SS387 Public Finance Syllabus
Department of Social Sciences, USMA, AY 20-1

The legitimate object of government is to do for the people what needs to be done, but which they can not, by individual effort, do at all, or do so well, for themselves - in their separate and individual capacities. In all the people can individually do as well for themselves, government aught not to interfere.

Abraham Lincoln (1854)

INTRODUCTION

This course explores the role of government in the economy. It builds upon the foundations of microeconomics and econometrics in SS382 and SS368 to train you to think about public policy *like an economist*. We will examine the two theoretical motivations for the government to intervene in the economy: (1) To improve social welfare in the case of a market failure and (2) to redistribute resources from some groups to others. In doing so, we will apply the theoretical and empirical tools of economics, while we improve our public policy knowledge base. The general learning goals for the course are:

Theory:
  (1) Compare market equilibrium with the social optimum in a given market, in the presence of a range of market failures (including externalities, public goods, and asymmetric information).
  (2) Identify the impact of specific government interventions, including multiple forms of regulation and taxation, on market equilibria, social welfare, and equity.
  (3) Use theory to predict the possible consequences of policy proposals.

Evidence:
  (4) ***Understand and apply*** common empirical approaches to answering real-world policy questions, both experimental and quasi-experiment.
  (5) ***Digest and critique*** empirical evidence (including academic journal articles).

Knowledge Base:
  (6) ***Understand*** the fundamental elements of major government interventions in the U.S. (e.g. Unemployment Insurance, Social Security, Affordable Care Act, food stamps, etc.).

CONTACT INFO

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Notes on communication/meetings:
  (1) If you'd like to meet, email me with the topic you'd like to discuss and ***all*** of the times you are available to meet for two days (ex. THURS 1300-1400, WED 1600-1700).
  (2) Please include SS387 in the beginning of subject line of all email correspondence.

(3) Do not email me with questions that are answered in this document.
(4) I do my best to respond to e-mail within 1 business day. If I don't respond within 24 hrs (not including weekends/holidays), feel free to send me a reminder.

HOW TO SUCCEED IN THIS COURSE

(1) *Come prepared* to class having completed the reading and having reviewed material from the previous class.
(2) Do not free ride off of your partner for the homeworks. You will be *very disappointed* in your knowledge of the material when you arrive at the WPR/TEE if you have not done the problems on your own.
(3) Try to solve problems on your own before asking for help. *Nothing is learned without some struggling!* That being said, do not be afraid to ask for help after you have struggled sufficiently. Ask your classmates first, and if they cannot help you, then ask me.
(4) <u>*Memorization will be of limited value in this course*</u>. *The key is to learn the tools for analyzing a problem. You can then apply these tools to various problems and situations, regardless of the specific details.*

TEXTS AND MATERIALS

Two books will be used in this course: *Public Finance and Public Policy,* **by Jonathan Gruber** (Worth Publishers) and *Mastering Metrics* **by Joshua Angrist and Jorn-Steffen Pischke** (Princeton University Press).

We will also read a series of journal articles. You can find links to these articles on Blackboard.

You should arrive to class having read the assigned material for that lesson. I will use periodic quizzes and/or individual cold calls as checks on readings, these will be focused on the starred readings.

<u>STATA is required</u> for some homeworks. In a pinch, you may use any statistical software (e.g. R, earlier versions of STATA), but all instructions and handouts will refer to STATA 14 (IC or SE). I will not provide support for those who do not use STATA.

PREREQUISITES

In general, the course will assume you have the skills acquired in SS382 Microeconomics and SS368 Econometrics I. It is your responsibility to refresh these skills if they are rusty. We will have very little time for refreshers during class.

LAPTOP/TABLET POLICY

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Laptops/tablets will not be allowed in class, except for specific classes noted in the syllabus. You may appeal for an exception to this policy with 1-2 page memo that explains your unique requirements.

COURSE GRADING

Assignment	Points	Percent
Individual Assignments		
Weekly Homeworks (10)	135	13.5%
Empirical Excercises (3)	90	9.0%
Group Projects		
Journal Article Presentation (2)	120	12.0%
Congressional Testimony	100	10.0%
Assessments		
WRITS (2)	120	12.0%
WPR	135	13.5%
TEE [Cumulative]	200	20.0%
Instructor	100	10.0%
TOTAL	**1000**	**100%**

**I will recommend *failure* to the department head in both of the following cases:
(1) You fail both WPRs and the TEE
(2) Your TEE grade is below 50%

HOMEWORKS

Homeworks will be posted roughly every week on Blackboard (content→Homework/Empirical Exercise). They will be **due the day before the lesson listed on the schedule at 1800**. You may work with up to two partners, but you must turn in your own work.

