SAPIENZA
UNIVERSITÀ DI ROMA

European Economic Integration
EPOS – Master in Advanced Economics
Giovanni Di Bartolomeo

Optimal Task Allocation

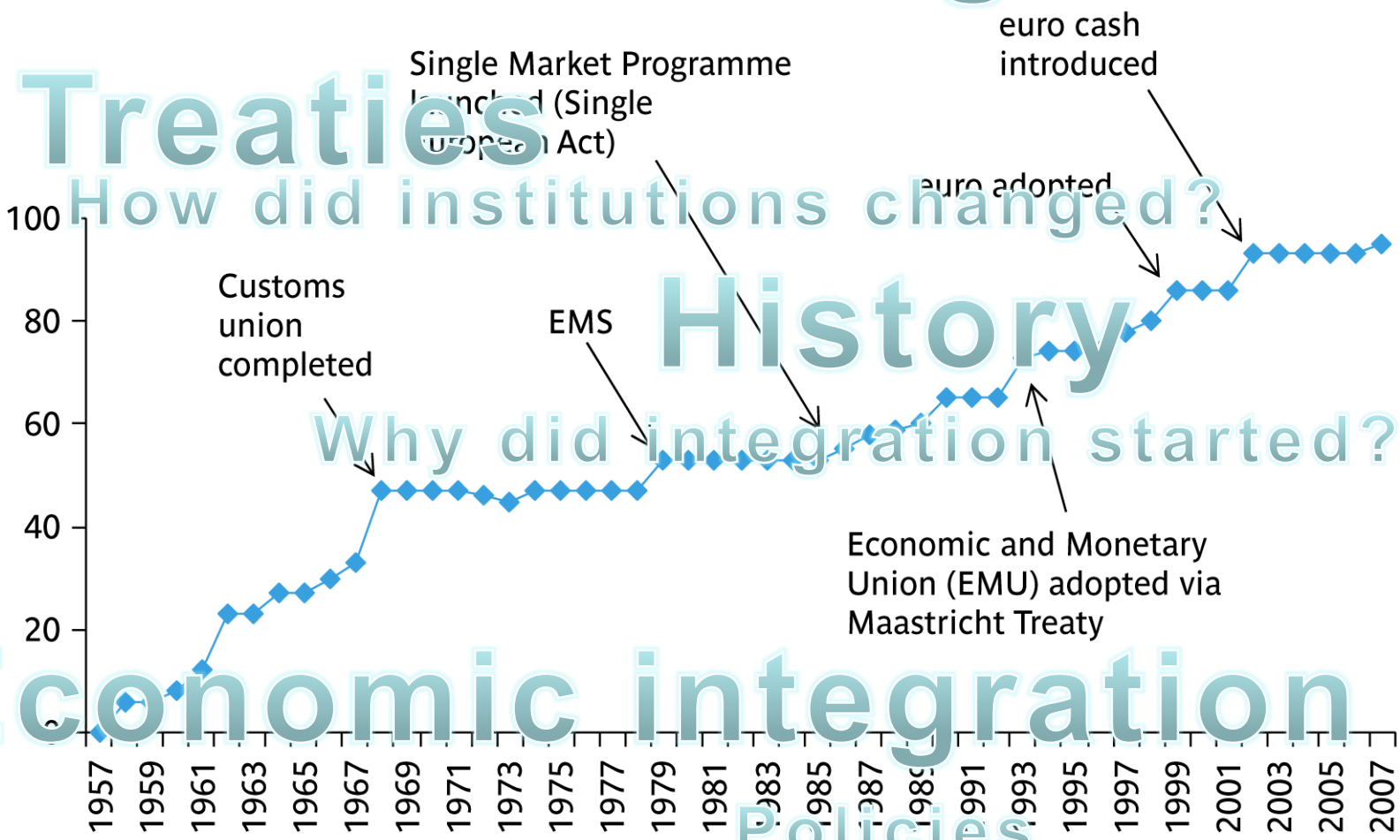
