Introduction
(Chapter 1, Gruber textbook)

131 Undergraduate Public Economics
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PUBLIC ECONOMICS DEFINITION

Public Economics (or public finance) = study of the Role of the Government in the Economy

Government is instrumental in most aspects of economic life:

1) Government in charge of huge **regulatory** structure

2) **Taxes:** governments in advanced economies collect 35-50% of National Income in taxes

3) **Expenditures:** taxes fund **public goods** (infrastructure, public order and safety, defense) and **welfare state** (Education, Retirement benefits, Health care, Income support)

4) Macro-economic **stabilization** through central bank (interest rate, inflation control), fiscal stimulus, bailout policies

⇒ We pool a large share of our incomes through government
Three questions in public economics

1) When should the government intervene in the economy?

2) What is the effect of those interventions on economic outcomes?

3) Why do governments choose to intervene in the way that they do?
When should the government intervene in the economy?

1) Market Failures: Market economy sometimes fails to deliver an outcome that is efficient

⇒ Government intervention may improve the situation

2) Redistribution: Market economy generates substantial inequality in economic resources across individuals

⇒ People willing to pool their resources (through government taxes and transfers) to help reduce inequality

First part of the class focuses on Redistribution

Second part of the class focuses on Market Failures
Main Market Failures

1) **Externalities:** (example: greenhouse carbon emissions) ⇒ require govt interventions (Pigouvian taxes/subsidies, public good provision)

2) **Imperfect competition:** (example: monopoly) ⇒ requires regulation (typically studied in Industrial Organization)

3) **Imperfect or Asymmetric Information:** (example: adverse selection in health insurance may require mandatory insurance)

4) **Individual failures:** People are not always rational. This is analyzed in behavioral economics, field in huge expansion (example: myopic people may not save enough for retirement)
Inequality and Redistribution

Even if market outcome is efficient, society might not be happy with the market outcome because market equilibrium might generate very high economic disparity across individuals.

Governments use taxes and transfers to redistribute from rich to poor and reduce inequality.

Redistribution through taxes and transfers might reduce incentives to work (efficiency costs).

⇒ Redistribution creates an equity-efficiency trade-off.

Income inequality has soared in the United States in recent decades, and has moved to the forefront in the public debate (Piketty’s 2014 book success, stats from Piketty-Saez-Zucman ’16).
Share of pre-tax national income going to top 10% adults

% of national income

Pre-tax

Source: Piketty, Saez, and Zucman (2018)
Top 10% national income share: pre-tax vs. post-tax

% of national income

Pre-tax

Post-tax (after taxes and adding transfers and govt spending)

Source: Piketty, Saez, Zucman (2018)
Average national income per adult: 61% growth from 1980 to 2014

Bottom 90% pre-tax: 30% growth from 1980 to 2014

Bottom 50% pre-tax: 1% growth from 1980 to 2014
What Are the Effects of Alternative Interventions?

1) **Direct Effects:** The effects of government interventions that would be predicted if individuals did not change their behavior in response to the interventions.

Direct effects are relatively easy to compute.

2) **Indirect Effects:** The effects of government interventions that arise only because individuals change their behavior in response to the interventions (sometimes called *unintended effects*).

Empirical public economics analysis tries to estimate indirect effects to inform the policy debate.

**Example:** increasing top income tax rates mechanically raises tax revenue but top earners might work less and earn less, reducing tax revenue relative to mechanical calculation.
Why Do Governments Do What They Do?

**Political economy**: The theory of how the political process produces decisions that affect individuals and the economy

**Example**: Understanding how the level of taxes and spending is set through voting and voters’ preferences

**Public choice** is a sub-field of political economy from a Libertarian perspective that focuses on **government failures**

government failures = situations where the government does not act in the benefit of society (e.g., government captured by special interests or a self-perpetuating bureaucracy)
Normative vs. Positive Public Economics

**Normative Public Economics:** Analysis of How Things Should be (e.g., should the government intervene in health insurance market? how high should taxes be?, etc.)

**Positive Public Economics:** Analysis of How Things Really Are (e.g., Does govt provided health care crowd out private health care insurance? Do higher taxes reduce labor supply?)

Positive Public Economics is a required 1st step before we can complete Normative Public Economics

Positive analysis is primarily empirical and Normative analysis is primarily theoretical
**Paternalism vs. Individual Failures**

In many situations, individuals may not or do not seem to act in their best interests [e.g., many individuals are not able to save for retirement]

Two Polar Views on such situations:

1) **Paternalism [Libertarian View]** Individual failures do not exist and government wants to impose its own preferences against individuals’ will

2) **Individual Failures [Behavioral Economics View]** Individual Failures exist: Self-control problems, Cognitive Limitations

Distinguishing the 2 views: Under Paternalism, individuals are opposed to government interventions. If individuals understand they have failures, they will support govt interventions.
Key Facts on Taxes and Spending

1) Government Growth: Size of government relative to National Income grows dramatically over the process of development from less than 10% in less developed economies to 30-50% in most advanced economies.

