Introduction

(Chapter 1, Gruber textbook)

131 Undergraduate Public Economics
Emmanuel Saez
UC Berkeley
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
Bigger view on government

Economists have a narrow minded view of individual behavior: purely selfish and economically rational interacting through markets ⇒ Limitation to fully understand public economics

Social interactions are critical for humans: we naturally cooperate at many levels: families, communities, nation states, global treaties with very strong/versatile in-group attachments

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 provide defense and education, health care, and retirement benefits

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 work in economic theory but in practice end up being a huge lifetime burden. For-profit education has a tendency to become a scam

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

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

Economists can still play a useful role in understanding when markets can help and how individualistic forces can undermine institutions
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? Economists’ traditional view:

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

Inequality is an issue because we are “social beings”

⇒ 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 (such as corrective taxation)

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

3) **Imperfect or Asymmetric Information**: (example: health insurance markets are subject to death spirals)

4) **Individual failures**: People do not behave as “fully rational individuals”. This is analyzed in behavioral economics a 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).

\[ \Rightarrow \] 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 ’18).
Share of pre-tax national income going to top 10% adults

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

Source: Piketty, Saez, Zucman (2018)
Average, bottom 90%, bottom 50% real incomes per adult

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 find ways to evade/avoid taxes, 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
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.
Interpretation. Total fiscal revenues (all taxes and social contributions included) made less than 10% of national income in rich countries during the 19th century and until World War 1, before rising strongly from the 1910s-1920s until the 1970s-1980s and then stabilizing at different levels across countries: around 30% in the U.S., 40% in Britain and 45%-55% in Germany, France and Sweden.

Sources and series: see piketty.pse.ens.fr/ideology.
Interpretation. In 2015, fiscal revenues represented 47% of national income on average in Western Europe and were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues. Note. The evolution depicted here is the average of Germany, France, Britain and Sweden (see figure 10.14). Sources and séries: see piketty.pse.ens.fr/ideology.
DIFFERENT LEVELS OF GOVERNMENTS

US Federal govt raises about 20% of GDP in taxes (and can run deficits)

State+Local govts raise about 10% of GDP in taxes

Decentralized govt = a larger fraction of taxes/spending are decided at local level

Decentralized govt can tailor policy to local views (example: California has more liberal policies than Texas)

Redistribution through taxes and transfers harder to achieve at local level (rich can leave local jurisdiction if local taxes are too high) ⇒ Local govts tend to do less redistribution

⇒ Conservatives/libertarians tend to prefer decentralized states
Federal outlays, adjusted to exclude shifts in the timing of certain payments, are projected to climb from 21.0% of GDP in 2020 to 23.0% in 2029 (see Figure 1-2).

Deficits are projected to average 4.7% of GDP over the 2020–2029 period. Over the past 50 years, deficits have averaged 2.9% of GDP; and in years when the unemployment rate has been below 6% deficit averaged just 1.5% of GDP. Primary deficits—that is, deficits excluding net outlays for interest—are projected to decrease over time, averaging 2.7% of GDP from 2020 through 2024 and 2.2% from 2025 through 2029. At the same time, because of projected increases in interest rates and federal borrowing, net interest outlays grow steadily, from 1.8% of GDP in 2020 to 2.6% in 2029 (see Figure 1-3 on page 14).

Those deficits are projected to boost federal debt held by the public, which consists mostly of the securities that the Treasury issues to raise cash to fund federal activities and pay off the government’s maturing liabilities. The net amount that the Treasury borrows by issuing those securities (calculated as the amounts that are sold minus the amounts that have matured) is influenced primarily by the annual budget deficit. Consequently, under current law, debt held by the public would increase in upcoming years. In CBO’s baseline, after accounting for all of the government’s borrowing needs, debt held by the public rises from $17.8 trillion at the end of 2020 to $29.3 trillion at the end of 2029 (see Table 1-3 on page 15). As a percentage of GDP, that debt would increase from 79% in 2019 to 95% by the end of the projection period (see Figure 1-4 on page 16). At that point, such debt would be the largest since 1946 and more than twice the 50-year average.

Outlays Over the coming decade, CBO projects, federal outlays would grow at an average annual rate of 5%, reaching $7.1 trillion in 2029 (adjusted to exclude the effects of timing shifts). Outlays for Social Security, Medicare, and net interest account for about two-thirds of that $2.7 trillion increase.

Figure 1-2.

Total Revenues and Outlays

Percentage of Gross Domestic Product

Source: Congressional Budget Office.
DISTRIBUTION OF TAXES

US Federal govt raises about 2/3 of total taxes, State+Local govt raises 1/3 of total taxes.

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

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

Key questions: how are these taxes distributed by income groups (Saez-Zucman ’19 book)? what impact do they have on the economy?
Average tax rates by income group in 2018 (% of pre-tax income)

Source: Saez and Zucman (2019)
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
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. Democratic candidates want to tax the rich more. Some propose new progressive wealth taxes.

**Health Care:** Up to 2013, 17-18% of the non-elderly U.S. population not insured. With Obamacare down to 10%. Some candidates propose Medicare for All.

**Climate change:** Carbon emissions are generating global warming with potentially devastating future consequences (sea rise, extreme weather, agricultural output). What should government do? Nothing (Trump) vs. Green New Deal
Figure 1

Number of Uninsured and Uninsured Rate among the Nonelderly Population, 2008-2018

NOTE: Includes nonelderly individuals ages 0 to 64.
GLOBAL TEMPERATURE & CARBON DIOXIDE

Global temperature anomalies averaged and adjusted to early industrial baseline (1881-1910)
Source: NASA GISS, NOAA NCEI, ESRL
PROFESSOR SAEZ’ RESEARCH

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