Class overview

1. Intro
2. Fiscal federalism
3. Tools (welfare)
4. Trade-offs

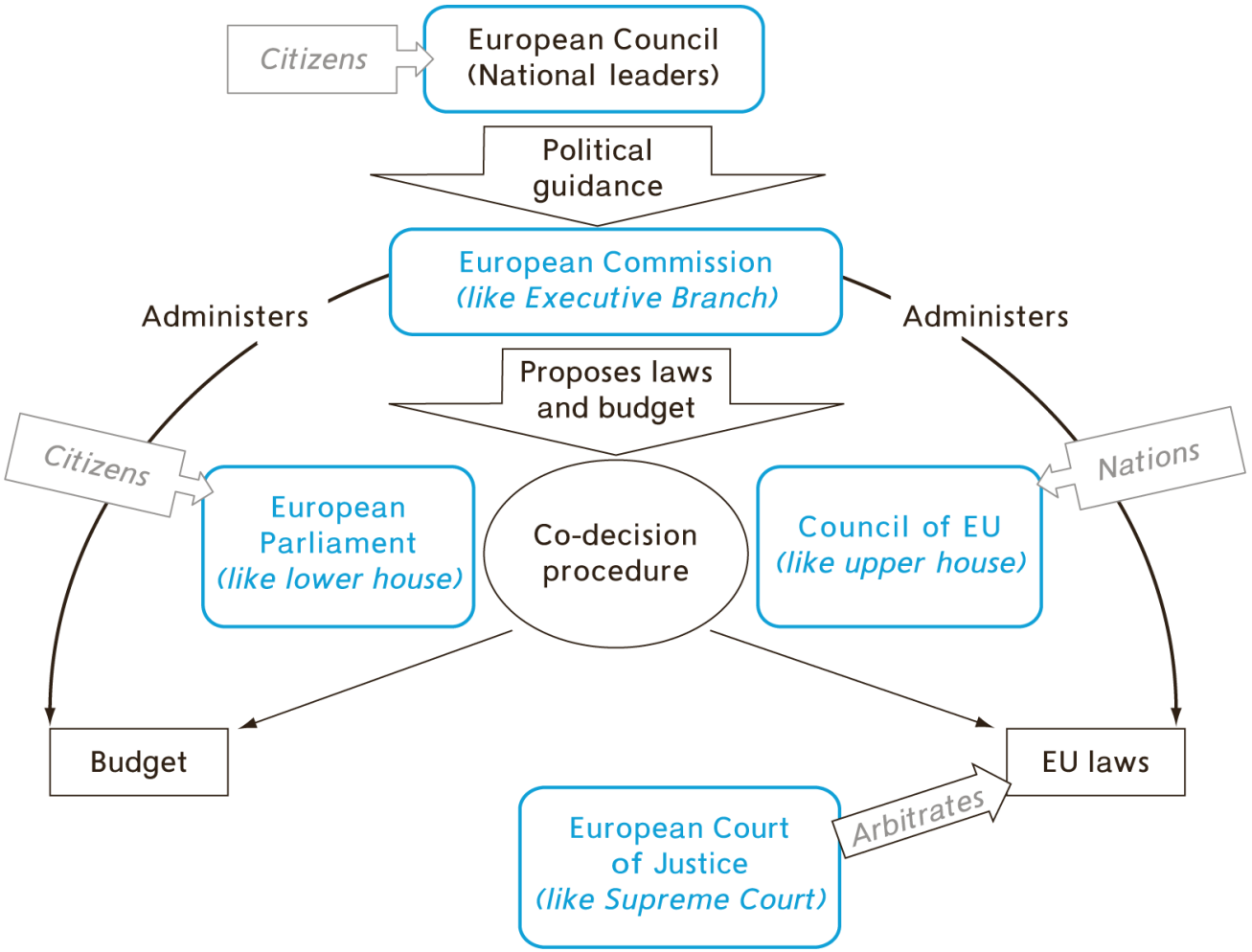
- Slides are largely based on Baldwin-Wyplosz's ones (textbook)

