

# Economic Policy Analysis: Lecture 1

## Introduction: A Framework for Economic Policy Analysis

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# Meet and Greet

1. Who are we?
  - Camille Landais
  - Greg Rosston
2. Why are we here?
3. Where are we going?
4. How will we get there?

# Outline

## Motivation

For the citizen

For the practitioner

For the student

## The 4 Questions of EPA

Q1: Why should gvt intervene?

Q2: How should gvt intervene?

Q3: What are the effects of gvt intervention?

Q4: Why is gvt acting this way?

## What Policies? Which Policymakers?

## Outline of the Course

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# Motivation for EPA

Why should we be interested in Economic Policy Analysis (EPA)?  
There is at least 3 big sets of reasons why you should study EPA...

1. **as a citizen**
2. **as a future practitioner**
3. **as a student**

# Economic Policies Are Everywhere

- ▶ Economic policies **constantly affect our everyday life**:
  - Through **price interventions**: taxes (sales tax on what we buy, sin taxes on cigarettes or alcohol, income tax on what we earn, property taxes on our houses, etc.), transfers (Pensions, EITC, Food Stamps, UI, Disability, etc.), public provision of public goods (schools & education, Homeland Security, etc.),...
  - Through **regulation**: on what we eat and consume (FDA and other environmental regulation), on the way we drive (DMV regulations, etc.), on the labor market (minimum wage, labor laws, etc.), on how we educate our children (minimum education laws, etc.)...
- ▶ Stakes are extremely large because of **broad scope of policies**:
  - Tax reforms immediately affect millions
  - Government directly employs one sixth of U.S. workforce

# Big vs Little Government

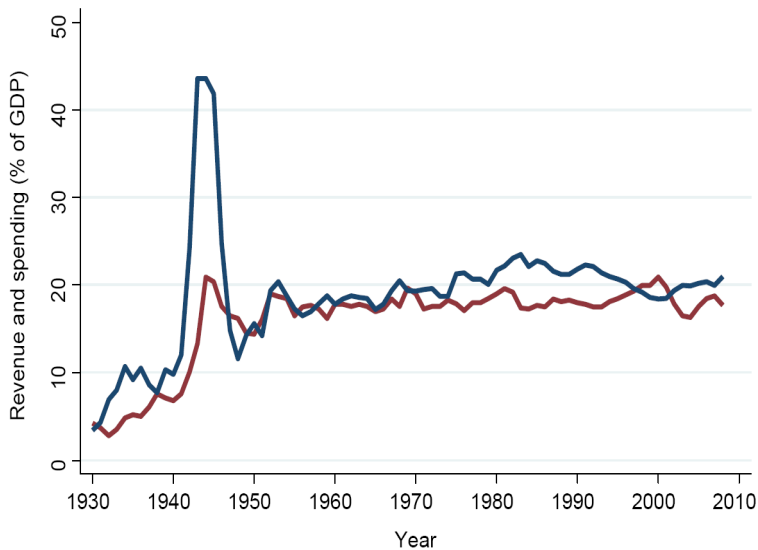
Long term evolution of gvt spending:

- ▶ Size of gvt grew significantly over the past century
- ▶ Same in all developed countries, with some countries with even higher share of gv spending in GDP (Nordic countries > 50%)

In this class we are going to learn how and how much we can **separate normative issues** (is gvt spending too high or too little in general?) **from positive issues** (given the goals that we ascribe to gvt, is money spent efficiently, are policies optimal?)

We are not here to settle the “War of Gods” (Max Weber) but to **disentangle the role of the scientist & that of the politician**