Submit via Blackboard as <u>a single PDF</u> document.
- Your answers should be typed or neatly written. Keep it legible, clear, and concise, and include the work required to reach your answer.
- If you prefer to write your answers, scan them to a PDF (e.g. using Adobe Scan app). Save as a single document.

- Your submission should include ONLY your answers, **do not attach text of the problems themselves** (I know what they are).

NO CREDIT FOR LATE HOMEWORKS.

YOUR LOWEST HOMEWORK GRADE WILL BE DROPPED (AT THE END OF THE SEMESTER).

I encourage you to take the homeworks seriously as they are by far the best way of learning the material and studying for the exams.

Homeworks will be worth 15 points. 2/3 will be a holistic grade of the answers submitted based on effort and correctness. 1/3 will be based on a short in-class quiz that is similar to one of the homework questions (but not exactly the same).

I **will not** provide detailed feedback on the homework, but I will provide answer keys for you to examine for yourself any spots where you went off track. They will be available at 2000 on the day the homework is listed on the schedule.

EMPIRICAL EXERCISE

Periodically throughout the semester you will have an empirical exercise rather than a typical homework. These will involve using STATA to merge, manipulate, and analyze datasets and interpret the empirical results.

You may work with up to two partners, but you must turn in your own work.

Due dates/times are listed in the schedule. Submit typed answers (with any associated results) via Blackboard as a PDF. Print your associated STATA do files to PDF and include these as separate files.

INSTRUCTOR POINTS

Instructor points will be determined by your preparation for class, the frequency of your participation in class, and the *quality* of your participation in class. Preparation will be assessed occasionally based on questions associated with prior lessons or associated with assigned readings.

GROUP PROJECT: JOURNAL ARTICLE PRESENTATION

Twice during the semester you (in a group of 2-3) will take a deep dive into an important academic journal article and present it to the class along with a summary memo that will be sent out prior to the presentation. You should begin working on this project **WELL IN ADVANCE** of the presentation date.

If you are likely to be absent on the day your presentation is assigned, please notify me immediately so that I can rearrange groups.

GROUP PROJECT: CONGRESSIONAL TESTIMONY

Once during the semester you (in a group of 2-3) will act as an expert advocating a policy approach to a given problem. For each policy problem there will be two teams attempting to convince the committee (the rest of class and Dr. Smith) to support their proposal rather than their opponent's. Prior to testimony both groups will produce and disseminate a white paper outlining their proposal to the rest of the class. The testimony will consist of an opening statement presentation (with visuals) from both teams, a Q&A period where both sides respond to questions from the committee and each other, and closing remarks from each side. The winning team will be the one that shifts the positions of the committee in their direction.

WRIT/WPRs

There will be one WPRs and two Writs. The emphasis will be on understanding and synthesizing the material rather than regurgitating memorized material. There **will be** questions that you have not seen previously; however, throughout the block you will have learned the tools needed to attack these problems, and this is your chance to apply them. If you will miss a WPR/Writ for any reason, *you must notify the instructor 72 hours prior and make up the assessment before the assigned test day.*

SS387 Course Schedule (AY 20-1)

Schedule is subject to change. Assigned readings for each lesson in a block will be assigned prior to the beginning of that block.

