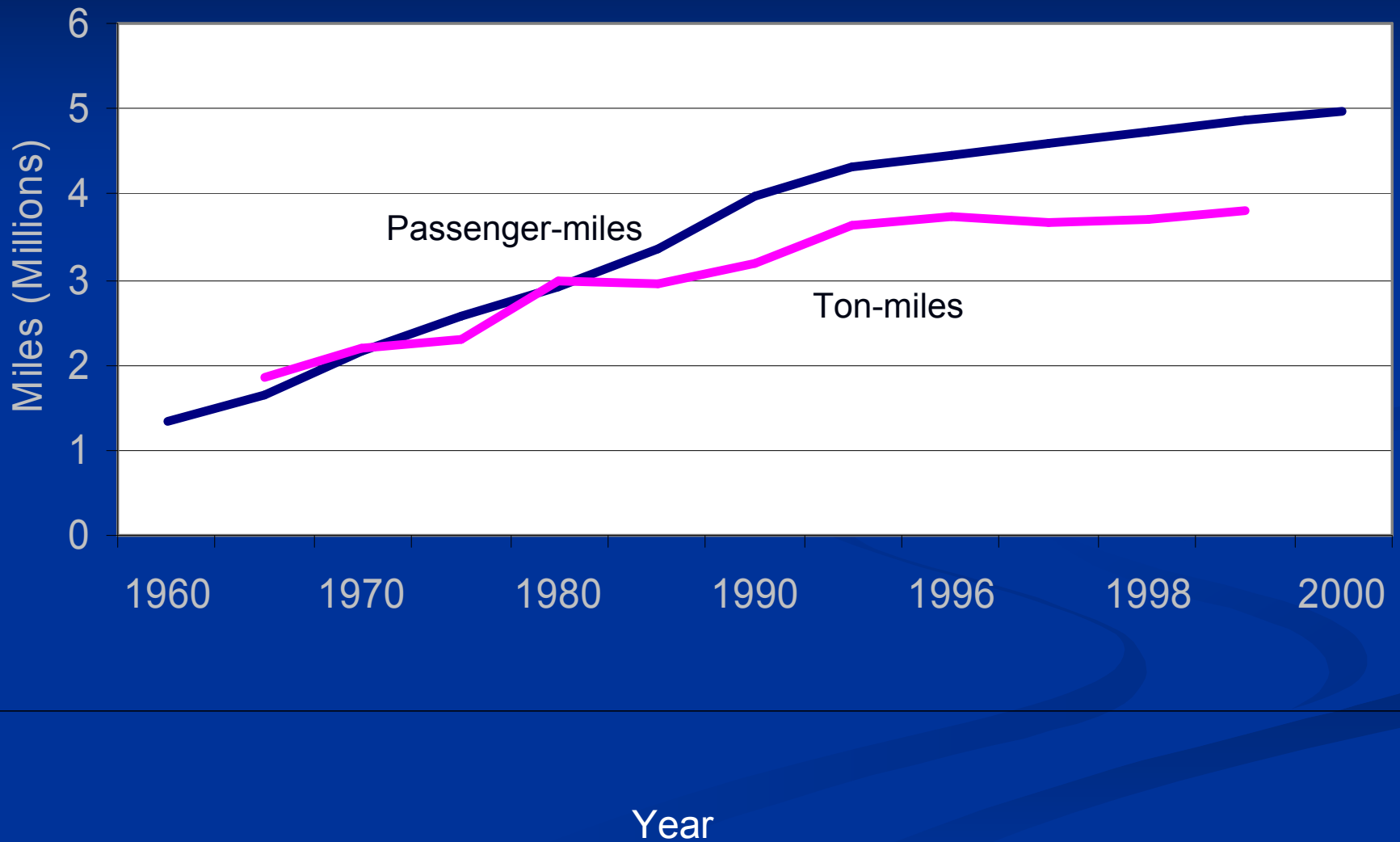
Chief Economist

U.S. Department of Transportation

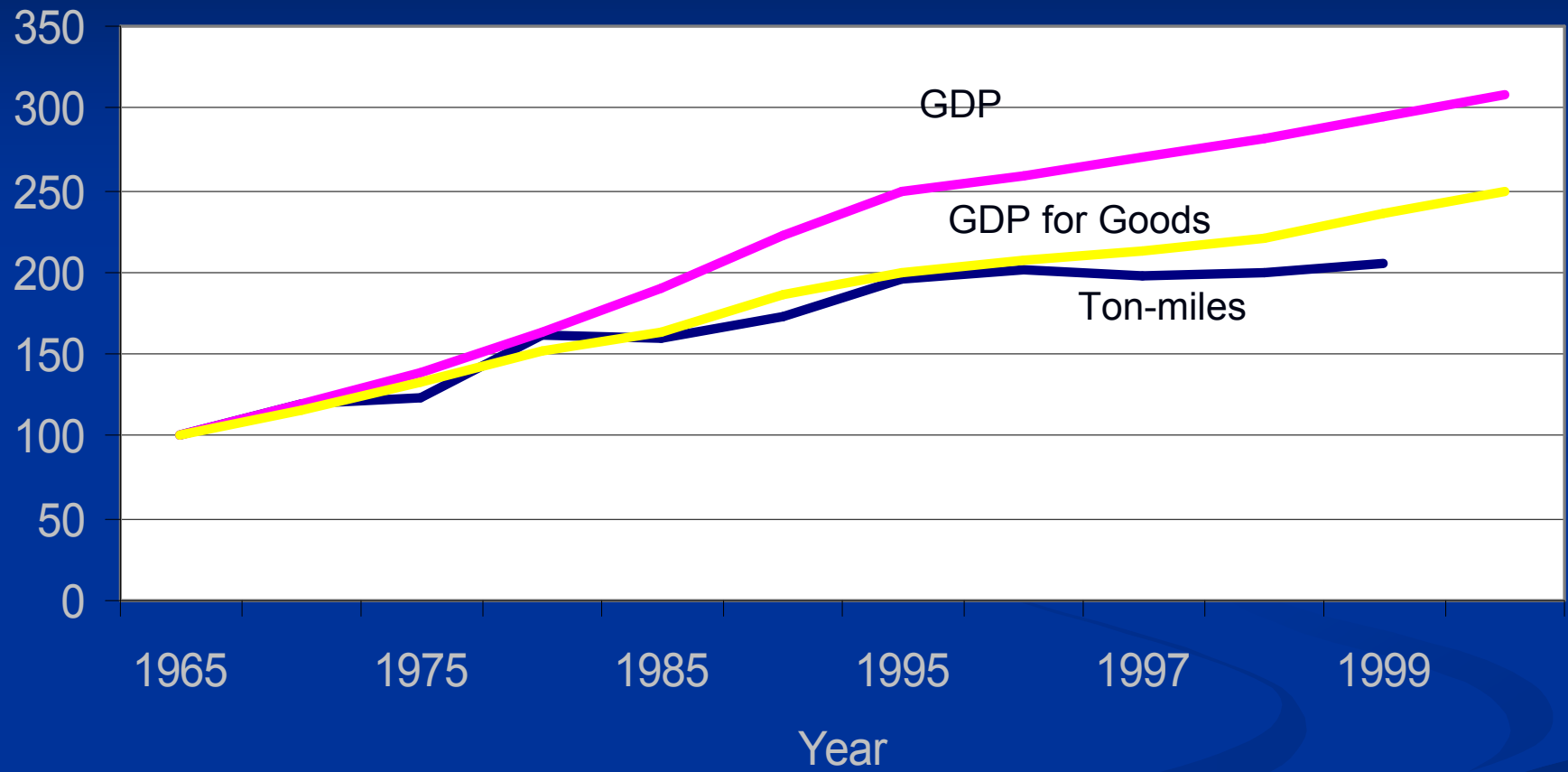
Scope of the Transportation Sector

- NIPA accounts show Transportation as 2.9% of GDP in 2004 (for-hire only)
- Adding in In-house Transportation increases the total to about 4.9%
- GDP produced for a Transportation purpose: 11.2%
- Adding in the Household sector raises Transportation to about 18.6% of GDP

Growth in Passenger and Ton Miles



Growth in Freight Relative to GDP



Transportation is particularly important to certain industries

- Input-output data show transportation is
 - 12 % of Agricultural Fertilizers and Chemicals
 - 10 % of Steel and other Metals
 - 9 % of Coal
 - 8 % of Chemicals
 - 8 % of Motor Vehicles
 - 8 % of Food
 - High percentages of Stone and Clay, Livestock, Paper, Paints, Rubber, Lumber, and Plastics

