



Performance and Policy Reform of the U.S. Transportation System



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Motivation

- Transportation is a cost in both money and time that must be incurred by individuals and firms to complete any market transaction
- An efficient transportation system reduces the cost of everything—conversely....
- Transportation also affects the performance of the trade, industry, labor, & urban sectors
- The US spends nearly \$2.5 trillion in money costs and \$3 trillion in time costs on transport

Issues

- Are we getting our money's worth?
- Are travelers and shippers:
 - Paying too much money for transport
 - Spending too much time on transport
- Is government spending too much on transport?
- Are other sectors adversely affected by transportation?
- How can public policy improve the system?

Money Costs of Transportation

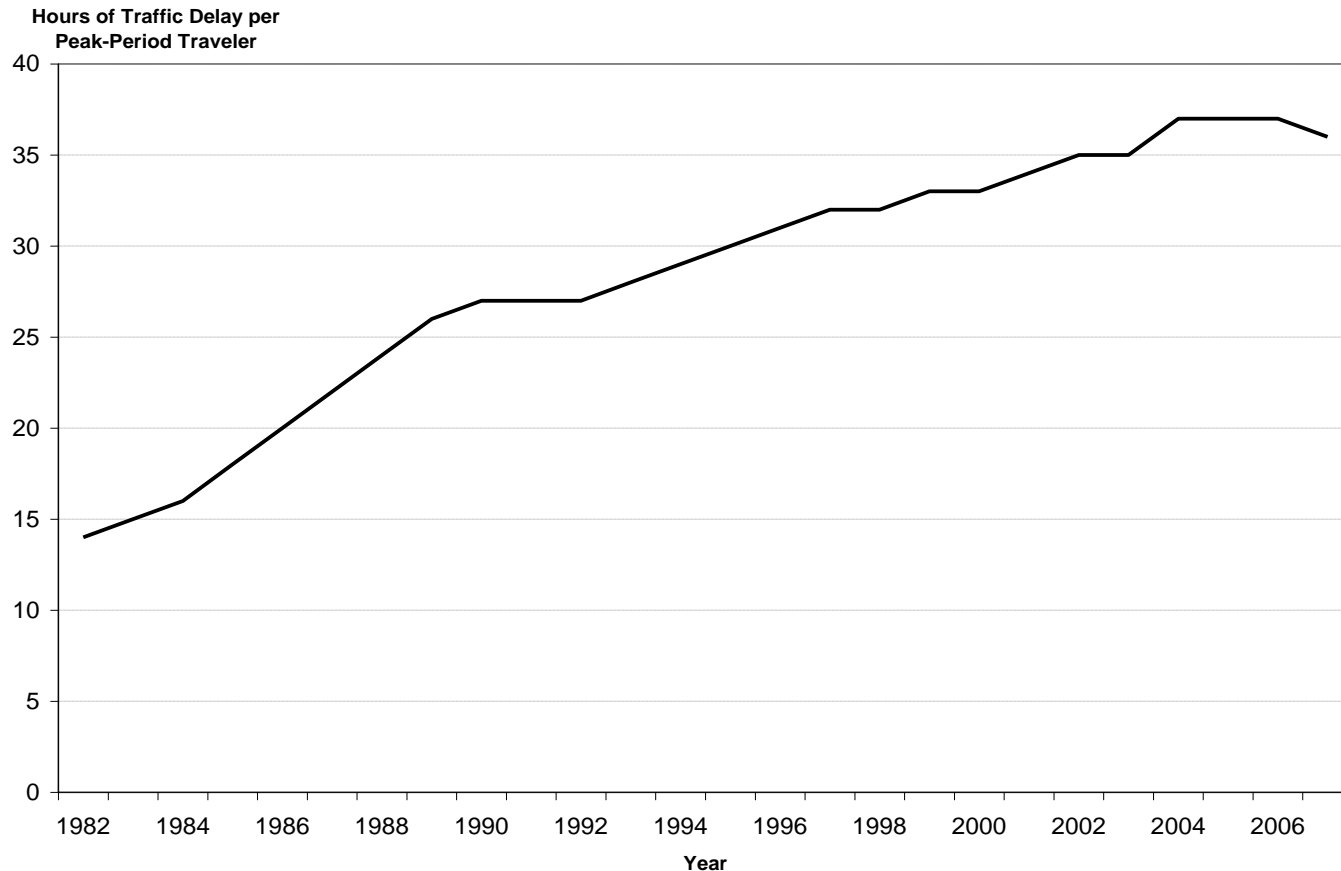
- Partial deregulation of the intercity modes—air, truck, rail, and bus—has been a success. But residual regulations have been costly
- Air Transportation
 - Exclusive use gates
 - Cabotage rights are denied
 - Price and entry regulations in international markets (passenger and cargo)

