Public Economics for Public Policy
Part I: Introduction

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Sciences Po   *MPA 2022-2023*

Most of my research is in public economics. I'm interested in the intersection between public finance and macroeconomics. You can check this out on my website.

I've worked on tax evasion, climate policies, and macro topics:

1. *Acceptability of climate policies*: who support/oppose climate policies and why?
2. *Offshore real-estate in Dubai using leaked data*: how large is it, who owns it, and what does it tell us about global offshore real-estate?
3. *Excess Profit Tax*: how to tax excess profits from energy firms that benefited from the war in Ukraine?

- J. Gruber, *Public Finance and Public Policy*, 5th edition, 2015
- A. Atkinson and J. Stiglitz, *Lectures on Public Economics*, Updated edition, 2015
- B. Salanié, *The Economics of Taxation*, 2003

I - Introduction to Public Economics

II - Basic micro concepts for Public Finance

III - Taxation, Externalities, and Climate Change

IV - Capital Taxation & Tax Havens

V - Social Insurance

VI - Education

What is Public Economics?

Public Economics is the study of the role of the Government in the Economy

It focuses on answering 3 types of questions:

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?

Reasons to take this course:

- For the *practitionier*: improving economic welfare; injecting science in large stakes

    ▸ (e.g., tax reforms immediately affect millions; contentious debate on appropriate role of government in society)

- For *academic interest*: end point of many subfields (macro, development, labor)

- For *methodology*: data-driven approach to answer important policy questions

    ▸ Connecting theory to data (e.g., optimal income tax rate, optimal unemployment benefit)

    ▸ Quasi-experimental empirical methods and "Big data"

Saez (2021): Sometimes, economics has a narrow minded view of individual behavior: selfish and rational interacting through markets ⇒ **Limitation to Public Economics**.

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

Governments are a formal way to organize cooperation/distribution

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

Replacing social institutions by markets does not always work

(e.g., Retirement benefits)

Economics is clearly changing. This is why "Social Economics" is so important

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
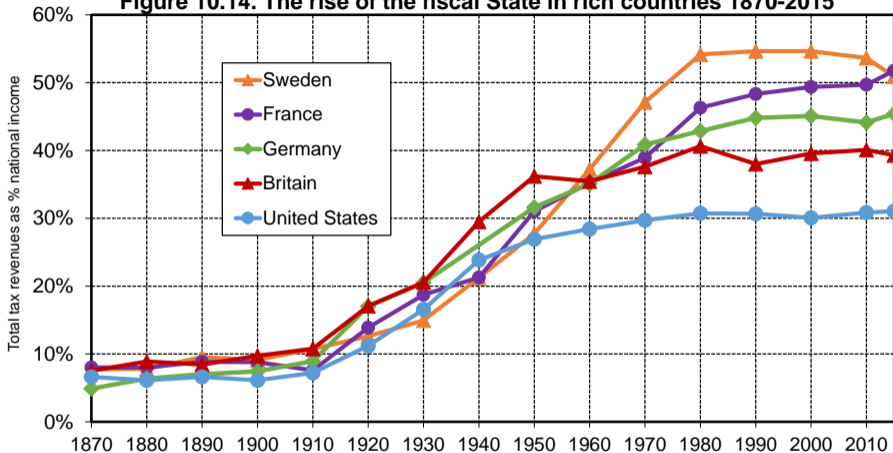
Positive analysis is primarily empirical and Normative analysis is primarily theoretical

Government is instrumental in most aspects of economic life:

1. Government in charge of huge **regulatory** structure
2. **Taxes**: governments in advanced economies collect 30-50% of National Income in taxes
3. **Expenditures**: funds **public goods** (e.g., infrastructure) and **social state** (e.g., Education)
4. Macro-economic **stabilization** through central bank, fiscal stimulus, bailout policies

The Rise of the Fiscal State in Rich Countries

Figure 10.14. The rise of the fiscal State in rich countries 1870-2015

Legend:
- Sweden
- France
- Germany
- Britain
- United States

Y-axis: Total tax revenues as % national income (0% to 60%)
X-axis: 1870 to 2010

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.