Why is Transportation Critical to These Industries?

- Freight Transportation is important because of the
 - Weight of goods that must be carried
 - Distance that goods must be carried
 - Speed that goods must be carried

Weight of Goods

- Industries that use heavy inputs or outputs include
 - Construction (stone and gravel)
 - Steel and other metals
 - Agriculture
 - Energy (coal and oil)
 - Chemicals

Distance of Goods

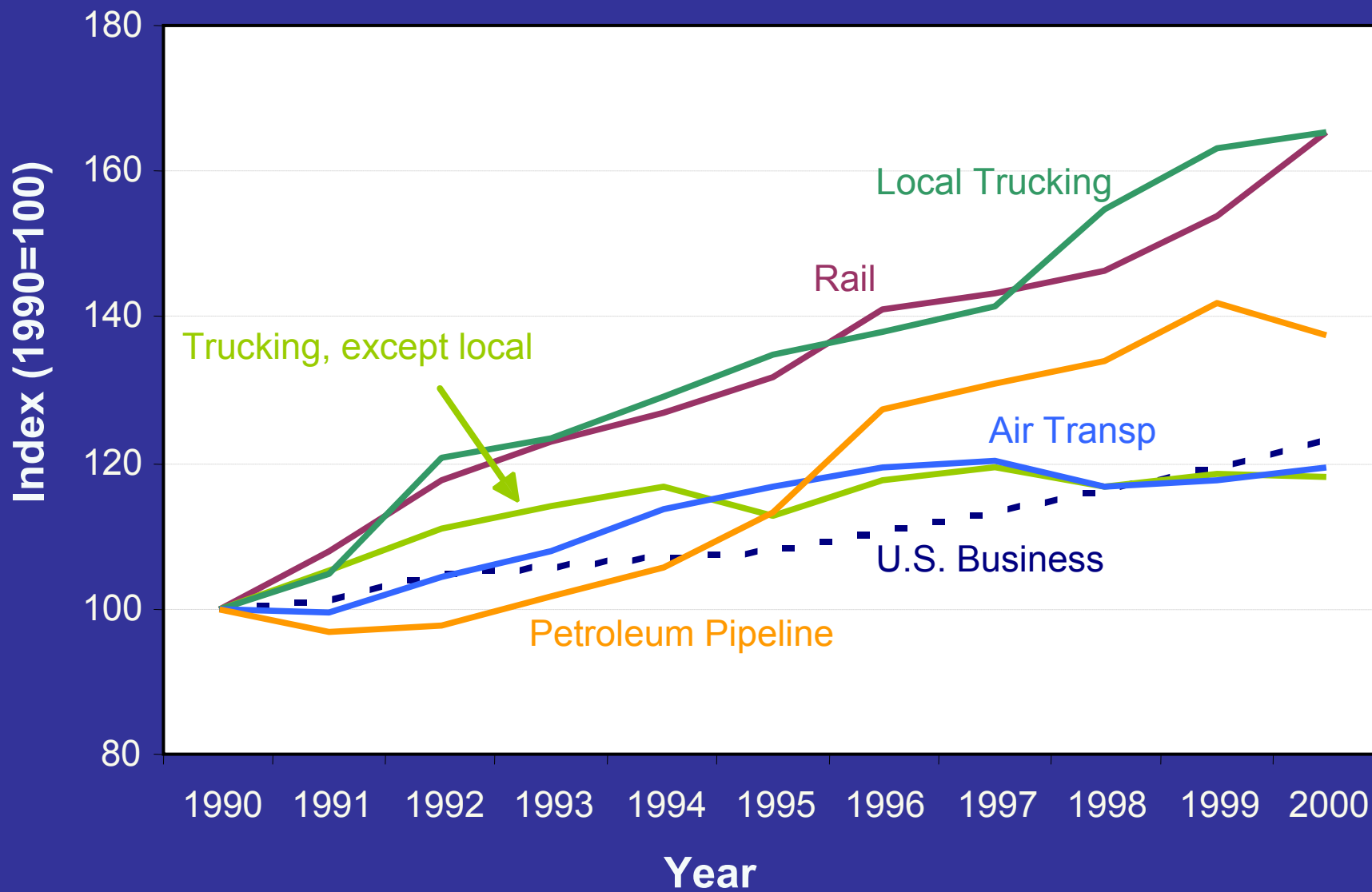
- Industries that must move goods over great distances include
 - Energy (coal and oil)
 - Retail trade
 - Agriculture

Speed that Goods Must be Carried

- Perishable commodities
 - Flowers, fresh foods
 - Fashion merchandise
 - High-Technology products
- High-value commodities
 - High value creates incentives to reduce inventory carrying costs by reducing transportation time
 - Pharmaceuticals
 - Electronics