European integration

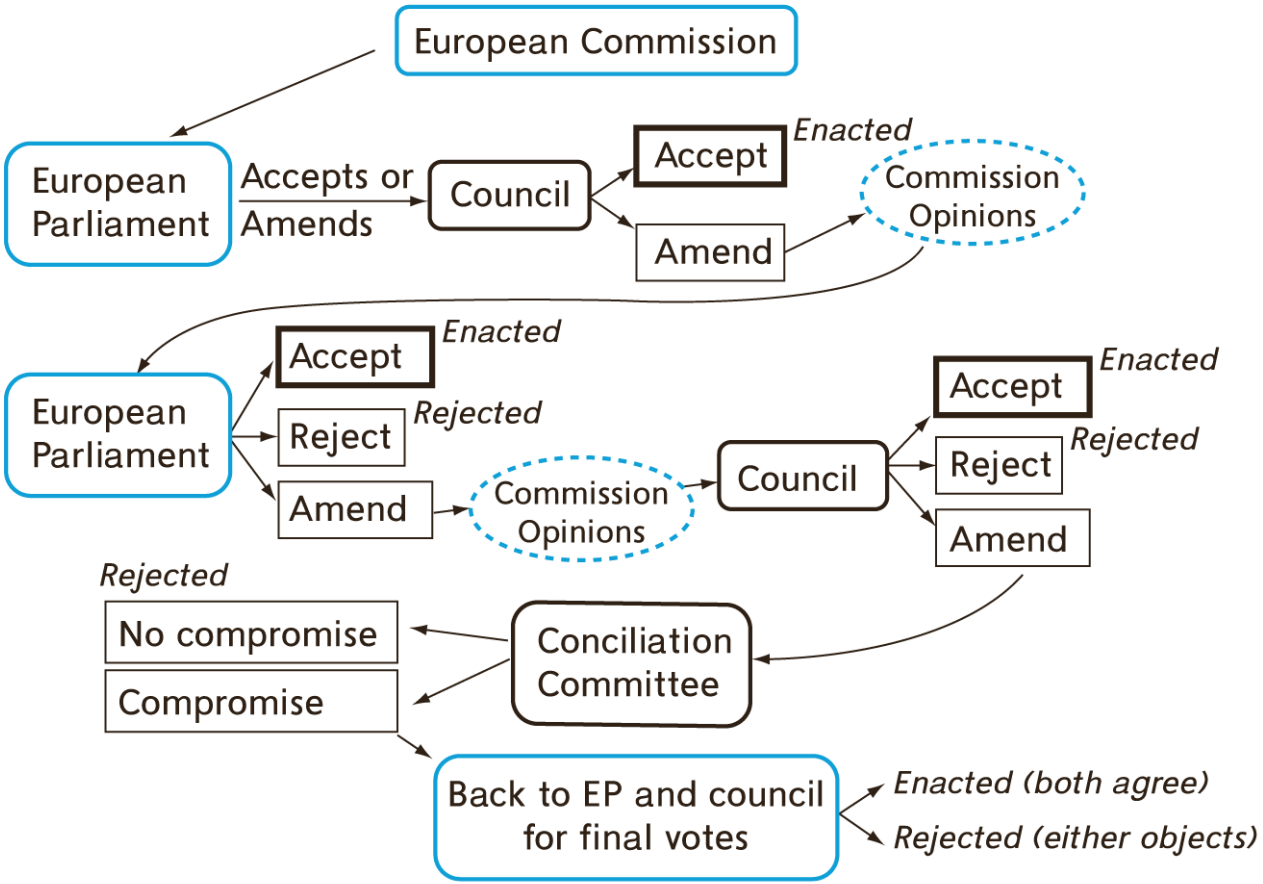
Economic historians have quantified the extent of economic integration.