2) Government Size Stable in richest countries after 1980.

3) Government Growth is due to the expansion of the welfare state: (a) public education, (b) public retirement benefits, (c) public health insurance, (d) income support programs.

4) Govt spending > Taxes: Most rich countries run deficits and have significant public debt (relative to GDP), particularly during Great Recession of 2008-10.
Total tax revenues were less than 10% of national income in rich countries until 1900-1910; they represent between 30% and 55% of national income in 2000-2010. Sources and series: see piketty.pse.ens.fr/capital21c.

Source: Piketty (2014)
Federal Spending and Revenue as a Share of the U.S. Economy (1930 - 2016)

Source: OMB, National Priorities Project
DIFFERENT LEVELS OF GOVERNMENTS

US Federal govt raises about 20% of National Income in taxes

State+Local govt raise about 10% of Nat. Income in taxes

Decentralized govt = a larger fraction of taxes/spending take place at local level

Decentralized govt give additional power to individuals who can also vote with their feet

Tailors govt to local views and creates competition between local govt: If local govt is inefficient, residents can leave, putting the local govt “out of business”

Redistribution through taxes and transfers harder to achieve at local level (rich can leave if local taxes are too high)

⇒ Conservatives/libertarians tend to prefer decentralized states

The chart illustrates the percentage of GDP for revenues, expenditures, and surplus/deficit over the years from 1947 to 2008. The graph shows the steady increase in expenditures and revenues as a percentage of GDP, with the surplus/deficit fluctuating around the zero line.
The Distribution of Federal and State Expenditures, 1960 and 2007 • This figure shows the changing composition of federal and state spending over time, as a share of total spending. (a) For the federal government, defense spending has fallen and Social Security and health spending have risen. (b) For the states, the distribution has been more constant, with a small decline in education and welfare spending and a rise in health spending.
DISTRIBUTION OF TAXES

US Federal govt raises about 20% of GDP in taxes, State+Local govt raises about 10% of GDP in taxes.

Main Federal taxes: (1) Individual income tax (40%), (2) payroll taxes on earnings (40%), (3) corporate tax (15%)

Main State taxes: (1) real estate property taxes (30%), (2) sales and excise taxes (30%), (3) individual and corporate state taxes (30%)

Key questions: who bears the burden of those taxes (tax incidence), what impact do they have on the economy?
Another critical role the government plays in all nations is that of regulating economic and social activities. Examples:

1) **Minimum wage** at the Federal level is $7.25 (States can adopt higher min wages) ⇒ Potential impact on inequality

2) The **Food and Drug Administration (FDA)** regulates the labeling and safety of nearly all food products and approves drugs and medical devices to be sold to the public

3) The **Occupational Safety and Health Administration (OSHA)** is charged with regulating the workplace safety of American workers

4) The **Environmental Protection Agency (EPA)** is charged with minimizing dangerous pollutants in the air, water, and food supplies
Bigger view on government

Economists have a narrow minded view of individual behavior: purely selfish and economically rational

But social interactions are critical for humans: we naturally cooperate at many levels: families, communities, nation states, global treaties

Archaic human societies depended on social cooperation for protection and taking care of the young, sick, and old

⇒ Explains best why our modern nation states have defense and provide education, health care, and retirement benefits

⇒ Humans are in between purely social animals (like bees) and solitary animals (like tigers)

Humans reveal their social nature from the size of their “governments” (informal and formal)
More modest role for economists

Replacing social institutions by markets does not always work:

Education is primarily government funded: student loans are economically rational but in practice they discourage education and end up being a huge lifetime burden

Health care: Health care relies heavily on government/community support everywhere. People are not able / willing to shop rationally for health care plans

Retirement benefits: Saving for your own retirement is economically rational but in practice most people unable to do so unless institutions (employers/government) help them

Economists can still play a useful role in understanding when markets can help
PUBLIC DEBATES OVER TAXES, HEALTH CARE, AND CLIMATE CHANGE

Taxes, health care, and climate change are each the subject of debate, with both the “liberal” and “conservative” positions holding differing views in their approach to each problem.

**Taxes:** Trump administration decreased taxes on corporations and individuals in 2018. Senator Warren wants new progressive wealth tax and Ocasio-Cortez 70% top individual tax rates.

**Health Care:** Up to 2013, about 20% of the non-elderly U.S. population not insured. With Obamacare down to 10% but Trump administration would like to repeal Obamacare.

**Climate change:** Carbon emissions are generating global warming with potentially devastating future consequences (sea rise, extreme weather, agricultural output). What should government do?
Most of my research (available on my webpage) is in public economics:

1) Design of optimal tax policies and optimal transfer programs (theory, normative)

2) Analysis of the effects of taxes and transfers on individual behavior (empirical, positive)

3) Analysis of inequality overtime and across countries (empirical, descriptive)

I will discuss some of my research in this course when we cover the relevant topics
REFERENCES

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