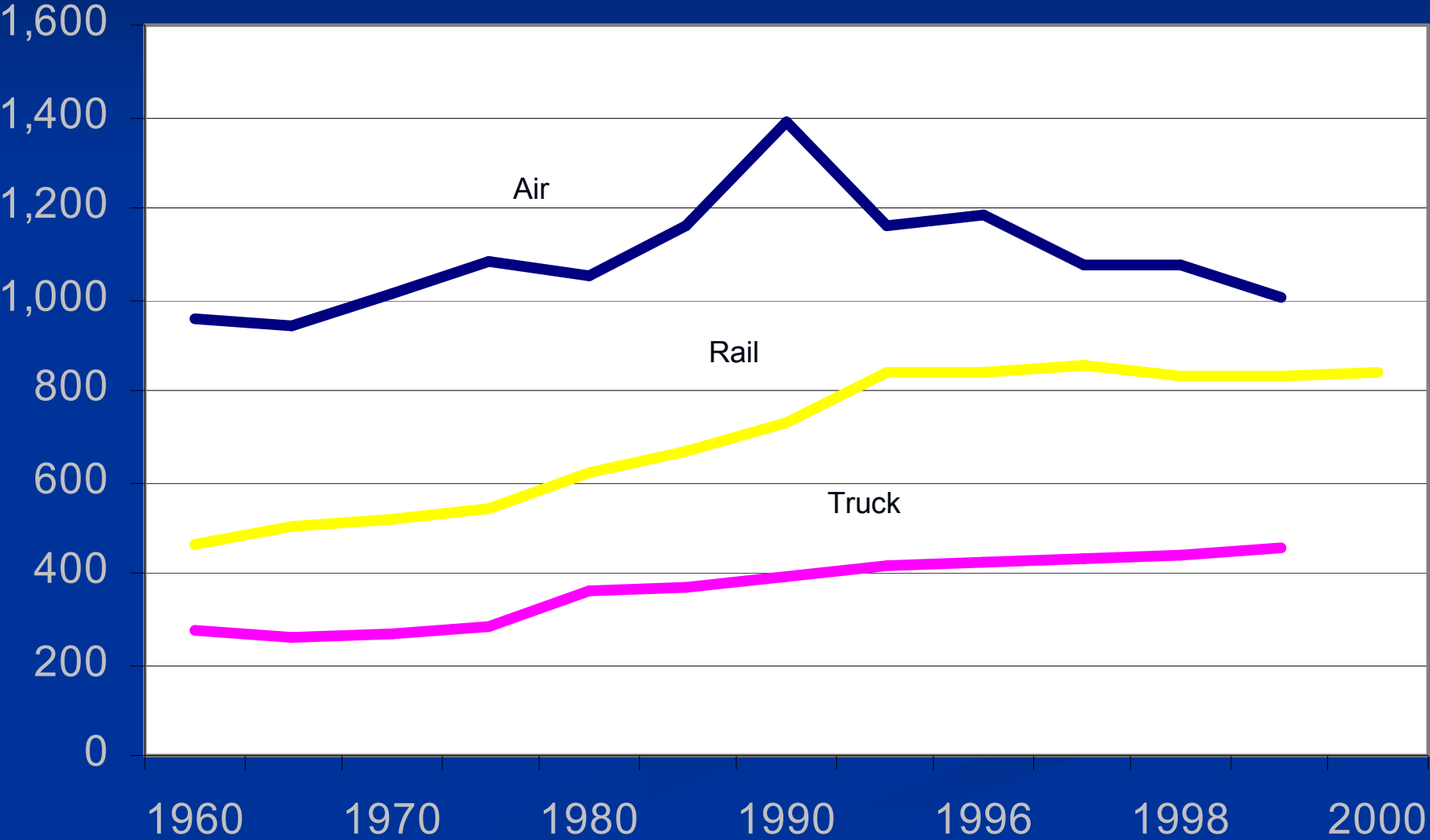
Labor Productivity

Transportation vs. All U.S. Business, 1990-2000



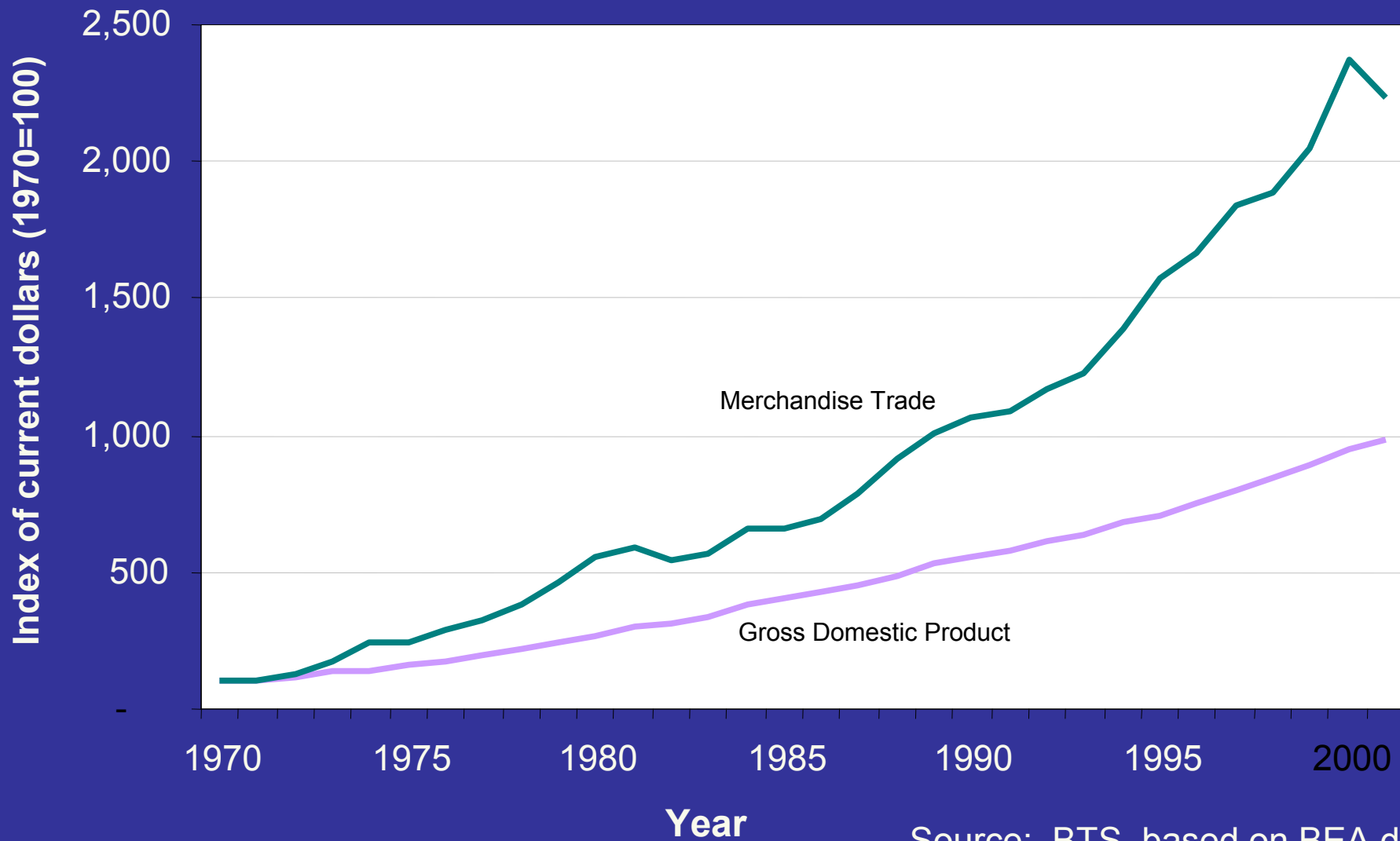
Source: Bureau of Labor Statistics

Changes in Average Length of Haul



U.S. International Merchandise Trade and GDP 1970-2001