Figure 10.15. The rise of the social State in Europe, 1870-2015
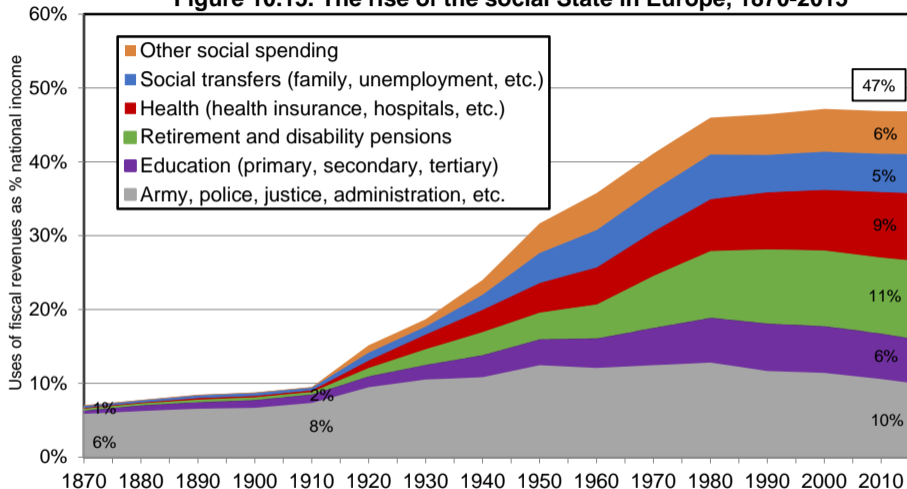
Interpretation. In 2015, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% 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.

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/hour (states or cities can adopt higher min wages: Berkeley $17/hour) $\rightarrow$ 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

Different Levels of Government

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

State+Local govts raise about 10% of GDP in taxes (cannot run deficits)

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) $\rightarrow$ Local govts tend to do less redistribution

$\Rightarrow$ Conservatives/libertarians tend to prefer decentralized states

When should the government intervene in the economy?

Fundamendatel theorems of Welfare

1. Under competitive market conditions, every competitive equilibrium is Pareto-efficient
2. Every Pareto efficient allocation can be attained through a competitive market mechanism, with the appropriate initial redistribution.

- Failure of 1st Welfare Theorem: Government intervention can help if there are market or individual failures

