Alternative Approaches to Funding Highways

Presentation to the U.S. Chamber of Commerce

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CBO’s Report on Funding Alternatives for Federal Spending on Highways

- Focuses on fuel and VMT taxes
- Uses facts and estimates from literature
- Provides an economic framework
- Requested by the Chairman of the Senate Budget Committee
Highway Funding Goals

- Efficiency
- Equity
- Privacy
Goal 1: Efficiency

Maximize benefits of road travel net of total costs, including

• Costs of building and maintaining roads
• Costs of using roads
• Costs of the funding system itself (direct or indirect)
Comparing Fuel and VMT Taxes: Incentives for Efficient Road Use

■ Prescription for efficiency: Charge people for *the marginal cost* of their use or consumption of a good or service
Estimated Mileage- and Fuel-related Costs

- **Rural Passenger Vehicles**
  - Mileage-Related Costs: Low
  - Fuel-Related Costs: Low

- **Urban Passenger Vehicles**
  - Mileage-Related Costs: Moderate
  - Fuel-Related Costs: Low

- **Rural Trucks**
  - Mileage-Related Costs: High
  - Fuel-Related Costs: Moderate

- **Urban Trucks**
  - Mileage-Related Costs: Very High
  - Fuel-Related Costs: High

All costs are converted to cents per mile.
Charges That Maximize Efficiency of Road Use

- Charge for both VMT and fuel use
- Total charges 3 to 8 times higher than today
- Full marginal-cost pricing on entire road network would yield ~ $500 billion per year, 3 times the current total construction and O&M spending (~ $160 billion per year)
- Efficient VMT charge: uniform “base” component + (potentially much larger) “congestion” component that varies by time and place
- Congestion charges could save ~$40 billion per year in construction, $20 to $50 billion per year in time and fuel
Would Implementation Costs Outweigh the Benefits of VMT Taxes?

- Costs of a nationwide system very uncertain; available evidence is limited
- Estimated benefits of $60 to 90 billion per year from congestion pricing leave a lot of room for implementation costs
- What about less comprehensive VMT taxes?
Goal 2: Equity

Fair treatment for

• Different groups of users?
• General taxpayers?
• People with low incomes?
• Rural residents?
• “Donor” states?
• All of the above?
Equity Implications

- Both fuel and VMT taxes satisfy “user pays” criterion
- Both fuel taxes and VMT taxes other than congestion charges impose larger relative burdens on
  - Households that drive more (e.g., rural)
  - Lower-income households
- Fuel taxes also impose larger relative burdens on households using lower-MPG vehicles (sports cars, SUVs, pickup trucks, old cars)
- Congestion charges shift tax burden toward (mostly urban) households that drive in congested conditions
Goal 3: Privacy

- Implications for efficiency and equity
- But core issue is respecting individuals’ rights
Options for Addressing Privacy Concerns

1. Limit the information used
2. Use detailed information but do all charge calculations in-vehicle
   • Store info internally for specified time or
   • Deduct charges in real time from prepaid debit card
3. Use detailed info; calculate charges externally but
   • Anonymously or
   • Using a private company
4. Ease into VMT system; let private firms bundle other services
5. Allow “safety valve” opt-out alternative(s) for those most concerned about privacy
Summary Comparisons

Compared to fuel taxes, VMT taxes

• Provide better incentives for efficient road use
• Are no worse on some interpretations of equity and better on others
• Have higher (and more uncertain) implementation costs
• Raise privacy concerns (for congestion charges)
Two Key Questions for a System of VMT Charges

■ What should the system do?
  • Just raise revenue?
  • Reduce pavement damage?
  • Reduce specific congestion problems?
  • Maximize efficiency of road use?

■ Who should lead the system’s introduction?
  • The federal government?
  • The states?
  • The private sector?