(In current dollars)



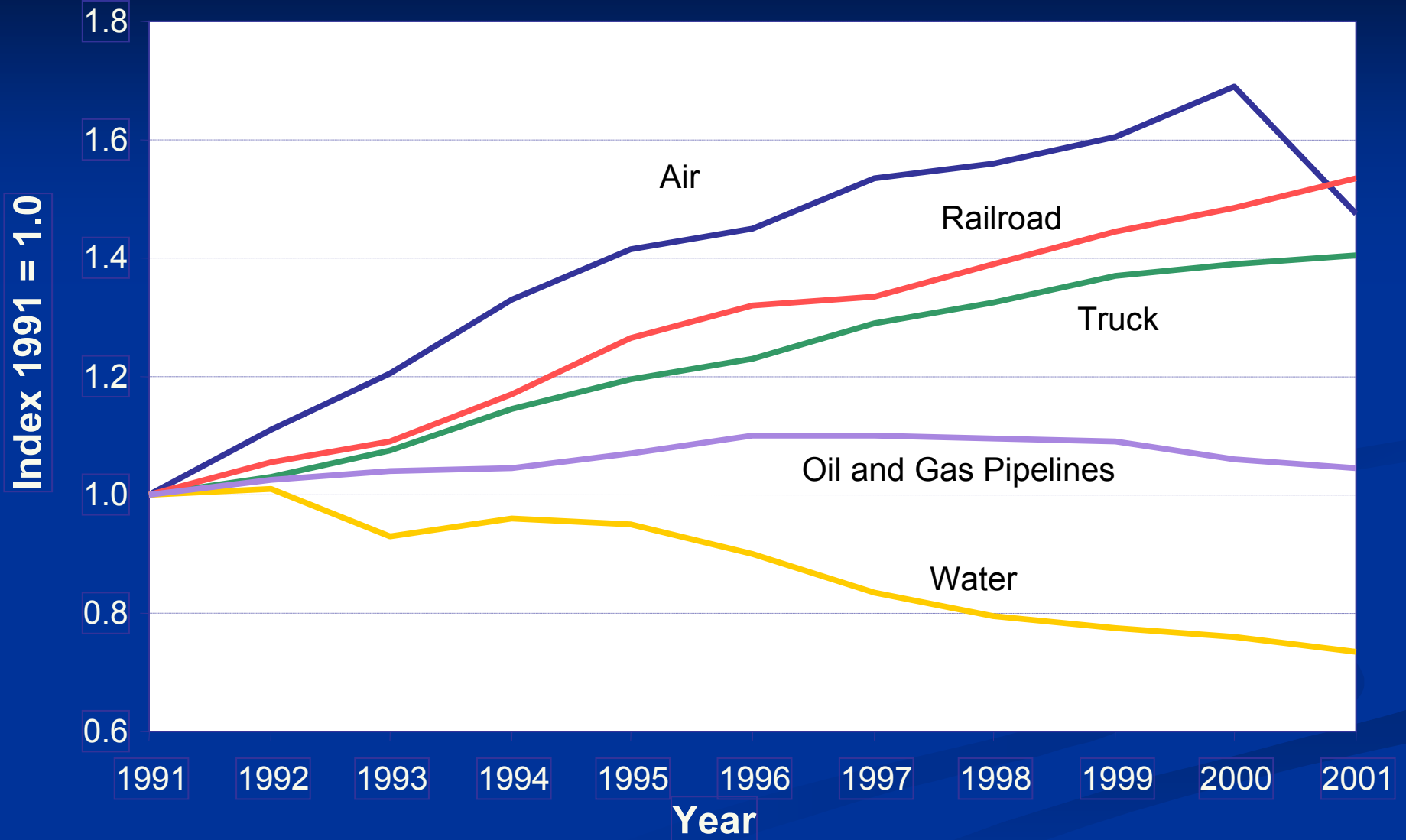
Source: BTS, based on BEA data

“The greatest improvements in the productive powers of labor . . . seem to have been the effects of the division of labor. . . . The division of labor is limited by the extent of the market.”