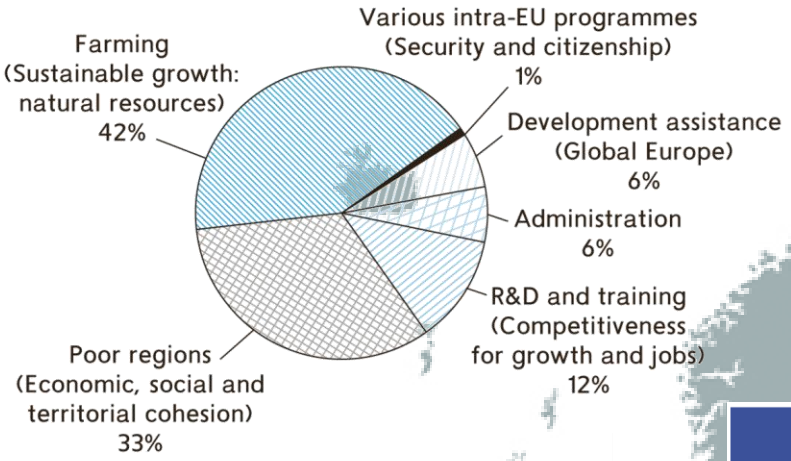
The "Big-5" institutions

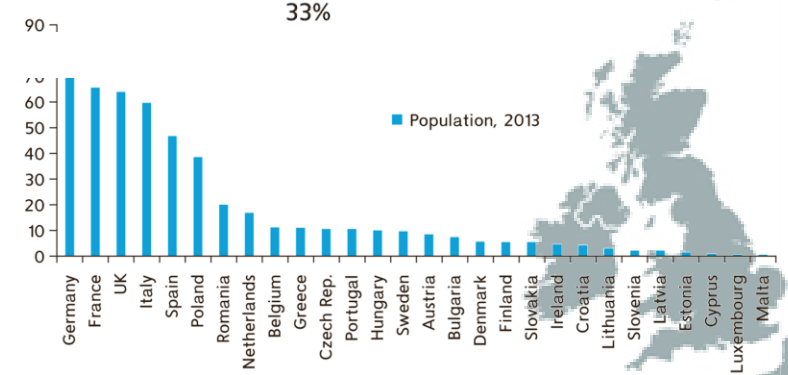


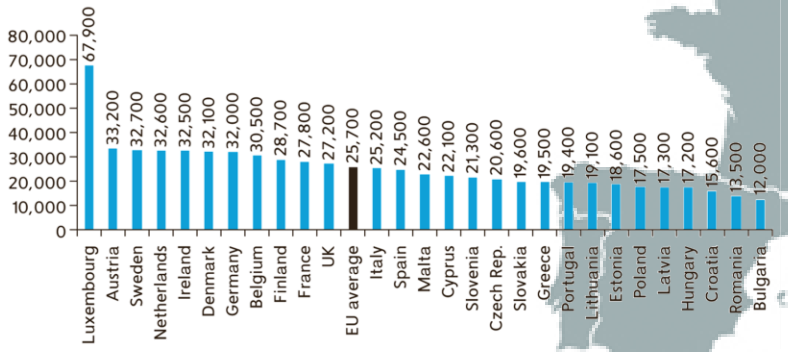
Legislative processes



Main facts







	Openness ratio	Exports to EU15 as % total exports		Openness ratio	Exports to EU15 as % total exports
Greece	17%	49%	Malta	44%	48%
Italy	22%	51%	Slovenia	25%	57%
Finland	30%	53%	Turkey	62%	58%
Sweden	33%	53%	Latvia	69%	59%
Germany	29%	53%	Bulgaria	56%	59%
United Kingdom	21%	54%	Slovak Rep.	45%	62%
Ireland	61%	57%	Lithuania	38%	66%
France	22%	58%	Cyprus	62%	67%
Austria	36%	59%	Romania	26%	68%
Denmark	29%	59%	Czech Rep.	36%	68%
Spain	23%	69%	Poland	51%	69%
BLEU	75%	75%	Hungary	67%	70%
Netherlands	55%	76%	Estonia	25%	70%
Portugal	29%	80%			

SOURCE: Eurostat and IMF Direction of Trade Statistics, 2002.

Task allocation

- Now, we aim to discuss the following question:
- Which level of government is (and should be) responsible for policies in the EU?
- Examples
  - Transport
  - Bank regulation
  - Migration policies
  - Currency and exchange rates
- More in general
  - Public good provision
  - Externalities regulation

Policies in the EU

- Which level of government is responsible?
  1. exclusive competences: EU decides alone;
  2. shared competences: responsibility shared between the EU and Members; two types:
     - members cannot pass legislation in areas where the EU already has;
     - existence of EU legislation does not hinder members' rights to make policy;
  3. supporting, coordinating or complementary competence where the EU can pass laws that support action by members;
  4. national competences: national or sub-national governments alone decide.

