

School of Urban Studies & Planning  
USP510: Transportation Finance  
Off. Hrs.: Tues. & Thurs. 3:00-4:00  
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## Syllabus

The objective for this course is to understand the various methods to finance transportation investment, operation, and maintenance. There are many ongoing controversies about the best methods to raise revenue for these purposes. We will start by reviewing existing methods to fund the transportation system and the “needs” for revenue and historical development of road finance. Then we will consider the various issues relating to alternative methods of finance. Congress created two commissions to investigate the issues and make recommendations for future finance. The first one is the National Surface Transportation Policy and Revenue Study Commission, and their report is titled *Transportation for Tomorrow*. The second one is the National Surface Transportation Infrastructure Financing Commission, and their report is titled *Paying Our Way: A New Framework for Transportation Finance*. We will refer to them as the Policy and Finance Commissions. The report from the Finance Commission is more relevant to this course, and it will serve as our basic text for identifying issues. It received limited hardcopy distribution, so I have put it and many other relevant readings on a cd which will be distributed in class. Many related materials and a free hard copy are available at

<http://financecommission.dot.gov/> . The Policy Commission report is also included on the disk.

As you will see, there is an immense amount of current discussion relating to methods of finance. The first reading or two under the topic heading represent the required reading. The other readings are related to the topic if you want further information or as a starting point for your papers. Most of the required readings are from *Paying Our Way*. Another good source for current information is <http://www.innobriefs.com/> .

There will be some exercises, a short paper, and a term project. The short paper will be a review of some issue related to the current financing of transportation or an extended evaluation of some form of finance. You get to choose the topic, but I must approve it before you start. Some examples of issues would be: evasion of fuel taxes, equity of existing finance, Congressional earmarks, or alternate forms of finance, such as system development charges or infrastructure banks. Be creative; I want each person to find a distinct topic. The term project will be a review of some issue related to innovative finance. Examples would be: administrative cost of alternative revenue systems, potential for fraud or evasion, transition from one system to another, ability to forecast revenue, or equity of different finance methods. The first papers are due on February 1. The term project presentations will be on the last day of class and during finals period. The paper is due at the last class meeting (during finals period). The exercises and short paper will count half of the grade and the term project and related presentation will be the rest.

I intend to cover the material in approximately the order shown below, but some topics will take more than one week and others less.

## **I. (1/4/11) Overview**

*Paying Our Way*, “Summary and Recommendations,” pp. 1-15, and “Setting Course.” pp. 20-31. Springer, Darren (February 2007), *State Policy Options for Funding Transportation* NGA Center for Best Practices.

Strathman, James and Elizabeth Simmons, “Financing Mechanisms for Capital Improvements: Interchanges,” Oregon Department of Transportation Report SR 687 (March 2010).

### **Recommended Reading on disk:**

“Transportation for Tomorrow” (Policy Commission Report), “Volume I: Recommendations” pp. 1-68.

### **Recommended Reading not on Disk:**

Dean, Thomas B., “Policy Versus the Market: Transportation’s Battleground,” *Transportation Research Record No. 1839* (National Academy Press, 2003), pp. 5-22.

## **II. (1/11/11) Level and Distribution of Spending**

*Paying Our Way*, “The Route We Are On: The Widening Investment Gap,” pp. 33-61.

### **Recommended Readings on disk:**

Congressional Budget Office (August 2007) *Trends in Public Spending on Transportation and Water Infrastructure, 1956-2004*.

Urban Land Institute (2007), *Infrastructure 2007: A Global Perspective*

Government Accountability Office (July 2007), “Strategies Are Available for Making Existing Road Infrastructure Perform Better”

### **Recommended Reading not on disk:**

Flyvberg, Bent et al., “Underestimating Costs in Public Works Projects: Error or Lie?” *APA Journal* 68:3 (Summer 2002), 279-295.

## **III. (1/18/11) Evaluation Of Funding Sources**

*Paying Our Way*, “Transportation Funding At A Crossroads: Existing Sources And New Revenue Options,” pp. 63-98.

### **Recommended Reading on disk:**

TRB (2002), “Resource Papers for the 3<sup>rd</sup> National Transportation Finance Conference.”

## **IV. (1/25/11) No Class: Transportation Research Board Conference**

## **V. (2/1/11) Fuel Taxes**

*Paying Our Way*, “Paying by the Gallon: Motor Fuel Taxes, pp. 99-110

### **Recommended Readings on disk:**

Transportation Research Board (2006), *Special Report 285: The Fuel Tax and Alternatives for Transportation Funding*

NCHRP Report 623 (2008), *Identifying and Quantifying Rates of State Motor Fuel Tax Evasion*

## **VI. (2/8/11) Freight Use of Roads and Impact on Cost**

*Paying Our Way*, "Paying for the Ton: Freight Related Charges," pp. 111-124.