-- Adam Smith,
Wealth of Nations, 1776

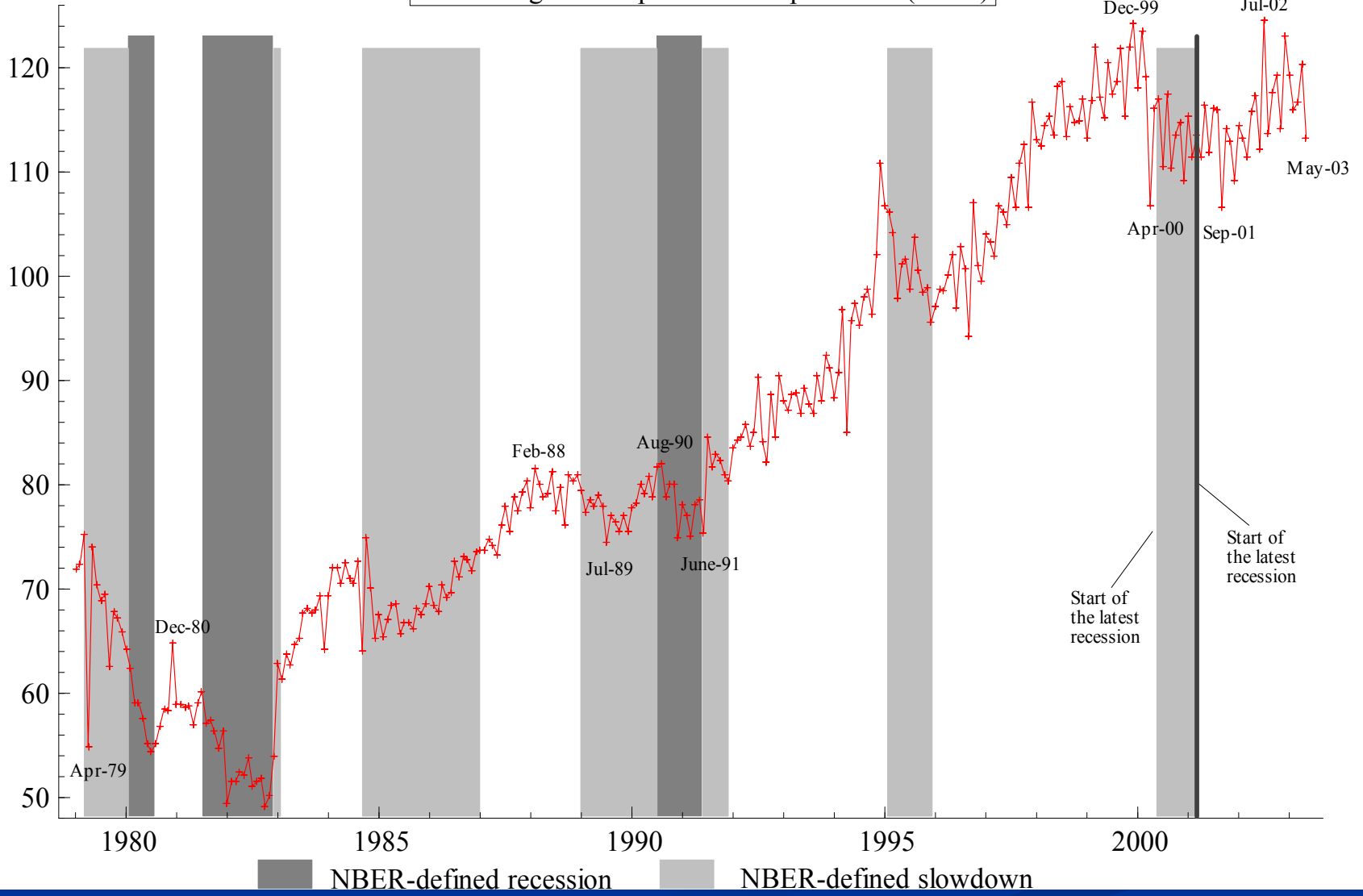
Domestic Freight Ton-Miles by Mode

1991-2001

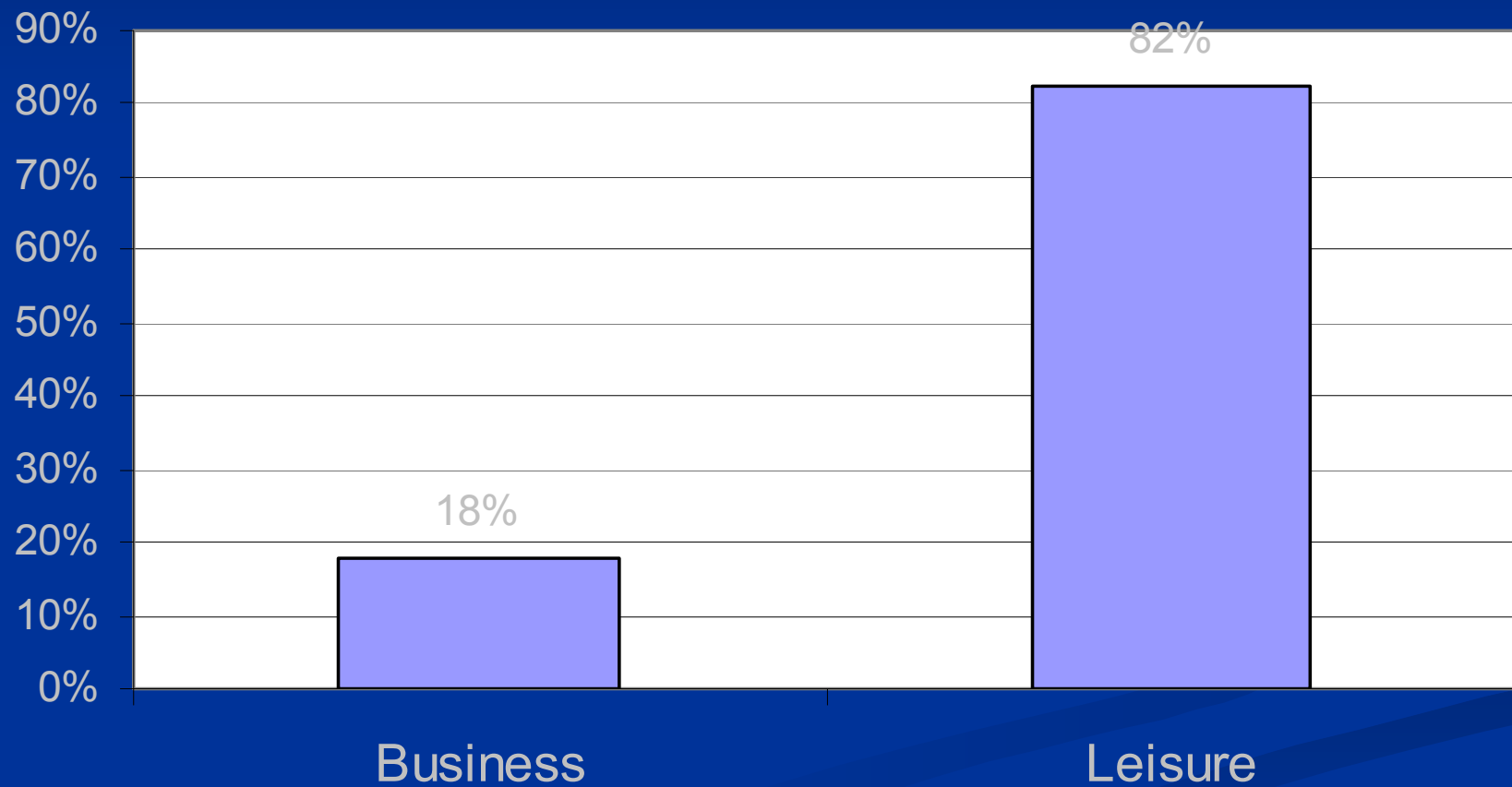