Lesson	Date	Day	Material	Lesson Objectives	Reading	Assignment
1	20-Aug	Tues	Overview / Intro to Causal Inference	1) When should the government intervene in the economy? 2) How can the government intervene? 3) Direct vs. Indirect effects of interventions 4) Understand correlation vs. causation 5) Understand internal vs. external validity 6) Understand concept of counterfactual 7) Understand concept of selection bias	Causal Inference Notes*	
2	22-Aug	Thurs	Causal Inference: RCT / Regression / DD	1) Understand and apply the Rubin model of causal inference. 2) Understand intuition behind RCT/regression/DD empirical strategies. - When is it appropriate to use this model? - What is the counterfactual? - What are the assumptions necessary for the estimate to be interpretted as causal?	Angrist and Pischke Ch2*	
3	26-Aug	Mon	Causal Inference: Fixed Effects / IV / RD	1) Understand intuition behind Fixed Effects/IV/RD empirical strategies. - When is it appropriate to use this model? - What is the counterfactual? - What are the assumptions necessary for the estimate to be interpretted as causal?	Angrist and Pischke Ch5.2, Ch3.1, and pp132-133*	HW #1
4	29-Aug	Thurs	Writ/ In-Class Empirical Exercise		*Bring LAPTOP (with STATA)*	Empirical Exercise #1 (Due 9/3 at 1800)
5	5-Sep	Thurs	Income Distribution / Poverty	1) In broadstrokes, how has income inequality changed over the past century? 2) How is the U.S. federal poverty rate measured? What are the potential problems with this measurement? How do these problems affect conclusions regarding changes in poverty over the last 50 years?	Stiglitz Ch2* and Mankiw, 2013* (Additional Reference: Stiglitz Social Choice)	
6	11-Sep	Tues	Social Safety Net	1) Explain the fundamental tradeoffs inherent in means-tested welfare programs. 2) Show graphically which benefit programs are more likely to reduce deep poverty or encourage employment. 3) How can benefit programs be changed to reduce moral hazard? What are the possible negative consequences of these changes?	Gruber Ch17.3-17.5 (Optional: PBS Frontline "Poor Kids")	HW #2 (See Derivatives/Constrained Optimization Handouts for refresher)
7	13-Sep	Fri	Social Safety Net	1) In broad strokes, describe how the U.S. social safety net has changed over the last 30 years. What are the advantages and disadvantages of the new safety net? 2) What effects of EITC expansions that researchers have found? What empirical strategies have they used?	Hoynes and Patel (2018)* NYTimes Retro Report	
8	17-Sep	Tues	Tax Incidence	1) Define: payroll tax, individual income tax, corporate income tax, wealth taxes (e.g. property tax, estate tax), consumption tax (e.g. sales tax, excise tax), tax deduction vs. credit 2) Understand the difference between marginal and average tax rates. How have tax rates changed over the last 50 years? 3) Define progressive, proportional, and regressive tax. What forms of taxation in the U.S. fit into these categories? 4) How do the federal sources of tax revenue differ from the state/local sources? 5) Define excise tax vs. sales tax, statutory incidence vs. economic incidence 6) Derive graphically/analytically the incidence of a tax in a given market. What factors determine who bears the burden of the tax?	Gruber Ch19.1-19.3 (+Appendix) (Additional Reference: Hyman Ch11)	HW #3
9	19-Sep	Thurs	Tax Incidence	1) Show graphically/analytically the incidence of a tax in a (a) factor market and (b) market with price controls. 2) Define partial vs. general equilibrium tax incidence 3) Show graphically the general equilibrium incidence for a tax in a given market. 4) What factors affect the general equilibrium incidence analysis?	Crawley and Frisvold (2017)*	
10	24-Sep	Tues	Tax Efficiency	1) Derive graphically/analytically the deadweight loss of a tax in a given market. 2) What factors determine the magnitude of the deadweight loss due to a tax?	Gruber Ch20 (+Appendix) (Additional Reference: Hyman Ch11)	Empirical Exercise #2 (Due 9/24 at 1800)
11	26-Sep	Thurs	Tax Efficiency	1) Derive Ramsey Rule for optimal commodity taxation. What are the real-world implications of this rule? What are the equity implications? 2) Show graphically how tax-benefit linkages can reduce the deadweight loss from a tax.	Gruber, 1994*	
12	30-Sep	Mon	Article Presentation 1/2/3/4/5	1) What research questions are the authors seeking to answer? Why do we care? 2) What empirical approach is used? What is the implied counterfactual of this approach? What assumptions are required? 3) What data is used? 4) What are the main results?		HW #4
13	4-Oct	Fri	**DROP**			
14	8-Oct	Tues	WPR1			