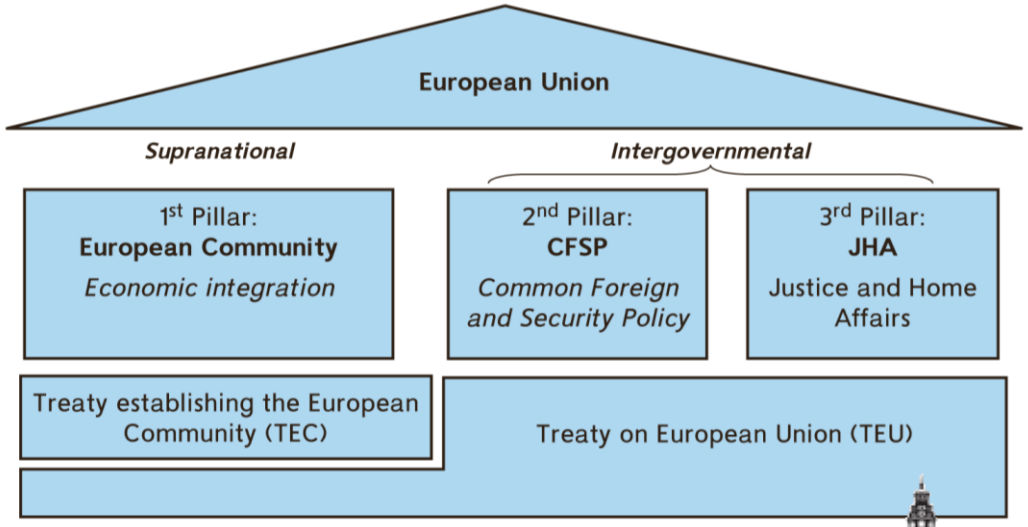
Task allocation

Exclusive	Shared		Support, coordinate or supplement
Customs union	Exclusive if EU has policy	Non-exclusive	Certain human health policies
Competition policy	Internal market	R&D policies	Industry
Eurozone monetary policy	Certain social policy	Outer space policies	Culture
Conservation of marine resources	Cohesion policy	Development cooperation	Tourism
Common commercial policy	Agriculture and fisheries	Humanitarian aid	Education and training
	Environment		Civil protection and disaster prevention
	Consumer protection		Administrative cooperation
	Transport		Coordination of economic, employment and social policies
	Energy		Common foreign, security and defence policies
	Old third pillar 'Area of freedom, security and justice'		
	Certain public health polices		

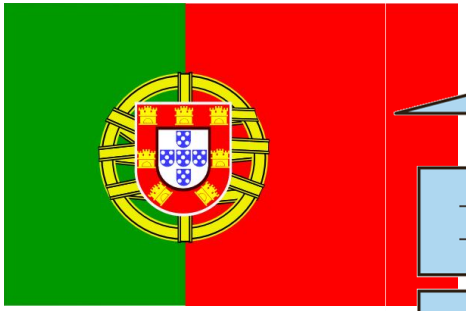
EU structure: Pre and post-Lisbon

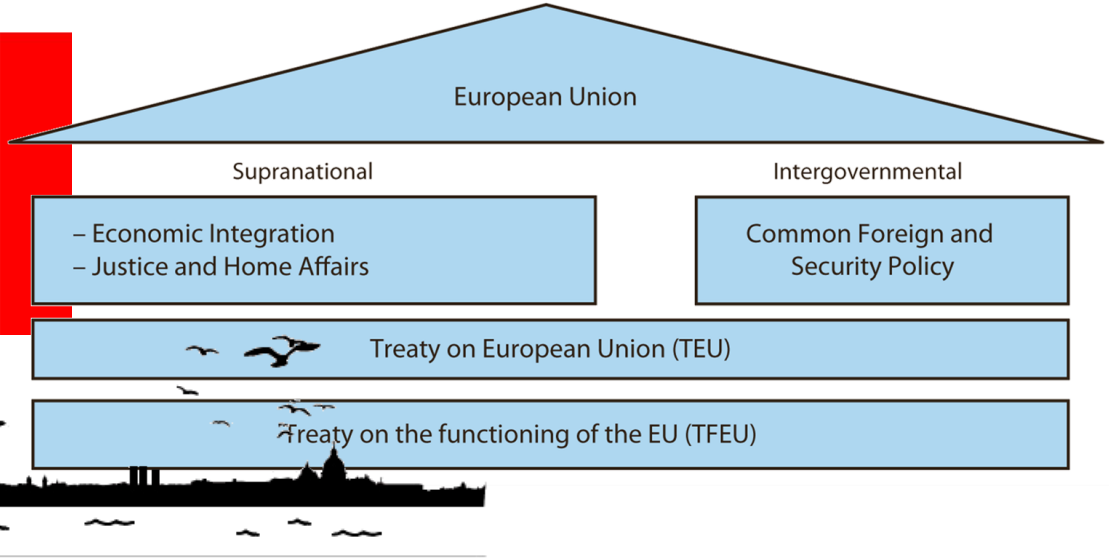
- Until the Maastricht Treaty, most integration initiative were decided with supranational decision-making procedures
- Two problems:
  - old schism: federalists/intergovernmentalists
  - integration that was taking place outside of the EU's structure
- The Maastricht (and Lisbon) Treaty drew a clear line between supranational and intergovernmental policy areas

EU structure: Pre and post-Lisbon



Maastricht





Lisbon

Subsidiarity and proportionality

- The use of the tasks is guided by two principles:
  1. subsidiarity: keep decisions as close to the citizen as possible without jeopardizing win–win cooperation at the EU level (i.e., EU action only if it is more effective than action at national, regional or local level);
  2. proportionality: the EU should undertake only the minimum necessary actions.
- The burden of proof lies on the instigators of EU legislation: they must make the case that there is a real need for common rules and common action. National parliaments are subsidiarity watchdogs.