Money Costs (continued)

- Ocean Shipping and Pipelines
 - Rate regulations elevate rates
 - 1920 Jones Act raises cost of ocean transport
- Highways
 - Roads in poor condition damage cars & trucks
 - Truck size and weight limits
- Subsidies
 - Amtrak
 - Essential Air Services program

Time Costs: Road & Parking Delays

Average Annual Traffic Delay in Urban Areas, 1982-2007

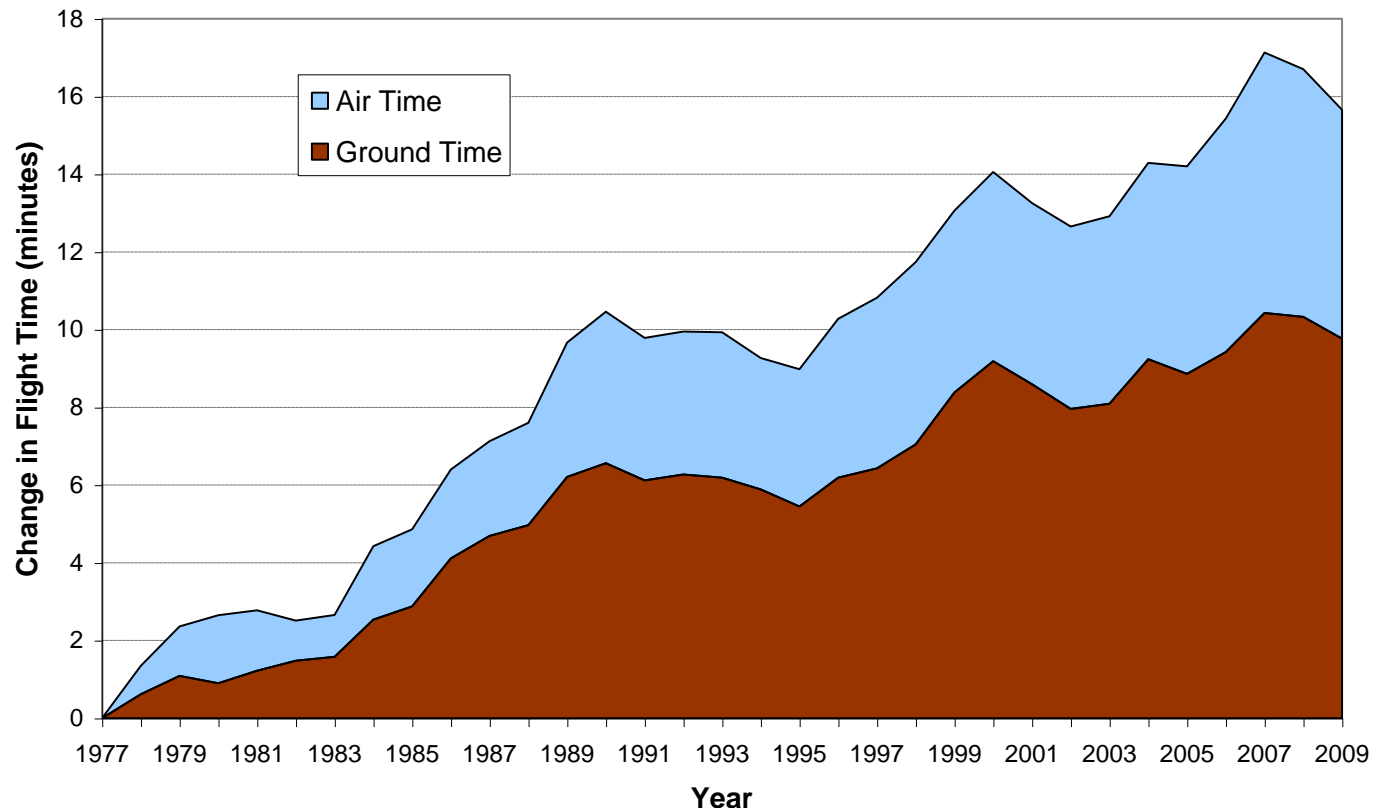


Source: Texas Transportation Institute