Source: Bureau of Transportation Statistics

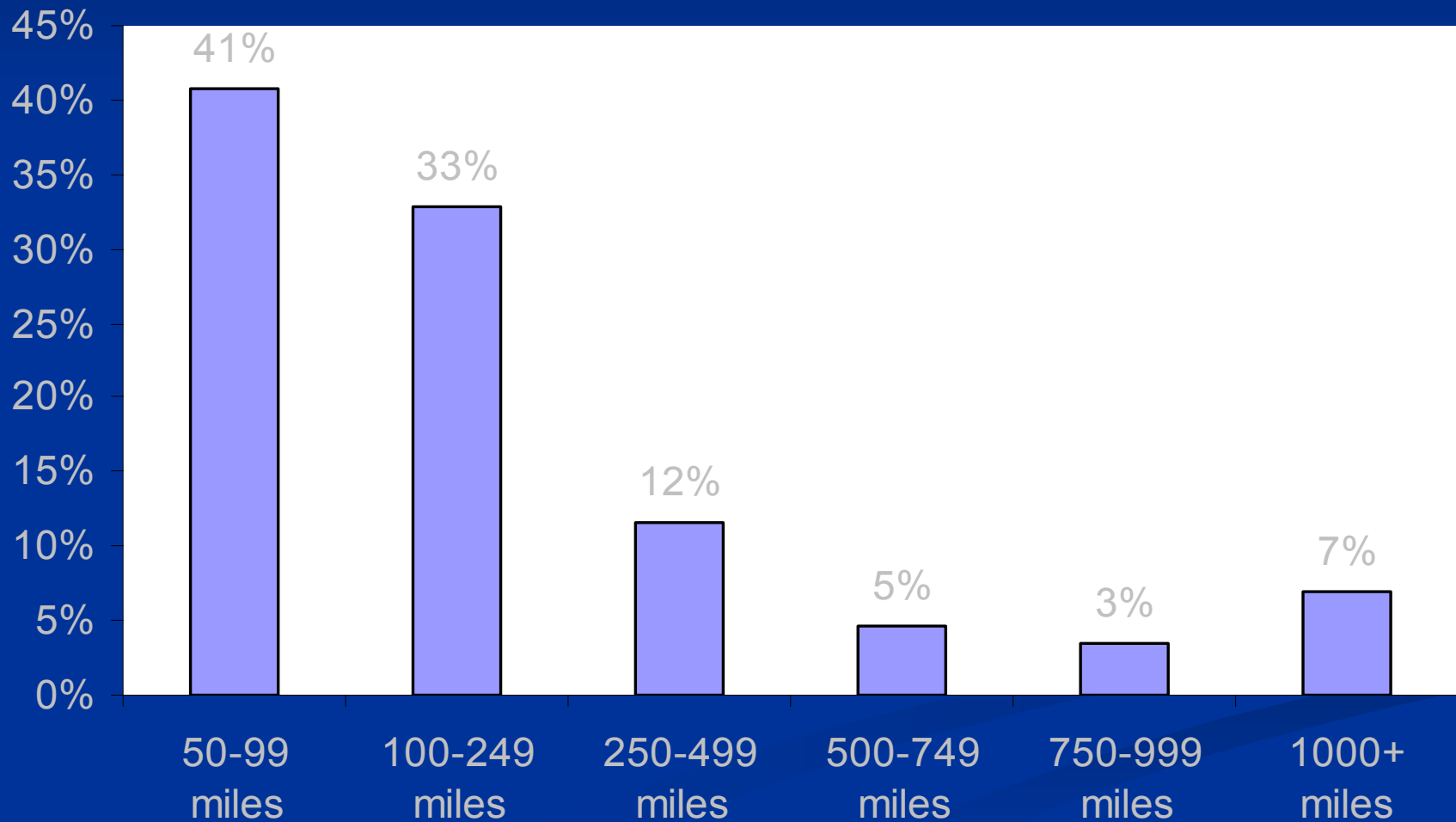
Freight Transportation Output Index (FTOI)



