Public Economics

Lecture 1: Introduction to public economics

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1. General introduction
2. Foundations of public intervention
3. Normative and positive public economics

What's public economics?

- Public economics is the study of the role of government in the economy.
- Both positive and normative approaches.
- No broad consensus on appropriate role for government in society.
- Research in public economics has large practical value.

- Academic Perspective: publics economics is often endpoint for other fields of economics.
- Questions often develop based on policy motivations or policy implications.
  - Macroeconomics focuses on institutions that lead to growth, policies that mitigate business cycle fluctuations;
  - Labor economics focuses on minimum wage, unemployment;
  - Development, corporate finance, other fields.
- Natural to combine public economics with another field.
  - Draw new insights about policy from theory or evidence in another area.
  - Understanding public economics can help sharpen research focus and always working on relevant issues.

Important themes and skill sets in public economics

- Traditionally quite theoretical; now more a combination of theory and evidence;
- Micro-based;
- Two styles of work: structural and reduced-form;
- Tends to be relatively neoclassical, but growing interest in implications of behavioral economics for public policy;
- Long run focus in theory, relatively little focus on short term stabilization – the ultimate question is the ideal design of systems for long run welfare.

What's a state/government?

- Public authority: state, regional council, city hall, etc.
- Traditional economic approach: firms, households, ... and the state.
- Complex network of contractual relations between individuals (politicians, civil servants, etc.) that produces outputs out of inputs.

- The dividing line between public and private production is fluctuating (both over time and across countries or regions):
  - Superior education: mainly produced in the public sector in France, mainly in the private one in the US;
  - Health services: mainly produced in private hospitals in the US; mainly produced in public ones in Canada or France.
- Yet, there is one good that has never been (at least during a long period) provided by private firms:
  - The elaboration and application of laws and rules that govern human social life.

- There are other goods as well that are almost always produced in the public sector (roads (in cities), police, street lights).
- Are the goods that tend to be produced by the public sector special ?
- Is there a characteristic of the public sector that makes it more efficient in producing these kinds of goods ?

Tools of public intervention in the economy

- Taxes and transfers;
- Law, institutions;
- Provision of public goods;
- Macroeconomic stabilization, e.g. monetary policy (not quite relevant for this course).

Why do we need public intervention?

When is government intervention necessary in a market economy?

- when we are inside frontier, government improves efficiency;
- when we are unsatisfied with location on frontier, government improves distributional outcomes;
- to ensure the development of non-violent and mutually beneficial interactions.

Monopoly of legal violence

> *"[...] a state is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory."*

Politik als Beruf, Max Weber (1918).

- The state forces people to pay taxes or to enroll in the army, expropriates, punishes, etc.
- The state is the only actor that has such a power on a given territory.

Why is it useful?

To avoid the "state of nature", i.e. the "war of all against all" and the absence of any law (Hobbes, 1651):

- No (private) property;
- No (in)justice.

In such a framework, individual self-interest makes unlikely the emergence of a minimally organized social life.

Illustration

- Imagine a forest without any state nor rule (nor of course property rights), and two hunters/fishers/gatherers: François and Jean-François.
- François has gathered fruits and Jean-François has fished trouts.
- Both have convex preferences so that François would not mind having some trout to eat before his fruits and Jean-François would like to complete her carnivorous meal with some fruits.
- Suppose they meet.

- Two kinds of interaction may arise: brutal stealing or peaceful dealing.
- If both choose to steal, they end up fighting.
- If one steal and the other does not, the stealer gets what he wants for free.
- If both choose to deal, they get a mutually beneficial agreement that is however worse for each guy than the situation where he could steal for free.

