

PLAN 738 Transportation Policy

Fall 2008, T,R 12:30-1:45

Instructor: Daniel A. Rodríguez

Office: New East 317

Office Hours: Friday, 9:30-11:30AM or by appointment

Email: danrod@unc.edu

Telephone: 962-4763

Description

With shifting political priorities and accumulating scientific evidence, the role of governments in transportation policy-making has changed significantly over the past three decades. Concepts such as congestion pricing, individualized car insurance, private toll roads, and for-profit mass transportation are beginning to be seriously considered as elements of a broad transportation policy both in the developed and the developing world. Meanwhile, local issues regarding the appropriateness of specific investments, their impacts on specific subpopulations, levels of travel demand, and transportation-related environmental concerns continue to be dominant themes of grass-roots politics. At the local and federal level, transportation continues to play a central role in concerns about sustainability, from local food buying to peak oil and climate change.

This course examines surface transportation from a public policy perspective. It is divided into four parts. Part 1 provides an introductory review of the role of government in transportation. Part 2 covers how transportation decisions are evaluated, including the vital role that planners play in conducting technical analyses. The emphasis is on understanding how technical tools are used for project evaluation, whereas the mechanics of the tools are covered in other courses (PLAN 739 and 785). Part 3 covers policy responses to congestion problems. Finally, Part 4 covers transportation's role in achieving environmental and social sustainability.

Objectives

The course introduces students to the current transportation policy discussions and methodological approaches for evaluating and making policy decisions. Students will be able to learn from the policy experience of many countries in areas such as:

- The role of government in transportation markets
- Transportation infrastructure financing
- Evaluation of transportation investments
- Transportation's role in sustainability and peak oil
- Approaches to address traffic congestion
- Market and non-market approaches for addressing mobile source pollution
- Environmental justice analyses in transportation

Format

This course combines lectures and seminar-style discussions. Active student participation is expected. Arrive prepared to engage your colleagues and me in active discussion. Several in-class examples will help in understanding and implementing the analysis tools covered. By the end of the class students are expected to write and present to their colleagues a transportation policy white paper.

Requirements

Students will prepare two group assignments, one individual homework assignment, and an individual final paper. I encourage you to begin thinking about a transportation policy problem early in the semester. Additional handouts will describe assignments in detail.

	Assignment	Due Date	% of Total
1	Group Presentation	9/16	10%
2	Individual	9/18	15%
3	Group	9/30	10%
4	Individual	10/14	20%
5	Individual (peer review)	11/11	15%
6	Final paper	11/25	25%
7	Oral presentation of paper to class	11/20 & 25	5%
	<i>Total</i>		100%

Meeting Times and Location

Monday: 12:30-1:45 PM, New East Hall 002

Required Textbook

All readings are available electronically through Blackboard. Look for the author's last name and, if necessary, year of publication.

Books on Reserve

Two hard copies of the course readings are available at Chapin Planning Library (one in a binder and the other unbound). The following additional books are on reserve in Chapin Planning Library. Some of the books contain readings that we use in the class, but those readings also are available in blackboard. The purpose of these reserve readings is to provide additional material to individuals with particular interests. Feel free to review at your discretion.

Button, K. and Stough, K. (Eds.) Transport Policy (1998). Northampton (MA): Edward Elgar Publishing.

Goddard, S. (1994). Getting There: The Epic Struggle Between Road and Rail in the American Century. New York: Basic Books.

Gomez-Ibañez, et al (Eds.). (1999) Essays in Transportation Economics and Policy –A Handbook in honor of John R. Meyer. Washington DC: Brookings Institution Press. (“Essays” from hereon).

Sperling, D. and Cannon, J.S. eds., (2007) Driving Climate Change, Academic Press, San Francisco, CA.