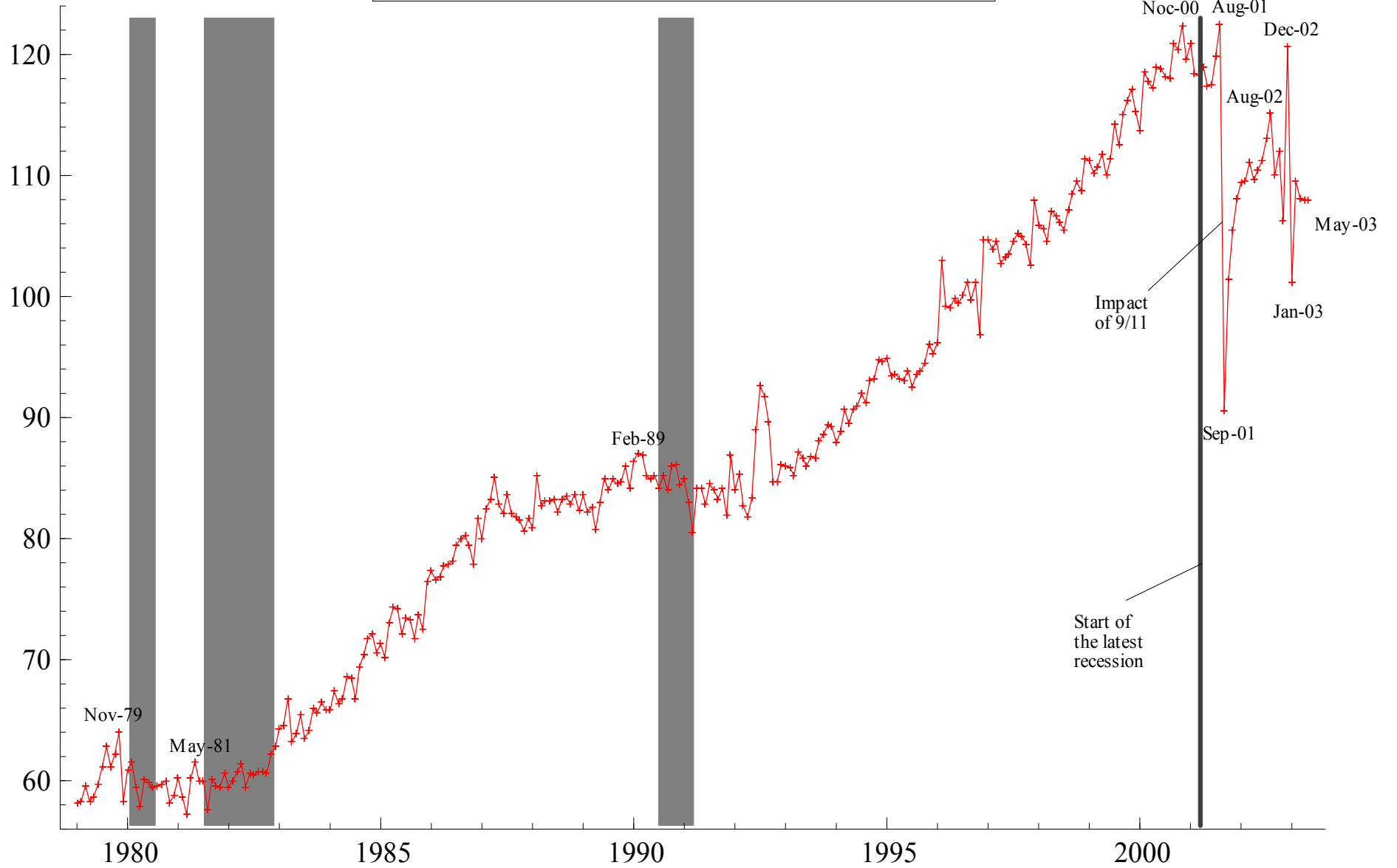
Business Travel and Leisure Travel



Percentage of Business Trips by Distance to Trip Destination

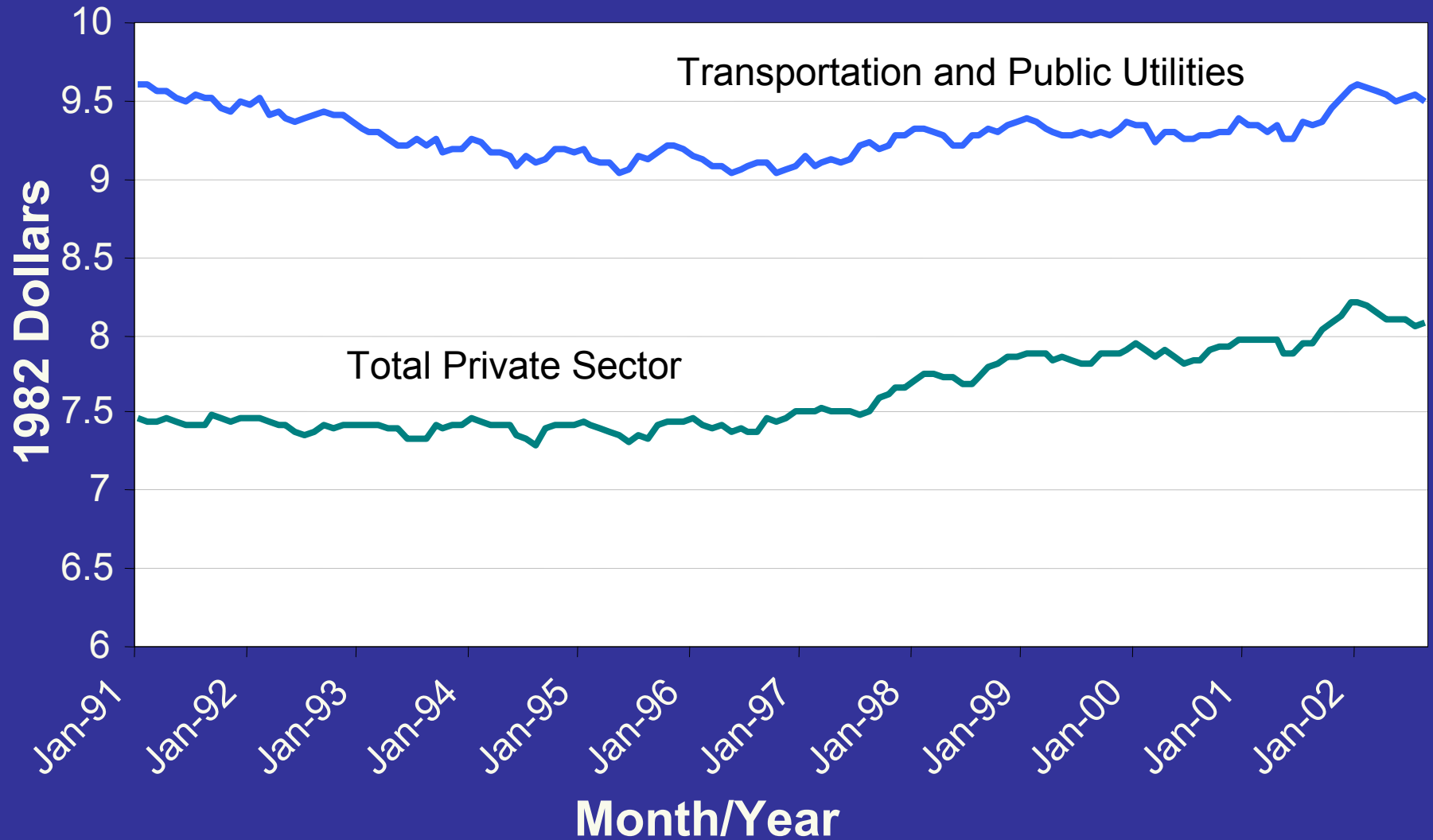


—+— Passenger Transportation Output Index (PTOI)