Action chosen by François	Action chosen by Jean-François	Outcome
Steal	Steal	Fight
Steal	Deal	François gets trouts for free
Deal	Steal	Jean-François gets fruits for free
Deal	Deal	Exchange at a mutually agreed rate

François:
Trouts for free $\succ$ Exchange $\succ$ Fight $\succ$ Jean-François gets fruits

Jean-François:
Fruits for free $\succ$ Exchange $\succ$ Fight $\succ$ François gets trouts

What outcome is the most likely?

		Action chosen by Jean-François: Deal	Action chosen by Jean-François: Steal
Action chosen by François	Deal	Exchange	Jean-François gets fruits
	Steal	François gets trouts	Fight

- Steal is the dominant strategy for both guys.
- War of all against all will prevail.

This situation is inefficient:

- François would prefer trading than fighting;
- So does Jean-François.

Assume a "state" emerges. It defines and implements property rights on resources.

- Property right: right given to the owner of the resource to exclude others from using the resource.
- Exclusion is done by a police force and a judicial system who will prosecute and punish those who wants to use the resource without the consent of its owner.
- Police and judicial system are costly and financed by taxes (forced/mandatory payments).

Action chosen by François	Action chosen by Jean-François	Outcome
Steal	Steal	Fight (with tax)
Steal	Deal	François is punished
Deal	Steal	Jean-François is punished
Deal	Deal	Exchange at a mutually agreed rate (with tax)

François:
Exchange $\succ$ Punishment of J.-F. $\succ$ Fight $\succ$ Punishment of F.

Jean-François:
Exchange $\succ$ Punishment of F. $\succ$ Fight $\succ$ Punishment of J.-F.

What outcome is the most likely?

		Action chosen by Jean-François: Deal	Action chosen by Jean-François: Steal
Action chosen by François	Deal	Exchange	Jean-François is punished
	Steal	François is punished	Fight

- Deal is the dominant strategy for both guys.
- “Doux commerce” will prevail.

- Using properly a monopoly of legal violence help individuals exploiting possibilities of mutual gains and avoiding the war of all against all.
- Argument rides on an efficient police protection.
- Monopoly of legal violence is important: suppose there was a competition, on a given territory, of the sources of legal violence?

- Minimal requirements: design of criminal and contract laws, related enforcement, provision of defense.
- Need of an organization to provide them.
- Need of revenues to finance it.

- Historically, the state has been imposed by brute force from some groups over others. But the basic mission of authoritarian setting of the rule of social life was so helpful to the mankind that all human groups have evolved with such an institution.
- Historical process has been one where the citizens have imposed on their rulers some limitations on their (dangerous) monopoly of legal violence so that it be exerted properly.
  Two main tools:
    - Constitution (limit *ex ante* the power of the State),
    - Democratic (by elections) political competition so that the monopoly of legal violence is temporary.

First welfare theorem

The allocation of commodities at a competitive equilibrium is Pareto-efficient.

Conditions:

- No externalities;
- Perfect competition;
- Perfect information;
- Agents are rational.

Government intervention may be desirable if:

- Externalities require government interventions (taxes or subsidies, public good provision);
- Imperfect competition requires regulation;
- Information is imperfect or asymmetric and causes incompleteness of markets;
- Agents are not rational.

Second welfare theorem

Any Pareto-efficient allocation can be made a competitive equilibrium.

Implication:

- Any equilibrium can be obtained by letting markets work freely after suitable redistribution using lump-sum taxes and transfers.

- There is no conflict between efficiency and equity (first best taxation).
- In reality, the necessary redistribution may not be feasible (because of information problems for example). The government needs to use distortionary taxes and transfers.
- There is a conflict between efficiency and equity (second best taxation).

Why limit government intervention?

- One solution to issues above: let the government be in charge of all production and allocation.
- Problems:
  - Information problems: how can the government decide what to produce?
  - Deadweight loss of large governments (not necessarily a benevolent planner in reality).
  - Incentive effects.
- This creates an important trade-off in any policy analysis:
  - Providing more public goods requires more distortionary taxation, can lead to inefficiency in spending.
  - Providing more social insurance induces bad incentive effects.
  - Additional redistribution distorts incentives.