MEETING DATES AND TOPICS

No.	Date	Day	Topic	Comment
1	8/19	T	Course presentation and introduction to policy analysis	
2	8/21	R	Transportation markets	
3	8/26	T	Transportation policy trends	
4	8/28	R	Transportation policy trends + streamlining	
5	9/2	T	Transportation financing	Assignments 1 & 2 out
6	9/4	R	Evaluation of transportation projects	
7	9/9	T	Evaluation of transportation projects	
8	9/11	R	Resource-based evaluation: Value of time	
9	9/16	T	Health impact assessment of transportation projects	Assignment 1 due
10	9/18	R	Transportation investments and economic Development	Assignment 2 due Assignment 3 out
11	9/23	T	Motorization	
12	9/25	R	Congestion pricing +	Assignment 4 out
13	9/30	T	Congestion pricing in world cities	Assignment 3 due
14	10/2	R	Land use solutions to congestion	
15	10/7	T	Travel demand management	
16	10/9	R	Transportation and air quality –land use solutions again?	
17	10/14	T	Transportation and energy	Assignment 4 due
18	10/16	R	*****Fall Break*****	*****
19	10/21	T	Transportation and climate change	
20	10/23	R	Policies for improving air quality and mitigating climate change	
21	10/28	T	Video	
22	10/30	R	Policies for improving air quality and mitigating climate change	Assignment 5 out
23	11/4	T	The walk mode: insights and policy responses	Paper draft due
24	11/6	R	Divided Highways Video	
25	11/11	T	The walk mode: insights and policy responses	Assignment 5 due
26	11/13	R	Environmental Justice and Transportation	
27	11/18	T	Applied Environmental Justice	
28	11/20	R	Presentations	Presentations (ass. 7)
29	11/25	T	Presentations	Presentations and final papers due (ass. 6 & 7)
30	11/27	R	***Thanksgiving Break***	
31	12/2	T	Summary and wrap-up	

READINGS

Part 1: The Role of Government in Transportation Markets

Introduction to policy analysis

Yates, Frank J. (2003) *Decision Management: How to Assure Better Decisions in Your Company*, Jossey-Bass, Chapter 1.

Transportation markets

The World Bank (1996) Sustainable Transport: Priorities for Policy Reform, Washington, D.C.:International Bank for Reconstruction and Development, 85-101.

Stough, R. and Rietveld, P. (1997) Institutional Issues in Transport Systems, *Journal of Transport Geography*, 5, 207-214.

Transportation policy trends

Munnich, L. W. J. (1997) Roles and Responsibilities of Government, In The Future of Highway Transportation Systems (Ed, Research and Technology Coordinating Committee) National Research Council, Washington, D.C., 91-107.

Transportation financing

Gómez-Ibañez, J. A. Pricing (Chapter 4). In Essays.

Gomez-Ibanez, J. A. and Meyer, J. R. (1993) Going Private: The International Experience with Transport Privatization, Washington, D.C.: Brookings Institution, 1-9;145-163.

Fielding, G. J. and Klein, D. (1993) How to Franchise Highways, *Journal of Transport Economics and Policy*, 27, 113-130.

Part 2: Transportation Project Evaluation and Decision-Making

Evaluation of transportation projects

The World Bank (2005). *A Framework for the Economic Evaluation of Transport Projects*, Transport Note No. TRN-5, Washington, DC, 25 pp.

Small, K. (1999) Project Evaluation (Chapter 5) in Essays.

Dannenberg, A. L., R. Bhatia, B. L. Cole, C. Dora, J. E. Fielding, K. Kraft, D. McClymont-Peace, J. Mindell, C. Onyekere, J. A. Roberts, C. L. Ross, C. D. Rutt, A. Scott-Samuel, and H. H. Tilson. 2006. Growing the field of health impact assessment in the United States: an agenda for research and practice. *Am J Public Health* 96 (2):262-70.

Dannenberg, A. L., R. Bhatia, B. L. Cole, S. K. Heaton, J. D. Feldman, and C. D. Rutt. 2008. Use of health impact assessment in the U.S.: 27 case studies, 1999-2007. *Am J Prev Med* 34 (3):241-56.

Resource-based evaluation of transportation projects

Gunn, H. F. An Introduction to the Valuation of Travel-time Savings and Losses. In Handbook of Transport Modelling (Hensher and Button, Eds.) Pergamon, 433-448.

The World Bank (2005). Valuation of Accident Reduction, Transport Note No. TRN-16, Washington, DC, 25 pp.

Mackie, P. and Preston J. (1998) Twenty one sources of error and bias in transport project appraisal. *Transport Policy*, 5, 1-7.

General Accounting Office (2004) Surface Transportation: Many Factors Affect Investment Decisions. Report Number 04-744.

Flyvbjerg, B. et. al. (2002) Underestimating Costs in Public Works Projects. *Journal of the American Planning Association*, 68,3, 279-296.

Transportation investments and economic development

Banister, D. and Berechman, J. (2000) Transport Investment and Economic Development. Chapter 6, University College-London Press, 131-160.

Part 3: Challenges and Policy Responses to Congestion

Motorization

Troth, G. 2007. Growth in vehicle miles traveled: can we really pull it off? In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds) , 129-142, Academic Press: Boston.

Congestion Pricing

Curbing Gridlock (Ed. Committee for Study on Urban Transportation Congestion Pricing) National Academy Press, Washington, D.C., 16-26; 39-57.

Mogridge, M. J. H. (1997) The self-defeating nature of urban road capacity policy. *Transport Policy*, 4, 1, 5-23.