- Fallacy of the 2nd Welfare Theorem: Distortionary Government intervention is required to reduce economic inequality
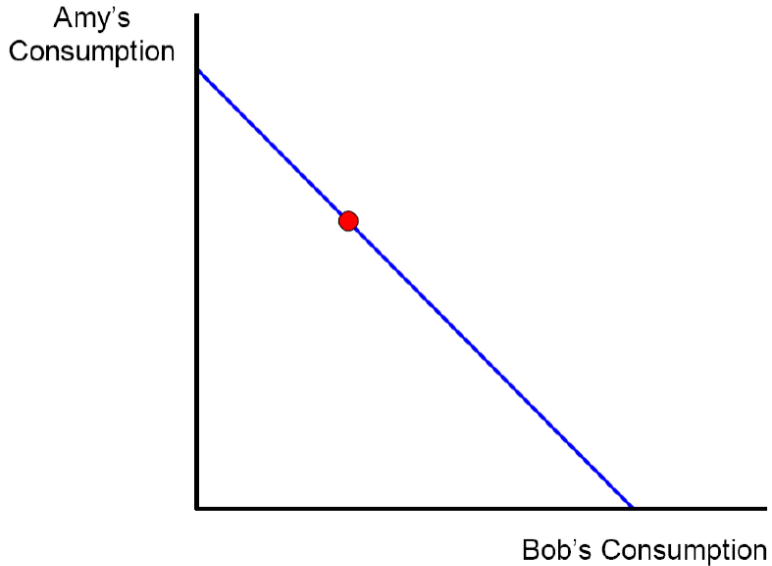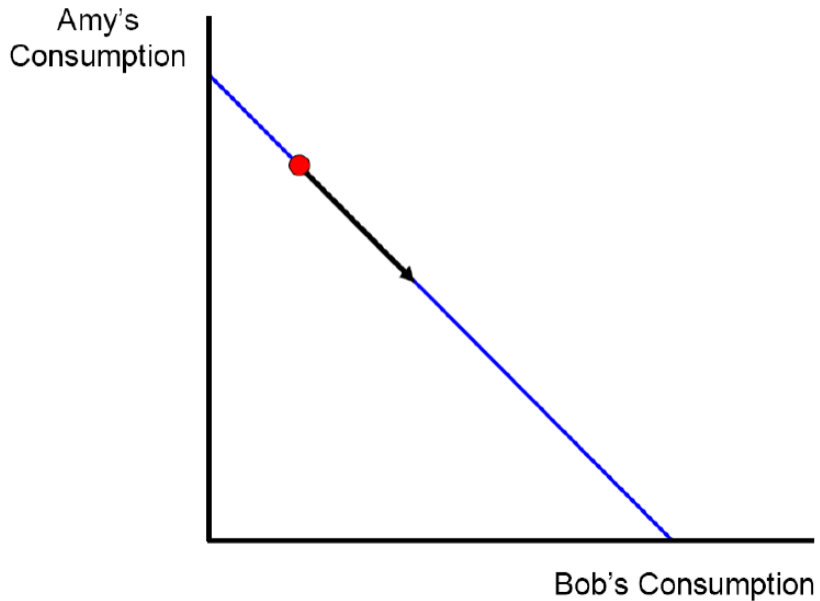
Amy's Consumption
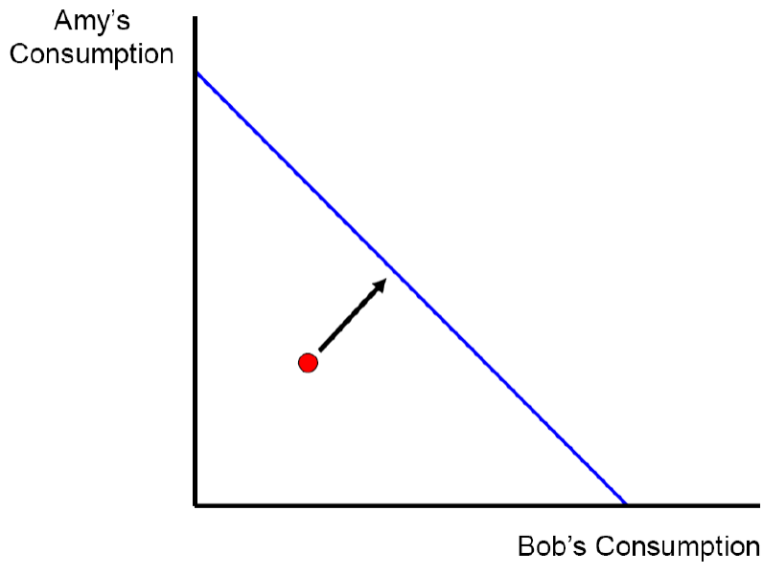
Bob's Consumption

1st Welfare Theorem If (1) no externalities, (2) perfect competition, (3) perfect information, (4) agents are rational, then private market equilibrium is Pareto efficient

Government intervention may be desirable if:

1. *Externalities* require government interventions

    (e.g., greenhouse carbon emissions and Pigouvian taxes/subsidies, public good provision)

2. *Imperfect competition* requires regulation

    (e.g., monopoly, typically studied in Industrial Organization)

3. *Imperfect or Asymmetric Information*

    (e.g., adverse selection may call for mandatory insurance)

4. Agents are *not rational* = **individual failures** analyzed in behavioral economics

    (e.g., myopic or hyperbolic agents may not save enough for retirement)

Even with no market failures, free market might generate substantial inequality.

Inequality is an issue because human are social beings: people care about their relative situation