Figure 1: Federal Gvt Revenue & Expenditure, US 1930-2009

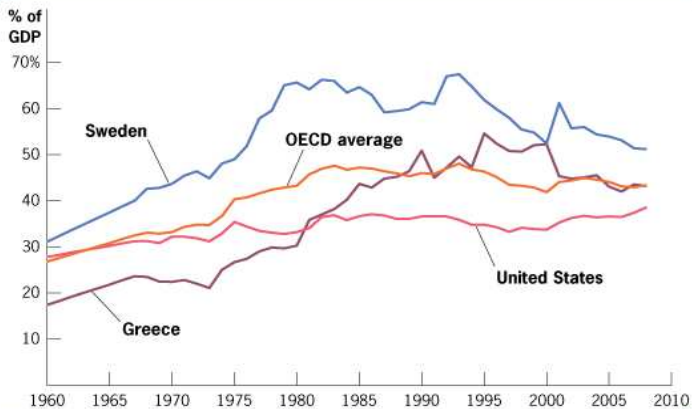


Source: Office of Management & Budget, Historical Tables, FY 2011



Figure 2: Gvt Expenditure, OECD Countries 1960-2009

■ FIGURE 1-2



**Total Government Spending Across Developed Nations, 1960–2008** • Government spending as a share of GDP has grown throughout the developed world, but the pace of growth has varied. The United States has seen a modest growth in its government share over this period, while government spending in Greece has more than tripled as a share of the economy.

Source: Organization for Economic Cooperation and Development (2008). Annex Table 30.

## For the practitioner

- ▶ Most of you are going to have jobs in which you have to take decisions affecting others: Social Choices!
- ▶ EPA is the toolkit to understanding social choices
- ▶ Some of you may well end up working for/in a public administration:

Here you are going to learn critical insights about a wide range of economic policies (taxes, education policies, social insurance, etc.), but also about how gvt/public administration are structured and work.

## For the student

- ▶ EPA is typically the **end point for many other subfields of economics** (Macro, development, labor, or corporate finance questions often ultimately motivated by a public economics issue).

Ex: Should we impose a cap on the remuneration of top compensated employees of bailed out firms?

- ▶ EPA is going to give you the **empirical tools & theoretical skills reusable** not only in economics, but in many other fields of social sciences and everyday life:

Ex: how can we identify the effects of taxes on migration decision of high-paid workers, or in other words, did LeBron James move to Miami for tax purposes?

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# The 4 Questions of EPA

For any policy, you should ask yourself

## 4 Questions:

1. Why should gvt intervene?
2. How should policies be designed?
3. What are the effects of economic policies?
4. Why are public authorities acting the way they do?

# Q1: Why should gvt intervene?

## Fundamental theorems of welfare economics:

- ▶ Competitive markets are Pareto-efficient
- ▶ Any efficient allocation can be reached by a competitive equilibrium

Then why gvt intervention?

4 main reasons:

1. **Creation/Definition of markets**
2. Correction of **market failures**
3. Solutions to **limited rationality** of individuals
4. **Redistribution**

Figure 3: Efficient Allocation

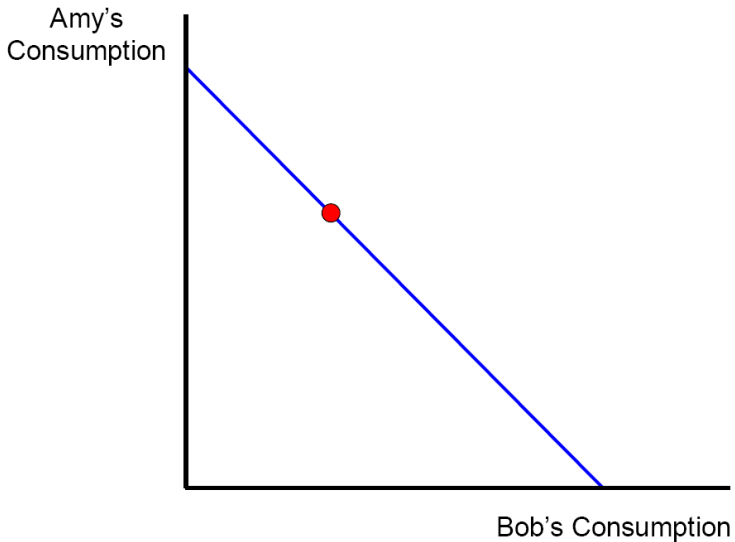
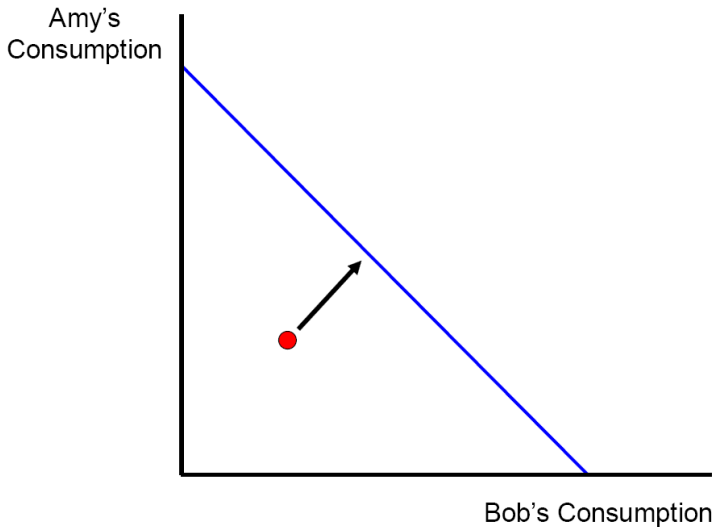