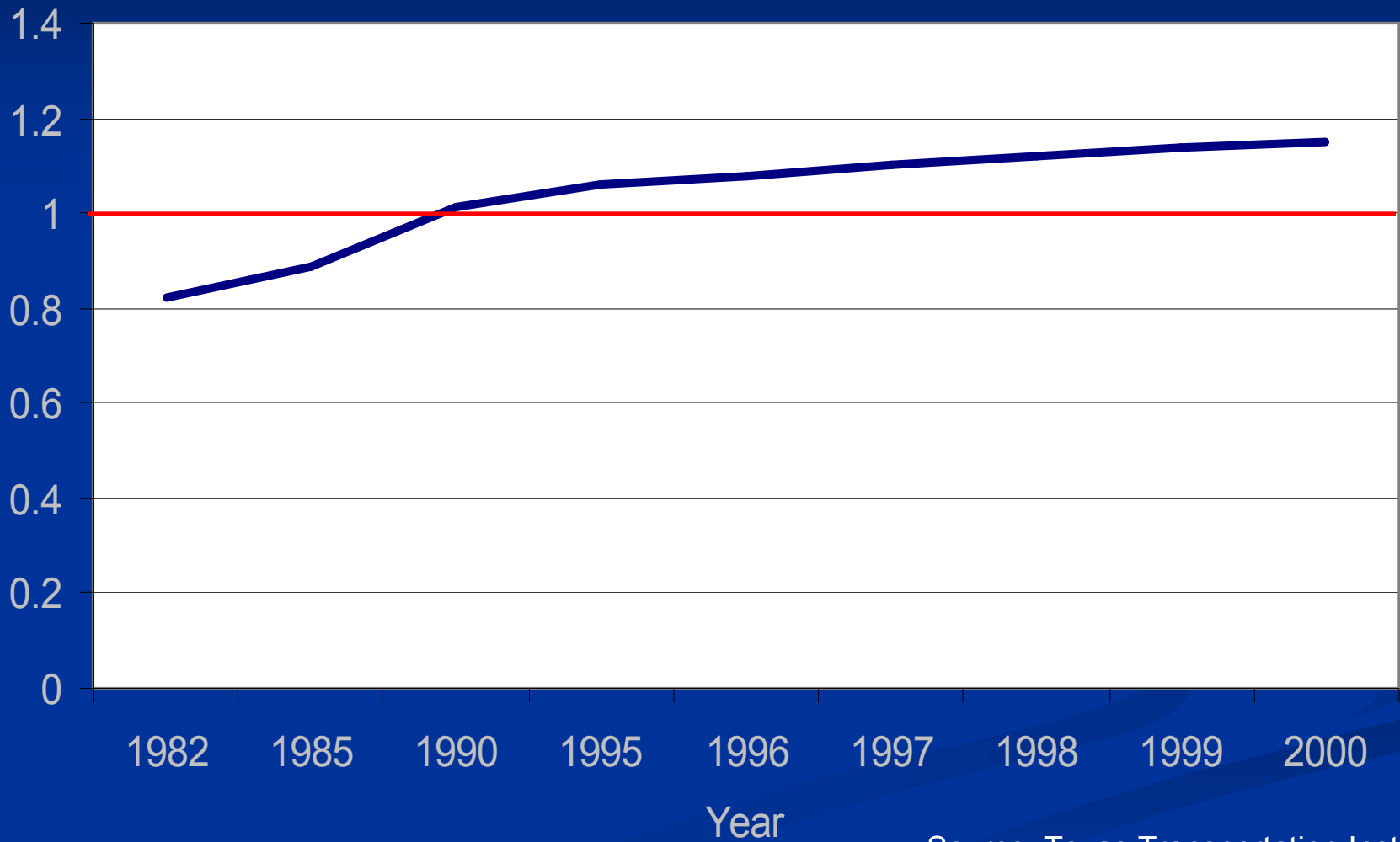
■ NBER-defined recession

Average Hourly Earnings - Transportation vs. Total Private Sector



Source: Bureau of Labor Statistics

Roadway Congestion Index



Source: Texas Transportation Inst

TTI Estimates Leave Out Many Congestion Costs

	<u>Billions of dollars</u>
TTI estimates of delay and fuel waste	63.1
Cities not included in TTI estimates	12.8
Productivity losses	38.0
Unreliability losses	38.0
Truck cargo delays	3.8
Safety and environmental costs	12.6
Total highway congestion costs	168.3

Congestion Costs are Growing Faster than GDP

- Since 1982, the cost of congestion has grown at 8 % per year, more than double the rate of growth of the economy
- In 20 years, continued growth at this rate would bring the cost of congestion to \$890.5 billion
- Equal to 4.3 % of GDP

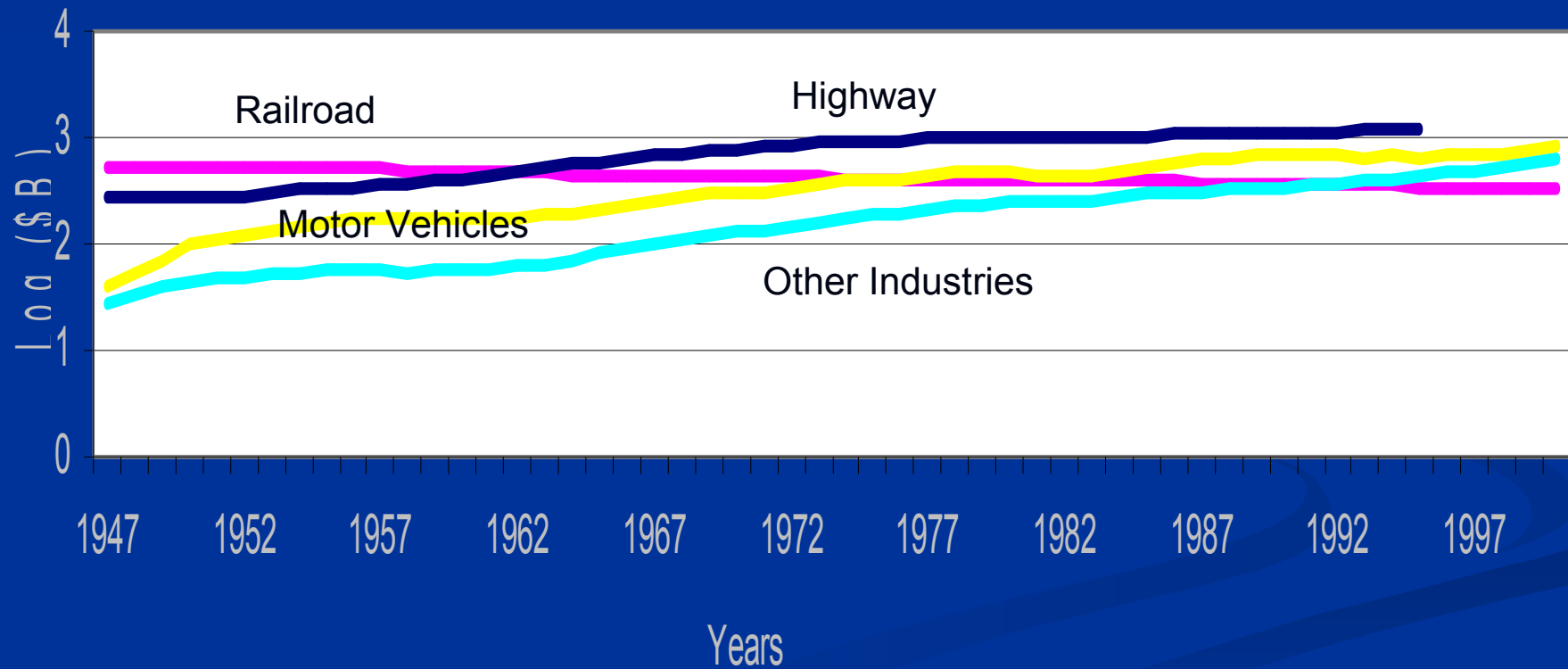
Congestion is Growing Faster in Rural Areas and Small Cities

- Congestion has traditionally been an urban phenomenon
- But congestion is growing most rapidly in rural areas
- From 1992 to 2002, traffic per lane-mile grew
 - 35 % on rural interstates
 - 21 % on urban interstates
- Rural congestion particularly affects freight

Congestion is growing more rapidly in smaller cities

- TTI found congestion costs grew from 1997 to 2003 –
 - 24% in Very Large Cities
 - 26% in Large Cities
 - 36% in Medium Cities
 - 56% in Small Cities

Real Net Capital Stock for Transportation and Other Industries



Government Revenues Generated by Transportation