### **Recommended Readings on disk:**

Federal Highway Administration, U.S. Department of Transportation (January 2007), *Financing Freight Improvements*

EcoNorthwest, (2007), *Highway Cost Allocation Study: 2007-2009 Biennium*

Fritelli, John (2010), "Harbor Maintenance Trust Fund Expenditures," Congressional Research Service report to Congress.

## **VII. (2/15/11) Alternative Road Finance Using Pricing**

*Paying Our Way*, "Paying by the Mile: Tolling and Mileage-Based User Fees," pp. 125-160.

### **Recommended Readings on disk:**

CBO (March 2009), *Using Pricing to Reduce Traffic Congestion*.

Rufolo, Anthony M. and Robert L. Bertini (Fall 2003), "Designing Alternatives to State Motor Fuel Taxes," *Transportation Quarterly* 57:1, 33-46.

Arnold, Robert et al. (2010), "Reducing Congestion and Funding Transportation Using Road Pricing in Europe and Singapore," Federal Highway Administration Report FHWA-PL-10-030.

Gilroy, Leonard and Amy Pelletier, (2007) Reason Foundation Policy Brief 59: *Hot Lanes: Frequently Asked Questions*

Samuel, Peter, (May 2007) Reason Foundation Report: *The Role of Tolls in Financing 21<sup>st</sup> Century Highways*

Prozzi, Yolanda et al. (2009), "Actual vs. Forecasted Toll Usage: A Case Study Review," Texas Department of Transportation CTR Technical Report 0-6044-1.

### **Recommended Readings not on disk:**

Prud'homme, Remy and Juan Pablo Bocarejo, "The London congestion charge: a tentative economic appraisal," *Transport Policy* 12 (2005) 279-287.

Mackie, Peter, "The London congestion charge: a tentative economic appraisal, A comment on the paper by Prud'homme and Bocarejo," *Transport Policy* 12 (2005) 288-290.

Taylor, Brian D., "Rethinking Traffic Congestion," *Access* 21 (Fall 2002), 8-16.

Mannville, Michael and Shoup, Donald, "People, Parking, and Cities," *Access* 25 (2005), 2-8.

## **VIII. (2/22/11) Alternative Road Finance Using the Private Sector**

*Paying Our Way*, "Accelerating the Trip: Financing Programs and Policies," pp. 161-190.

### **Recommended Readings on disk:**

Transportation Research Board (2006), *NCHRP Synthesis 364: Estimating Toll Road Demand and Revenue*

Samuel, Peter, (2007) Reason Foundation Policy Brief 60: *Leasing State Toll Roads: Frequently Asked Questions*

Gilroy, Leonard et al. (2007), Reason Foundation Policy Brief 58: *Building New Roads Through*

*Public-Private Partnerships: Frequently Asked Questions*  
Representatives Oberstar and DeFazio (2007), *Public Interest Concerns of Public-Private Partnerships*

### **IX. (3/1/11) Transit Finance**

Government Accountability Office (July 2007), "Flexible Funding Supports State and Local Transportation Priorities and Multimodal Planning"

#### **Recommended Readings on disk:**

Lave, Charles, "It Wasn't Supposed To Turn Out Like This: Federal Subsidies and Declining Transit Productivity," *Access* 5 (1994), 21-25.

GAO (March 2009), *High-Speed Passenger Rail*.

Small, Kenneth A., "Road Pricing and Public Transit," *Access* 26 (Spring 2005), 10-15.

Cervero, Robert, "Informal Transit: Learning from the Developing World," *Access* 18 (Spring 2001), 15-22.

### **(3/1/11) Equity and Efficiency**

Small, Kenneth A., "The Value of Value Pricing," *Access* 18 (Spring 2001), 17-20.

#### **Recommended Readings on disk:**

California Department of Transportation (June 2004), California Life-Cycle Benefit/Cost Analysis Model

TRNews 261 (March-April 2009), "Equity Implications of Financing the Nation's Surface Transportation System.

FHWA (2009), *Income-Based Equity Impacts of Congestion Pricing*,

#### **Recommended Reading Not on disk:**

Spielberg, Frank, and Phil Shapiro, "Slugs and Bodysnatchers: Adventures in Dynamic Ridesharing," *TR News* 214 (May-June 2001)20-23.

### **X. (3/8/11) Finance Commission Recommendations and Student Presentations**

*Paying Our Way*, "The Path Forward: Policy Recommendations," 205-224.

Sorenson, Paul et al. (2010), "System Trials to Demonstrate Mileage-Based Road Use Charges," NCHRP Web Only Document 161.

### **XI. (3/15/10) Conclusion of Student Presentations and Papers Due**