Figure 4: Gvt intervention to restore efficient Allocation





# Creation/Prohibition of markets

Markets do not exist *ex abstracto*

- ▶ **Markets need secure property rights:** police/justice to ensure that private contracts are enforceable
  - Reputation mechanisms can work on a small scale (cf. Greif JEP 2006)
  - Gvt intervention is critical on a larger scale when exchanges become impersonal (cf. Dixit 2007)
  - Secure property rights favor development of credit markets (cf. Acemoglu-Johnson)
  
- ▶ **Gvt might restrict/prevent the existence of markets** on moral/ethical grounds
  - Ex1: Prohibition of market for organs
  - Ex2: Should we legalize marijuana?

# Market failures

Private market provides a Pareto efficient outcome under three conditions: no externalities, perfect information and perfect competition.

When these conditions do not hold  $\Rightarrow$  Market failure

3 main sources of market failures:

1. **Externalities & Public Goods**
2. **Asymmetric Information**
3. **Imperfect Competition**

# Externalities & Public Goods

Markets do not provide optimally public goods or externality producing goods (if transaction costs are non-zero (Coase))

- ▶ Externalities: my consumption affects you but I do not make or receive payment to account for this
  - ⇒ Too much of negative externality-generating goods, e.g., pollution; too little of positive externality-generating goods (charitable giving)
- ▶ Public Goods: goods that are non rival & non excludable in consumption
  - ⇒ Free riding and therefore too little public goods are produced, e.g. californian highways!

# Asymmetric Information

When some agents have more information than others, markets fail

- ▶ Ex. 1: Used cars (market for lemons, Akerlof 1970) Seller knows the quality of the car, buyers do not → Uncertainty makes sellers of good cars withdraw from the market
- ▶ Ex. 2: Adverse selection in health insurance Healthy people drop out of private market → Mandated coverage could make everyone better off
- ▶ Ex. 3: Capital markets (credit constraints) and subsidies for education

# Imperfect Competition

When markets are not competitive, there is role for gvt regulation

- ▶ Ex 1: natural monopolies such as electricity and telephones
- ▶ Ex 2: the United States vs Microsoft case

## Limited rationality of individuals

Recent addition to the list of potential failures that motivate government intervention: people are not fully rational

The foundation for **behavioral economics** (cf. Kahneman and Tversky 1979):

- ▶ Hyperbolic discounting (Laibson 1997)
- ▶ Overconfidence (e.g. about future returns, etc.)
- ▶ Default options (Madrian & Sheah 2001)
- ▶ Inattention (Lacetera 2009)

Government intervention (e.g. by forcing saving via social security, mandating clicking seatbelats, mandating certain default options, etc.) may be desirable.

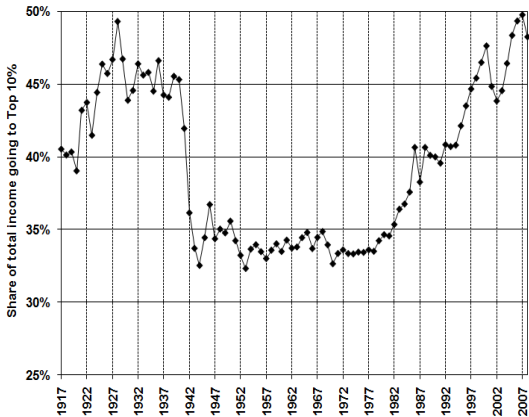
This is an individual failure rather than a traditional market failure: Conceptual challenge⇒ how to avoid **paternalism critique** ( why does govt. know better what is desirable for you?)

# Redistribution

The first three justifications were concerned with restoring efficiency. But what can govt. do if private market outcome is undesirable due to redistributive concerns?