Time Costs: Air Travel Delays

Air Travel Delays

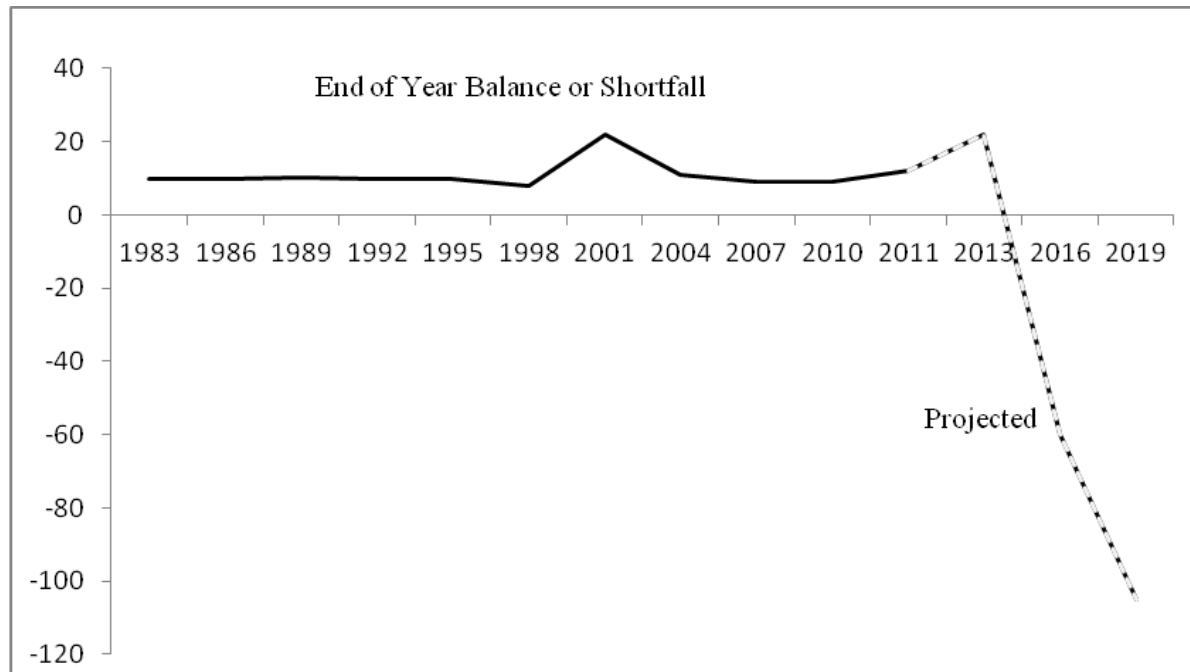
Changes in Components of Actual Flight Time Since 1977



Source: U.S. Department of Transportation, Service Segment Data and Schedule T-100, Data Bank 28DS, Domestic Segment Data. Data for 2009 are through October.

Government Expenditures: Highway Deficits

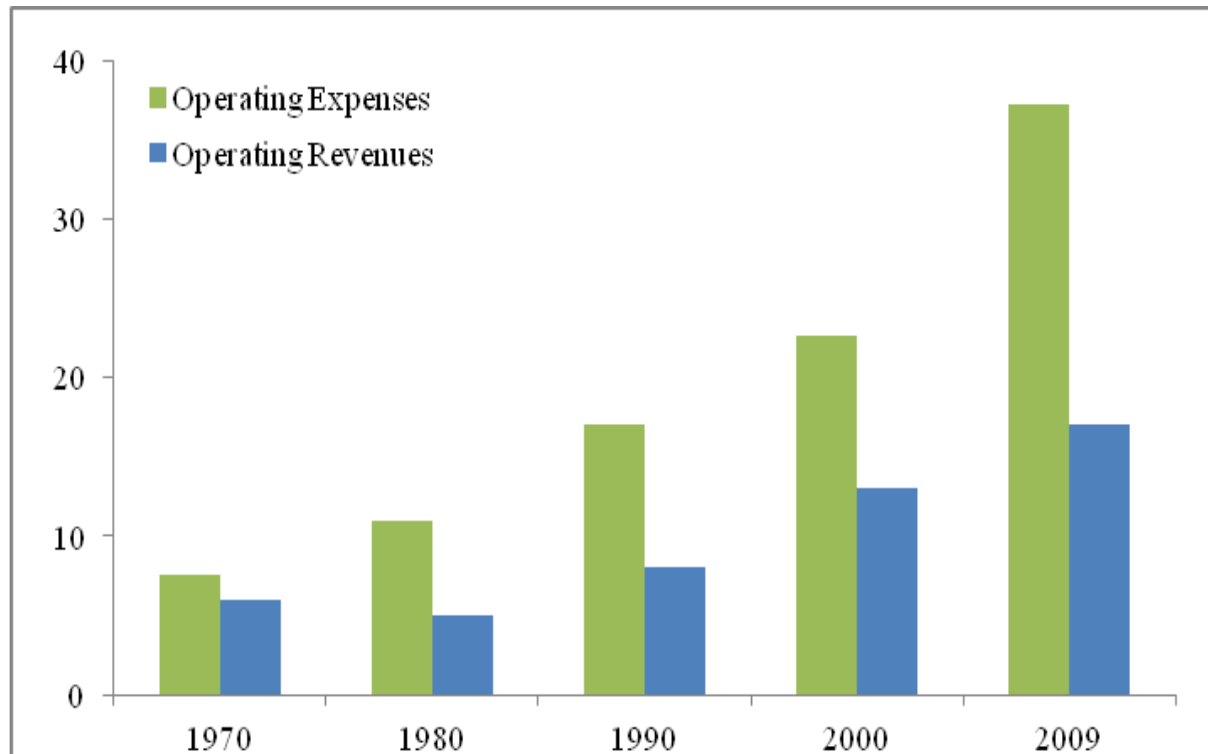
Budgetary Status of Highway Account of the Highway Trust Fund (Billions of dollars)