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Lesson	Date	Day	Material	Lesson Objectives	Reading	Assignment
15	10-Oct	Thurs	Externalities	1) Define/understand the concept of an externality and distinguish between different types of externalities. 2) How can externality problems be resolved with/without government intervention? Identify situations where government intervention is more/less likely to be necesary. 3) Graph market for good with an externality, identifying PMB, SMB, PMC, SMC, social optimum, competitive equilibrium, and DWL.	Gruber Ch5.1-5.3	
16	15-Oct	Tues	Externalities (Constrained Optimization)	1) Solve two agent optimization problem (with externality) for social optimum and competitive equilibrium. 2) Adjust optimization problem to show the result of a tax or coasian bargaining. 3) Compare efficiency of options for government intervention in general case, case with multiple firms with different costs, and case where true costs are uncertain. 4) Graph the market for pollution reduction in a given scenario, identifying PMB, SMB, PMC, SMC, social optimum, competitive equilibrium, and DWL.	Gruber Ch5.4-5.5, 6.1	HW #5
17	17-Oct	Thurs	Externalities (Pollution Regulation)	1) Compare efficiency of options for government intervention in general case, case with multiple firms with different costs, and case where true costs are uncertain. 2) Define rival, excludable, public good, private good, nash equilibrium, free rider problem. 3) How does a public good differ from a private good in (a) construct of SMB from individuals' PMB curves, (b) social efficiency maximizing condition? 4) Solve two agent optimization problem (with public good) for social optimum. 5) Solve two agent optimization problem (with public good) for competitive equilibrium by finding best response functions and solving for nash equilibrium. Find resulting DWL.	JEP Metcalf (2016)*	
18	21-Oct	Mon	Public Goods	1) How is the competitive equilibrium level of public good provision affected when (a) the government provides the public good, (b) agents differ in their income, (c) agents differ in their taste for the public good. 2) Adjust model to account for charitable giving using altruistic or warm glow utility functions.	Gruber Ch7	HW #6
19	25-Oct	Fri	Median Voter / Tiebout Sorting	1) Explain median-voter theorem and its assumptions. 2) Explain tiebout theorem and its implications and assumptions. 3) What are the arguments for/against government intervention in the education market?	Tiebout (1956)*	
20	29-Oct	Tues	Article Presentations 6/7/8/9/10	1) What research question is the author seeking to answer? Why do we care? 2) What empirical approach is used? What is the implied counterfactual of this approach? What assumptions are required? 3) What data is used? 4) What are the main results?		HW #7
21	31-Oct	Thurs	WRIT/ Preferences with Uncertainty	1) Define: expected utility, consumption smoothing, actuarially fair premium, zero profit condition, full insurance, risk premium, risk averse/neutral/loving.		
22	5-Nov	Tues	Insurance	1) Graph insurance market using Akerlof model (MC, Demand, AC, and equilibrium premium/quantity of insurance) under various assumptions. 2) Explain how MC, Demand, and AC curves are determined and what DWL represents. 3) Predict the effect of government interventions graphically.	JEP Einav and Finkelstein (2011)*	
23	7-Nov	Thurs	Social Insurance/U.S. Healthcare System	1) Know basic program details (financing, eligibility, benefits) for Unemployment Insurance, Disability Insurance, and Worker's Compensation. 2) Explain the tradeoff between consumption smoothing and moral hazard 3) What determines the severity of moral hazard? How does this play out in different types of insurance? 4) Define deductible, co-pay, co-insurance, risk pooling, uncompensated care, pre-existing conditions exclusions. 5) Graph simple model of patient health care utilization for various health insurance plans. 6) What does the U.S. healthcare system do well? What does it do poorly? 7) From an efficiency perspective, why should we care about the uninsured? 8) Why do employers provide health insurance?	UI/DI/WC Fact Sheet Gruber Ch15 (Optional: PBS Frontline "Sick Around America", "Sick Around the World")	
24	12-Nov	Tues	Affordable Care Act	1) Describe the problems with the non-group insurance market prior to the ACA. 2) Explain the main components of the affordable care act. 3) Know basic program details (financing, eligibility, benefits) for medicare and medicaid.	Frean, Gruber, and Sommers (2018)* The Youtoons video	HW #8
25	15-Nov	Fri	Congressional Hearing 1/2	1) What are the important benefits and costs to this policy? 2) What evidence supports this policy approach? What evidence does not?		

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26	19-Nov	Tues	Congressional Hearing 3/4	1) What are the important benefits and costs to this policy? 2) What evidence supports this policy approach? What evidence does not?		
27	26-Nov	Tues	Social Security	1) Know program details of Social Security: financing, eligibility, benefit calculation, benefit timing (e.g. know AIME, PIA, FBA, EEA). 2) Define Social Security wealth, annuity, myopia, for Social Security. 3) Graph/solve 2 period model of individual's saving decision under rational and myopic assumptions. 4) Explain the difference between funded and unfunded retirement systems. Who are the winners/losers in each? What determines which gets a better return?	Social Security Fact Sheet JEP Social Security Reform Symposium pg. 1-9 (Hines and Taylor 2005).	
28	2-Dec	Mon	Social Security	1) What are the problems facing social security? 2) What are possible reforms that could solve these problems?	JEP Social Security Reform Symposium pg. 10-55 (Diamond and Orzag 2005, Feldstein 2005)*	HW #9
29	6-Dec	Fri	Article Presentations 11/12/13/14/15	1) What research question is the author seeking to answer? Why do we care? 2) What empirical approach is used? What is the implied counterfactual of this approach? What assumptions are required? 3) What data is used? 4) What are the main results?		
30	10-Dec	Tues	Review			HW #10 Empirical Exercise #3 (Due 12/13 at 1800)
TBD: 12/16 - 12/21			TEE			

*Focal readings.