- ▶ Redistribution is a central normative question in our democracies
- ▶ When should we think about redistribution? At each policy level? Or at the aggregate level? (cf. Kaplow 2009)
- ▶ In the absence of a perfect pure transfer system, taxation distorts incentives → **Equity-Efficiency trade-off**

Figure 5: The Top Decile Income Share in the United States, 1917-2008



Source: Piketty and Saez (2003), series updated to 2008. Income is defined as market income including capital gains. In 2008, top decile includes all families with annual income above \$109,062.



Figure 6: A redistributive gvt intervention

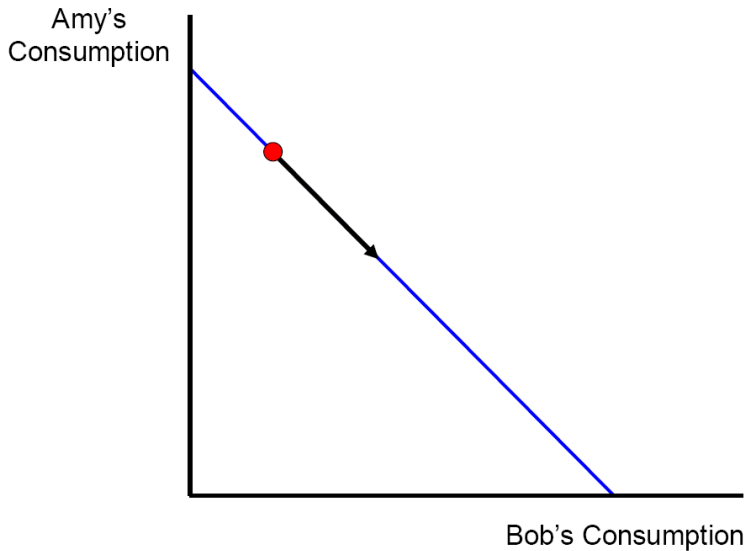
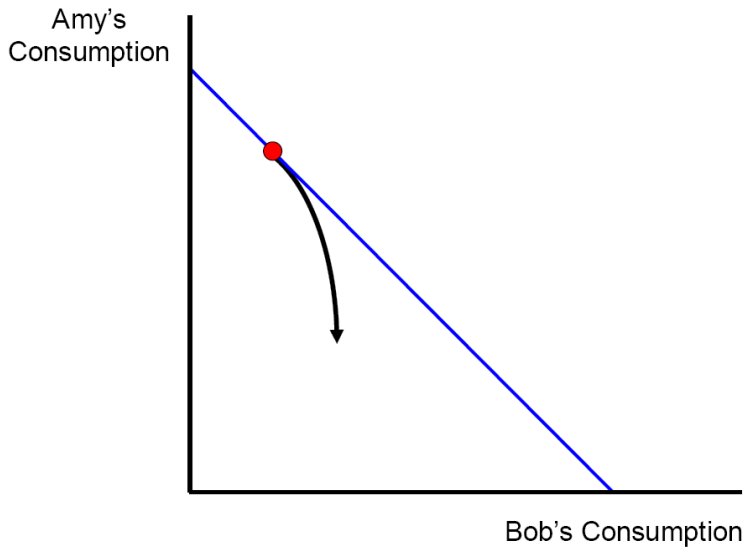


Figure 7: The equity-efficiency trade-off



## Q2: How should gvt intervene?

Two parts:

1. First **set an objective**
2. Then **maximize this objective**

But that's more complicated than it seems:

Once again intricate normative & positive issues

# How Do We Set a Social Objective?

- ▶ Organic/holistic view: objectives can be defined *ex abstracto* at the social level.  
Ex 1: *Manifest Destiny*  
Ex 2: *Dictatorship of the proletariat*
- ▶ Individualist/democratic view: depends on individual preferences.

Modern public economics & EPA is based on the second view, because it respects individual freedoms and places individuals first.

# The Intricacies of Social Choice

Important caveats to determining a social objective based on individual preferences:

- ▶ Is it morally acceptable to aggregate individual preferences (Sen's critique)?
- ▶ Needs perfect information from social planner (pb because people do not have interest in revealing private info, cf. Lindhal pricing for instance)
- ▶ Even when preferences are well established and well known, it's not possible to determine a well-behaved social objective based on individual preference aggregation (Arrow's impossibility theorem).

**Fundamental conflict here between social choice and individual values/freedom**

# Social Welfare Functions

Defining a Social Welfare Function is a normative choice!