Source: Congressional Budget Office
<http://www.cbo.gov/ftpdocs/121xx/doc12173/05-17-HighwayFunding.pdf>

Government Expenditures: Transit Deficits

**Transit Industry Operating Revenues and Expenses
1970-2009 (Billions of dollars)**



Source: APTA, *Transit Fact Book 2011 and previous years*
<http://www.apta.com/resources/statistics/Documents/FactBook>

Are Inefficiencies Justified By Distributional Goals?

- Demonstration Projects
- Allocation of highway and airport funds
- Transit riders have above-average incomes
- Carless households gain modestly from transit

The System's Effects on Other Economic Activities

- Labor Markets
- Urban Economies
- International Trade
- Industry Competition

Labor Markets

- Job matches are a key part of employment and productivity
- The transport system affects the extent that employees can search for jobs within commuting distance and the extent that firms can attract potential applicants
- Long and unreliable commutes may prevent some employers and employees from achieving optimal matches

Labor Markets continued

- In addition, congestion means that individuals will spend less time at work and suffer a loss in productivity and income. There is not only the loss from fewer hours but the “behavioral” economics loss of less productive hours.
- Evidence: Congestion reduces employment in Los Angeles
- Evidence: Congestion also reduces productivity and wages

Urban Economies

- Urban spatial structure—effects of highways and rail systems
- Economies of agglomeration—positive effects of improved access to workplaces
- Urban land use

Urban Economies (continued)

- Congestion has contributed to sprawl and inefficient land use policies
- Instead of addressing congestion efficiently, cities have instituted minimum parking requirements, which distort land use
- Congestion limits economies of agglomeration

International Trade

- Transportation is critical to international trade flows, which provide benefits through:
 - Product variety
 - Lower prices from competition
 - Lower costs from greater scale
- Transport accounts for at least 25% of trade costs: water, land, and air modes
- But those costs are elevated by congestion and delays and regulations that raise rates

Industry Competition

- Transportation may even affect industry competition and allow firms to realize the benefits of scale
- The advantages of locational monopolies are eroded by an efficient transport system
- Less relevant for developed economies but there could be benefits from foreign competition—e.g., auto transplants

Summary

- Extensive and safe system
- Many inefficiencies attributable to poor public policy
- Annual welfare costs exceed \$100 billion
- Additional costs: lack of technological advance and adverse effects on other sectors

Policy Options: Public Sector

- Reform current policies—failed efforts
- Improve financing
 - Raise fuel tax
 - VMT tax
 - Public private partnerships
 - Infrastructure bank
- Increase infrastructure spending

Privatization

- Theory
- Empirical evidence—abroad
- US deregulation experience
- Simulations
- Experiments

Conclusion

- The US spends an enormous amount of money on transportation and the system plays a vital role in the economy
- Policymakers have been searching for the optimal mix of public and private provision of transportation since the nation's founding
- The search needs to continue—a shift to the private sector may be socially desirable