Levine, J. and Garb, J. (2002). Congestion Pricing's Conditional Promise: Promotion of Accessibility or Mobility? *Transport Policy*, 9, 3, 179-182.

Gomez-Ibañez, J. A. (1992) The Political Economy of Highway Tolls and Congestion Pricing, *Transportation Quarterly*, 46, 343-360.

King, D., Manville, M. and Shoup, D. (2007). The political calculus of congestion pricing, *Transport Policy* 14, 111-123.

Land use solutions to congestion

Giuliano, G. (1991) Is Jobs-Housing Balance a Transportation Issue? *Transportation Research Record*, 1305, 305-312.

Levine, J. (1998) Rethinking accessibility and jobs-housing balance. *Journal of the American Planning Association*, Vol. 64, No. 2, 133-150.

Levine, Jonathan, Aseem Inam and Gwo-Wei Torng. (2005) A Choice-Based Rationale for Land-Use and Transportation Alternatives: Evidence from Boston and Atlanta. *Journal of Planning Education and Research* 24(3):317-330.

Travel demand management

Ferguson, E. (1990) Transportation Demand Management: Planning, Development, and Implementation, *Journal of the American Planning Association*, 56.

Meyer, M. (1999) Demand management as an element of transportation policy: using carrots and sticks to influence travel behavior, *Transportation Research Part A: Policy and Practice*, 33, 7-8, 575-599

Transportation and air quality –land use solutions again?

Frank, L. D., J. F. Sallis, T. L. Conway, J. E. Chapman, B. E. Saelens, and W. Bachman. 2007. Many pathways from land use to health - Associations between neighborhood walkability and active transportation, body mass index, and air quality. *Journal of the American Planning Association* 72 (1):75-87.

Stone, B. et al 2007. Is Compact growth good for air quality? *Journal of the American Planning Association* 73 (4):404-419 (including comment).

Transportation and energy

Greene, D. L., J. L. Hopson, and J. Li. 2006. Have we run out of oil yet? Oil peaking analysis from an optimist's perspective. *Energy Policy* 34 (5):515-531.

Hirsch, R., Bezdek, R., and Wendling, R., 2007. Peaking of world oil production and its mitigation, In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds), 9-27, Academic Press: Boston.

AEA Technology Environment (2005), The validity of food miles as an indicator of sustainable development, A Report to the UK Department for Environment Food and Rural Affairs, 117 pp.
Chapter 2, Factors driving food miles 6-15
Chapter 4, The direct impacts of food transport 36-47
Chapter 5, Wider social and economic issues 48-63
Conclusions, 95-97.

Transportation and climate change

Eggar, D., 2007. Toward a policy agenda for climate change : changing technologies and fuels and the changing value of energy, In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds), 29-40, Academic Press: Boston.

DeCicco, J., Fung, F., and An, F. 2007. Carbon burdens from new car sales in the United States, In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds), 73-87, Academic Press: Boston.

Policies for improving air quality and mitigating climate change

Rajan, Sudhir C. (1996) The Enigma of Automobility –Democratic Politics and Pollution Control. Chapter 1, University of Pittsburgh Press, 3-32.

Benfield, K. and Replogle, M. (2002). The Road More Traveled: Sustainable Transportation in America – or Not. *Environmental Law Reporter*, 6, 10,633-10,647.

Burwell, D., & Sperling, D. 2007. Toward a transportation policy agenda for climate change, In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds), 253-267, Academic Press: Boston.

Leone, R. Technology-Forcing Public Policies and the Automobile. (Chapter 9) In Essays

German, 2007. Reducing vehicle emissions through cap-and-trade schemes, In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds), 89-106, Academic Press: Boston.

Fullerton, D. and S. West. (2000). Tax subsidy combinations for the control of car pollution. Working Paper 7774, *NBER Working Paper Series*. 1-35.

An, F. 2007. International comparison of policies to reduce greenhouse gas emissions from passenger vehicles, In *Driving Climate Change: cutting carbon from transportation*, Sperling, D & Cannon, JS (eds), 143-163, Academic Press: Boston.

Part 4: Transportation's Forgotten Aspects

The walk mode

Saelens, B. E., Sallis, J. F., & Frank, L. D. (2003). Environmental correlates of walking and cycling: findings from the transportation, urban design, and planning literatures. *Annals of Behavioral Medicine*, 25(2), 80-91.

Environmental justice: who benefits and who pays

Surface Transportation Policy Project and Center for Neighborhood Technology (2000), *Driven to Spend*, Washington DC, 44 pp.

Forkenbrock, D. and, L. Schweitzer (1999). Environmental justice in transportation planning. *Journal of the American Planning Association*, 65, 1, 96-112.

©2008 and previous years, Daniel A. Rodríguez