Some examples of SWF functions:

- ▶ Pareto criterion: pure efficiency criterion, no redistributive concerns
- ▶ Utilitarian SWF:  $W = \sum_i U_i(\cdot)$   
Each individual has the same weight in the SWF.  
Redistribution may occur because of differences in marginal utilities  $U'_i(\cdot)$
- ▶ Rawlsian SWF:  $W = \min_i(U_i(\cdot))$   
Maximize well-being of the worst-off person in society

# Maximizing Social Welfare

Once a SWF is chosen, gvt intervention is optimal when it maximizes social welfare.

Question is then: what tool should gvt use and how to set the level of use of that tool?

Example of tools: Gvt wants to increase education level of low-income individuals:

- ▶ Increase direct provision of education in low income districts
- ▶ Give vouchers to low-income families
- ▶ Increase incentives through tax breaks/credits
- ▶ Mandate longer schooling days/ change in class sizes / changes in organization of curriculum, etc.

To be able to answer the question of what tool to use, one needs to jump to Q3: what are the effects of these different economic policies?

## Q3: What are the effects of gvt intervention?

Gvt intervention has two type of effects:

### 1. **Direct (mechanical) effects**

Ex: Gvt creates a tax on orange juice packs. 1M packs are sold at \$10, tax rate=10%  $\Rightarrow$  tax should raise \$1M.

### 2. **Indirect (behavioral) effects**

Ex: With the creation of the tax on orange juice, people reduce their orange juice consumption because price of orange juice increases  $\Rightarrow$  Reduces overall tax revenues & creates deadweightloss



# Analyzing the effects of economic policies

Here, needs both a:

1. **Theoretical toolkit** to understand the interaction between policies and behaviors:

Theoretical tools will cover subjects such as:

- Partial equilibrium/General equilibrium
- Dynamics
- Uncertainty, etc...

2. **Empirical methods** to identify & estimates behavioral responses:

Empirical methods will cover issues such as:

- Making the difference btw correlation & causality
- Identification methods
- Structural vs reduced-form estimates
- Long run vs short run estimates
- Randomized experiments

## Q4: Why is gvt acting this way? I

Sometimes, what seems to be the optimal set of policies are not the ones that gvt pursues.

Why?

### 1. **Optimal policies are not always implementable:**

- Collective choice problems
- First-best policies are not always credible
- First-best policies are costly or difficult to implement: information, administration, etc

These limitations leads to implementation of second-best policies

## Q4: Why is gvt acting this way? II

2. **Gvt failures:** Policymakers' objective & social optimum might differ

Politicians & administration are not a vacuum. They have interests & preferences of their own

- Lobbying
- Rent-seeking
- Special interests

Structure of gvt (incentives of policymakers) matters!

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# Policymakers in the US

- ▶ Federal gvt & Federal agencies
  - Executive branch (President, Cabinet & Departments)
  - Congress
  - Supreme Court
  - Small Business Administration,
  - Social Security Administration, etc.
  