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:
  - Paternalism (libertarian Chicago view): Individual failures do not exist and the government wants to impose on individuals its own preferences against individuals' will.
  - Individual Failures (behavioral economics view): Individual failures exist (Self-control problems, cognitive limitations).

- Key way to distinguish these two views:
  - Under Paternalism, individuals should be opposed to programs such as social security;
  - If individuals understand they have failures, they will tend to support government programs such as social security.

Approaches in public economics

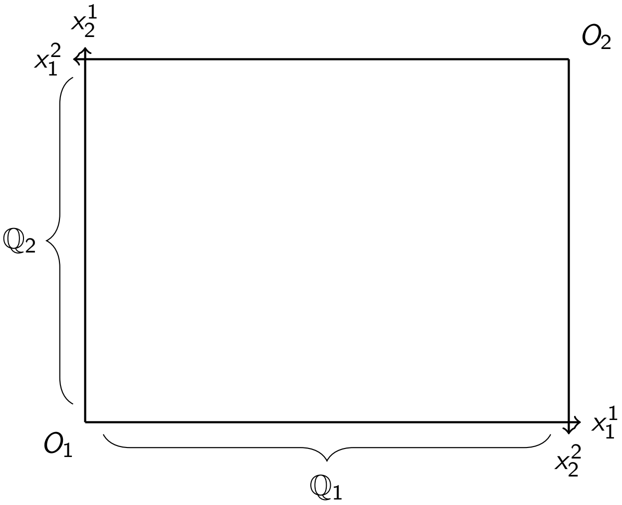
Three types of questions in public economics:

- Normative analysis: Analysis of how things should be. What should the government do? When should it intervene, and what is the best way to intervene (best amount of intervention)? At what level should government intervene? Primarily theoretical.
- Positive analysis: Analysis of how things really are. What are economic effects of government programs and interventions? Primarily empirical.
- Political economy: Why does the government behave the way it does? Develops theories to explain in a positive way. Not really covered by this course.

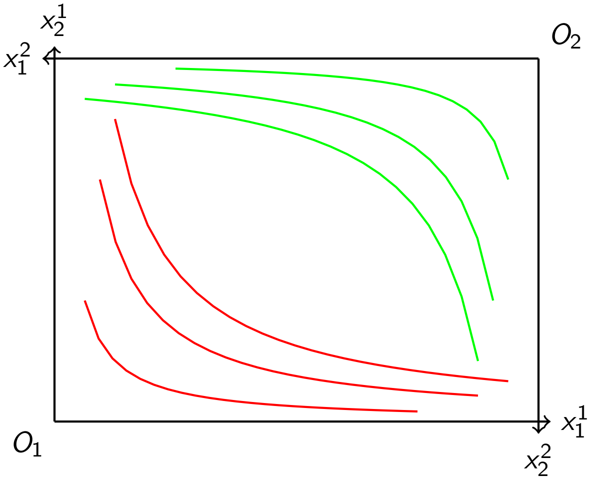
The economy in an Edgeworth box

- Exchange economy, i.e. no production.
- Two individuals with “normal” preferences over the ”consumption” of two goods.
- Two goods available in some given quantities $\mathbb{Q}_1$ and $\mathbb{Q}_2$.

Remember that if individual 1 consumes quantity x_1^1 of good 1, then only $\mathbb{Q}_1 - x_1^1$ is left fo individual 2.



