

FRE 527 (1.5) Environmental Economics and Policy: Empirical Analysis

Course Outline

Class Time: Tuesday, Thursday 12:30 -1:50 PM

Room: MacMillan 154

Instructor

Sumeet Gulati

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Office: 341 MacMillan

Office Hours: TBA

Besides my office hours, email (sumeet.gulati@ubc.ca) is the best way to get in touch with me.

Prerequisite

FRE528 Applied Econometrics, or equivalent.

Description

We study the economics of urban environmental problems: topics such as urban development, transportation, and energy. We will learn how researchers typically find data, and establish causality and draw inference in analyzing government policies. To aid with student learning of such policies, you will also write blog posts about specified policies in regions across the world.

Learning Objectives

- To understand how researchers use data to address real-world environmental issues.
- To obtain familiarity with commonly used empirical tools used to analyze the effectiveness of environmental policies.
- To become proficient in writing brief economic analysis reports describing the operation and effectiveness of environmental policies.

Class format

12 lectures of 1.5 hours, twice a week for 6 weeks.

Course Requirements (Subject to changes)

Your grade shall be determined as follows

Exams and Problem Sets	Date	Percent of Grade
Midterm	To be announced.	30 percent
Best 2 from 3 Assignments	Assigned every two weeks.	30 percent
Final Exam	To be announced.	35 percent
Class Participation	Contributions to class discussions.	5 percent

Exams

Students will take two exams: one midterm, and one final. The midterm will be held in class, lasting 80 minutes. The final exam will be comprehensive (it shall cover all material taught in class), and will last two (or more) hours. You must take exams at the scheduled times unless you have another

exam at the same time, serious illness, or an emergency. You must validate with documentation the reason(s) why you will be unable to take any exam. There shall be 3 assignments asking you to use your student blog to write about a policy issue as instructed.

Class Participation

Your participation grade depends on your contribution to class discussions. All contribution is appreciated, even questions asking me to clarify previously taught material. The sole aim of assigning a participation grade is to encourage active learning for everyone. I will ascertain and assign this part.

Assignments

The assignments will consist of blog posts addressing a specific question. These posts will enable the students to learn how researchers use data to address real-world environmental issues, to get familiar with and exposed to commonly used empirical tools used to analyze the effectiveness of environmental policies, and to practice writing brief economic summaries of environmental policy.

The class twitter discussion: Almost every day, I shall tweet links or commentary to news and blog posts via my twitter page: <https://twitter.com/sgulati>. All material I consider relevant to this course will be marked with the hashtag: #mfre. You can contribute in two ways: 1) by providing your thoughts, or links to information relevant to this course, or 2) by commenting on what I, or your classmates, tweet.

Academic Dishonesty

Please review the UBC Calendar “Academic regulations” for the university policy on cheating, plagiarism, and other forms of academic dishonesty. **Academic dishonesty will be dealt with very seriously in this course.**

Online Course Material

Available at Connect: <http://www.connect.ubc.ca>. You are required to regularly login to your course page for FRE 527. Your syllabus, course-lecture slides, additional material, announcements, assignments, and grades are available.

Course Outline and Readings

How to use this course outline: This outline is a collection of papers, and topics commonly taught in the economics of the environment. Wherever possible I provide a stable link to the paper. While some of these links will work anywhere, many of them are digitally protected requiring a subscription. You can access this material by logging in through your account at the UBC library, or on any computer connected via Ethernet on the UBC network. For some articles I do not provide a link, in that case,

please search for the article (if you search via the UBC library you will find access to its electronic version).

This outline is subject to change. I might add/replace material as the course proceeds.

1. The Urban Environment.

- a. Kuminoff N. V., V. Kerry Smith, and C. Timmins (Dec 2013), "The New Economics of Equilibrium Sorting and Policy Evaluation Using Housing Markets," *Journal of Economic Literature*, 51(4).
- b. Glaeser E. L., and M. E. Kahn (May 2010), "[The greenness of cities: Carbon dioxide emissions and urban development](#)," *Journal of Urban Economics*, 67(3), 404-418.
- c. Gilles Duranton and Matthew A. Turner (October 2011), "[The fundamental law of road congestion: Evidence from the US](#)," *American Economic Review*, 101(6):2616-52.

2. Transportation and the Environment.

a. Overview

1. Alex Anas and Robin Lindsey (2011), "Reducing Urban Road Transportation Externalities: Road Pricing in Theory and in Practice," *Rev Environ Econ Policy* 5(1): 66-88 doi:10.1093/reep/req019
2. Stef Proost and Kurt Van Dender (2011), "What Long-Term Road Transport Future? Trends and Policy Options," *Rev Environ Econ Policy* 5(1): 44-65 doi:10.1093/reep/req022
3. Werner Antweiler and Sumeet Gulati (December 2012), "Environmental Tax Policies Towards Transportation in British Columbia" *Canadian Tax Journal*, 20(12).
4. Werner Antweiler and Sumeet Gulati (August 2013) "Market-Based Policies for Green Motoring in Canada," *Canadian Public Policy*, 39 (2).

b. Gasoline Prices/Taxes:

1. Christopher R. Knittel (Winter 2012), "Reducing Petroleum Consumption from Transportation," *Journal of Economic Perspectives*, 26(1).
2. [Busse, Meghan](#), Christopher R. Knittel and [Florian Zettelmeyer](#) (2011). "Pain at the Pump: The Differential Effect of Gasoline Prices on New and Used Automobile Markets." Unpublished.

c. Fuel Efficiency Standards

1. Soren T. Anderson, Ian W. H. Parry, James M. Sallee, and Carolyn Fischer (2011), "Automobile Fuel Economy Standards: Impacts, Efficiency, and Alternatives," *Rev Environ Econ Policy* 5(1): 89-108 doi:10.1093/reep/req021.

d. Subsidizing new technology.

1. Chandra, Ambarish, Sumeet Gulati and Milind Kandlikar (September 2010), "[Green Drivers or Free Riders: An Analysis of Tax Rebates for](#)

Hybrid Vehicles." *Journal of Environmental Economics and Management*, 60 (2), 57-144.

3. Energy.
 - a. William D. Nordhaus, "Energy: Friend of Enemy", *The New York Review of Books*, <http://www.nybooks.com/articles/archives/2011/oct/27/energy-friend-or-enemy/?pagination=false>.
 - b. Richard Schmalensee (December 2011), "Evaluating Policies to Increase Electricity Generation from Renewable Energy" *Rev Environ Econ Policy*, doi:10.1093/reep/rer020.
 - c. More Material to be added later.
4. International Environmental Issues – if time permits.

Tentative Lecture Schedule (to be finalized).

1. Tues, February 24 th , 2015	The Urban Environment	Assignment 1 given.
2. Thurs, February 26 th , 2015	The Urban Environment	
3. Tues, March 3 rd , 2015	The Urban Environment	Assignment 1 due.
4. Thurs, March 5 th , 2015	The Urban Environment	Assignment 2 given.
5. Tues, March 10 th , 2015	The Urban Environment	
6. Thurs, March 12 th , 2015	Transportation	Assignment 2 due.
7. Tues, March 17 th , 2015	Midterm	
8. Tues, March 24 th , 2015	Transportation	
9. Thurs, March 26 th , 2015	Energy	Assignment 3 given.
10. Tues, March 31 st , 2015	Energy	
11. Thurs, April 2 nd , 2015	Energy	Assignment 3 due.
12. Thurs, April 9 th , 2015	Summary and Recap.	