- ▶ Local gvts:
  - Counties
  - Municipalities

Figure 8: Structure of US Public Spending, 2008

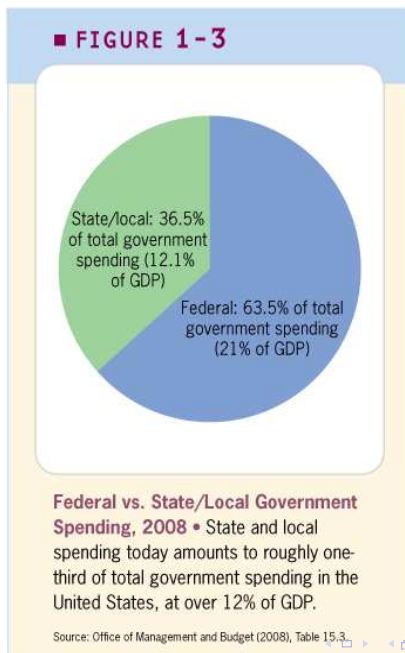
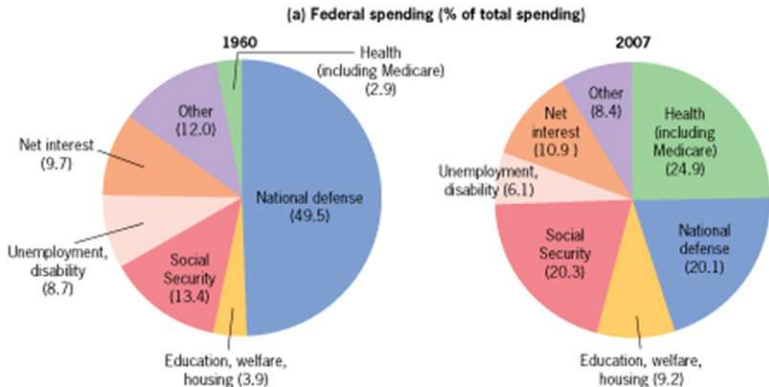
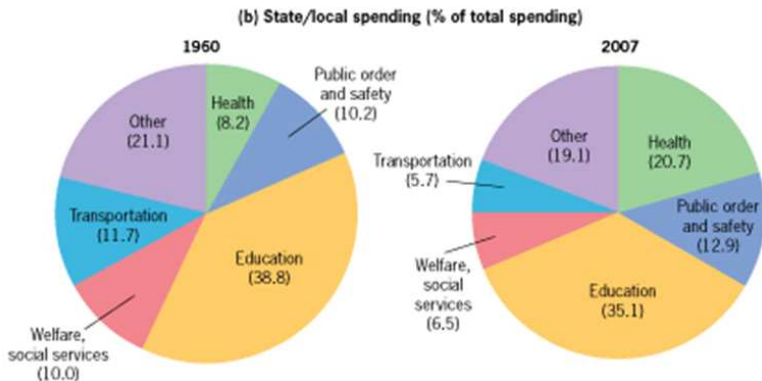


Figure 9: Structure of Federal Gvt Spending by Source, US 1960 & 2007



Source: Bureau of Economic Analysis, NIPA, Table 3.16

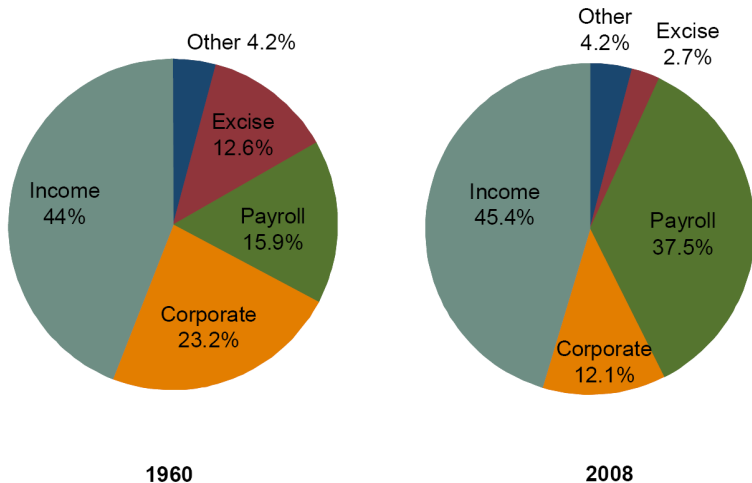
Figure 10: Structure of Local Gvt Spending, US 1960 & 2007



Source: Bureau of Economic Analysis, NIPA, Table 3.16



Figure 11: Structure of Federal Gvt Revenues, US 1960 & 2008



Source: Bureau of Economic Analysis, NIPA, Table 3.16

# The Spectrum of Economic Policies

- ▶ Industrial Policies (IO in general)
- ▶ Macro Policies (Monetary policies, Deficit & Debt level, Fiscal stimulus, etc)
- ▶ Financial market regulation
- ▶ Taxation
- ▶ Social Insurance: Social Security, Health Care, Unemployment Insurance, Disability Insurance...
- ▶ Education policies
- ▶ Environmental policies

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# Outline & Topics

- ▶ **Weeks 1-2:**

Introduction, utility maximization, market failures, externalities, public goods, moral hazard, adverse selection

- ▶ **Weeks 3-4:**

Cost-benefit tools - Willingness to pay, distributional concerns, discounting, uncertainty, contingent and existence valuations, impact valuation

- ▶ **Week 5:**

Local public finance, Education

- ▶ **Weeks 6-8:**

Social Insurance: pensions & social security, health care, unemployment insurance

- ▶ **Weeks 9-10:**

Taxation, Welfare Programs