2nd Welfare Theorem: Any Pareto Efficient outcome can be reached by (1) Suitable redistribution of initial endowments [individualized lump-sum taxes based on indiv. characteristics and not behavior], (2) Then letting markets work freely
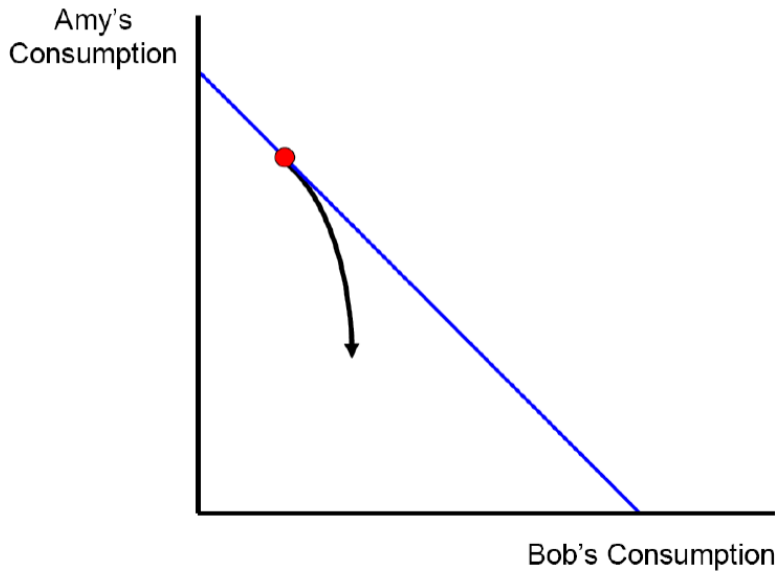
$\Rightarrow$ No conflict between efficiency and equity [1st best taxation]

Redistribution of initial endowments is not feasible (information problem)

$\Rightarrow$ govt needs to use distortionary taxes and transfers

$\Rightarrow$ **Trade-off between efficiency and equity** [2nd best taxation]

Amy's Consumption

Bob's Consumption

Suppose economy is populated 50% with disabled people unable to work (hence earning \$0) and 50% with able people who can work and earn \$100

Free market outcome: disabled have \$0, able have \$100

2nd welfare theorem: govt is able to tell apart the disabled from the able [even if the able do not work]

$\Rightarrow$ can tax the able by \$50 [regardless of whether they work or not] to give \$50 to each disabled person $\Rightarrow$ the able keep working [otherwise they'd have zero income and still have to pay \$50]

Real world: govt can't tell apart disabled from non-working able

$\Rightarrow$ \$50 tax on workers + \$50 transfer on non workers destroys all incentives to work $\Rightarrow$ govt can no longer do full redistribution $\Rightarrow$ Trade-off between equity and size of the pie

US Top 10% Income Shares pre-tax vs. post-tax, 1913-2018
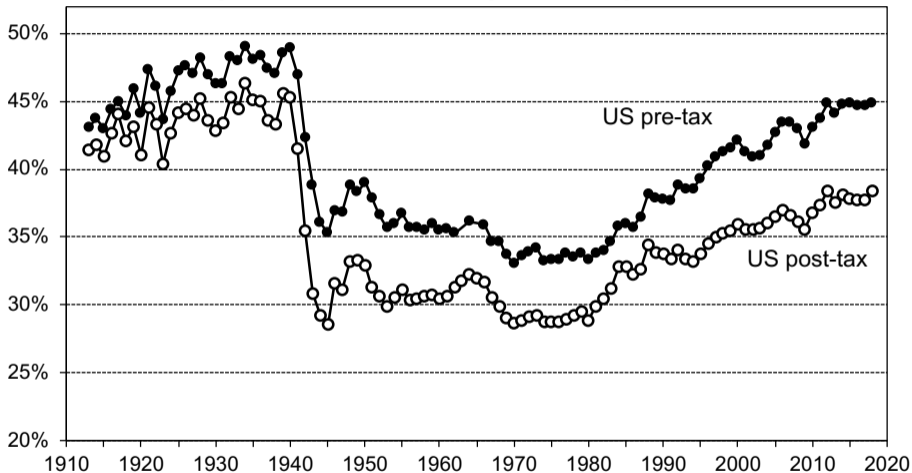
Top income shares of pretax and posttax national income among adults (income within married couples equally split). Source is Piketty, Saez, Zucman (2018) for US and Piketty et al. (2020) for France.

1. **Direct (mechanical) 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 (behavioral) 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

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 in a democracy

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 a dictator or special interests)

THANK YOU!

These slides are available on my website: https://bluebery-planterose.com/teaching

These slides are partly based on courses by: Ghazala Azmat, Raj Chetty, Emmanuel Saez, Stefanie Stantcheva, and Gabriel Zucman.