Any allocation within this box is feasible.


x_2^1
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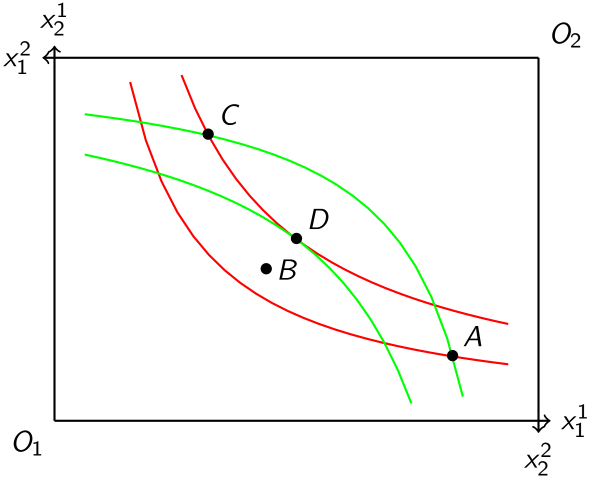
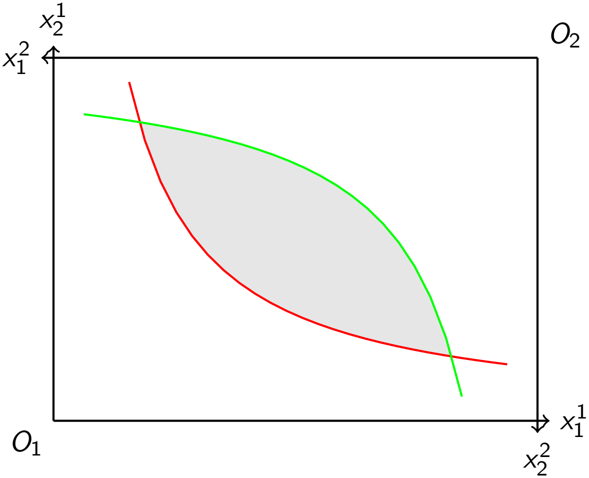


Is it possible to do better than A?

$B \succ A$ by both individuals.
$C \succ A$ by individual 1.

$D \succ A$ by both individuals.
$D \succ C$ by individual 2.

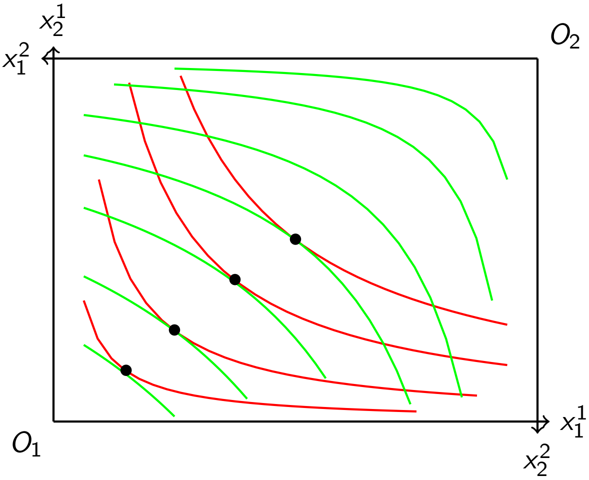


All allocations inside the lens are preferred by at least one individual to all allocations outside the lens.
They are Pareto-superior.

Pareto efficiency

An allocation is Pareto-efficient if it is impossible to find a feasible allocation that everybody weakly prefer to the current one and that at least one individual strictly prefers to the current one.

- The set of Pareto-efficient allocation is also called the "contract curve".
- Formally: set of allocations such that indifference curves are tangent.


x_2^1
x_1^2
O_2
O_1
x_1^1
x_2^2

- An inefficient allocation is unsatisfactory.
- Pareto-efficiency is a minimal normative requirement.
- But: Pareto-efficient allocation can be highly unequal.

> *"[A society may be efficient] even when some people are rolling in luxury and others are near starvation, as long as the starvers cannot be made better off without cutting into the pleasures of the rich. In short, a society can be Pareto optimal and still be perfectly disgusting."*

A. Sen (1970).

End of lecture.

Lectures of this course are inspired from those taught by R. Chetty, G. Fields, N. Gravel, H. Hoynes, and E. Saez.