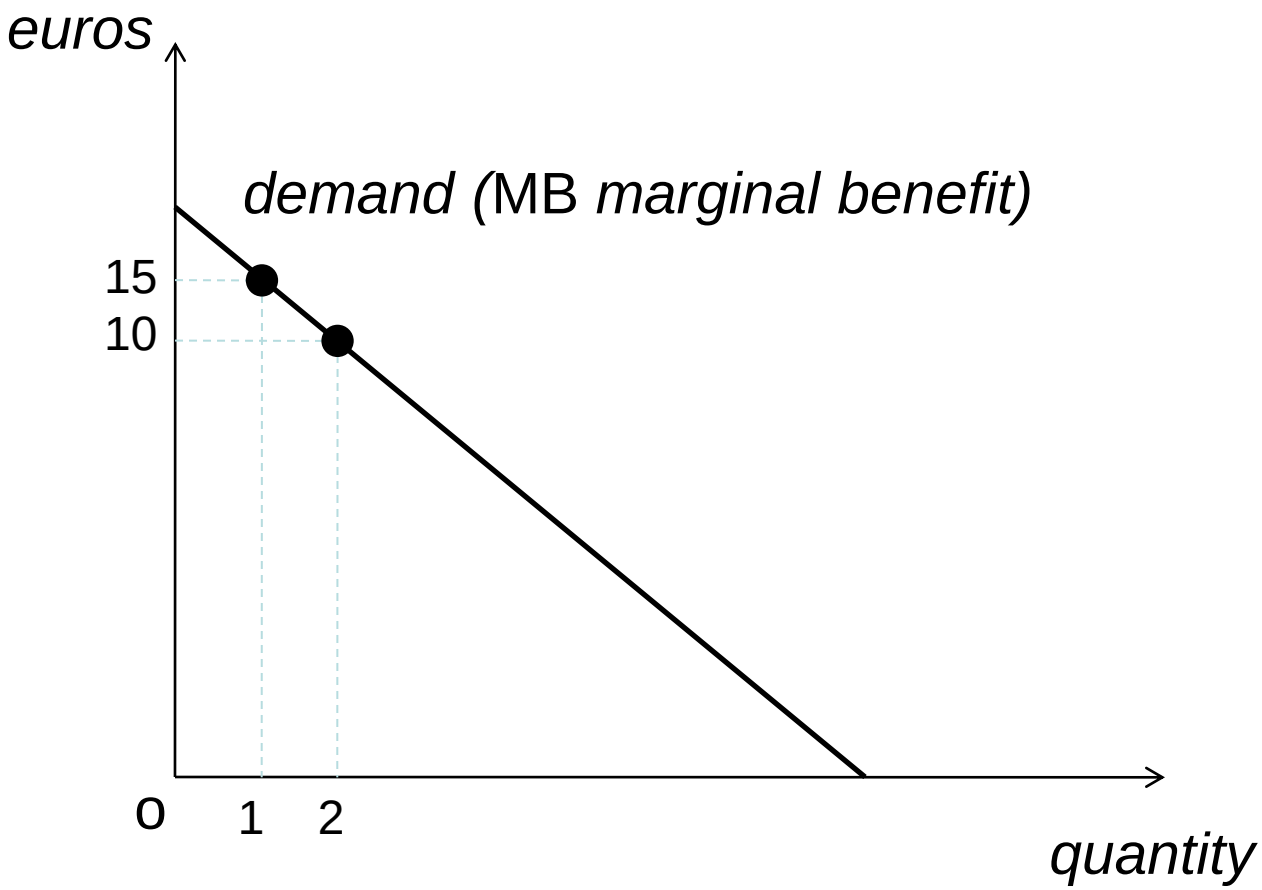
Theory: Fiscal federalism

- What should optimal allocation of tasks be?
- Basic theoretical approach is called Fiscal Federalism.
  - Name comes from the study a taxation, especially which taxes should be set at the national vs. sub-national level.
  - understanding which functions and instruments are best centralized and which are best placed in the sphere of decentralized levels of government (Oates, 1999).

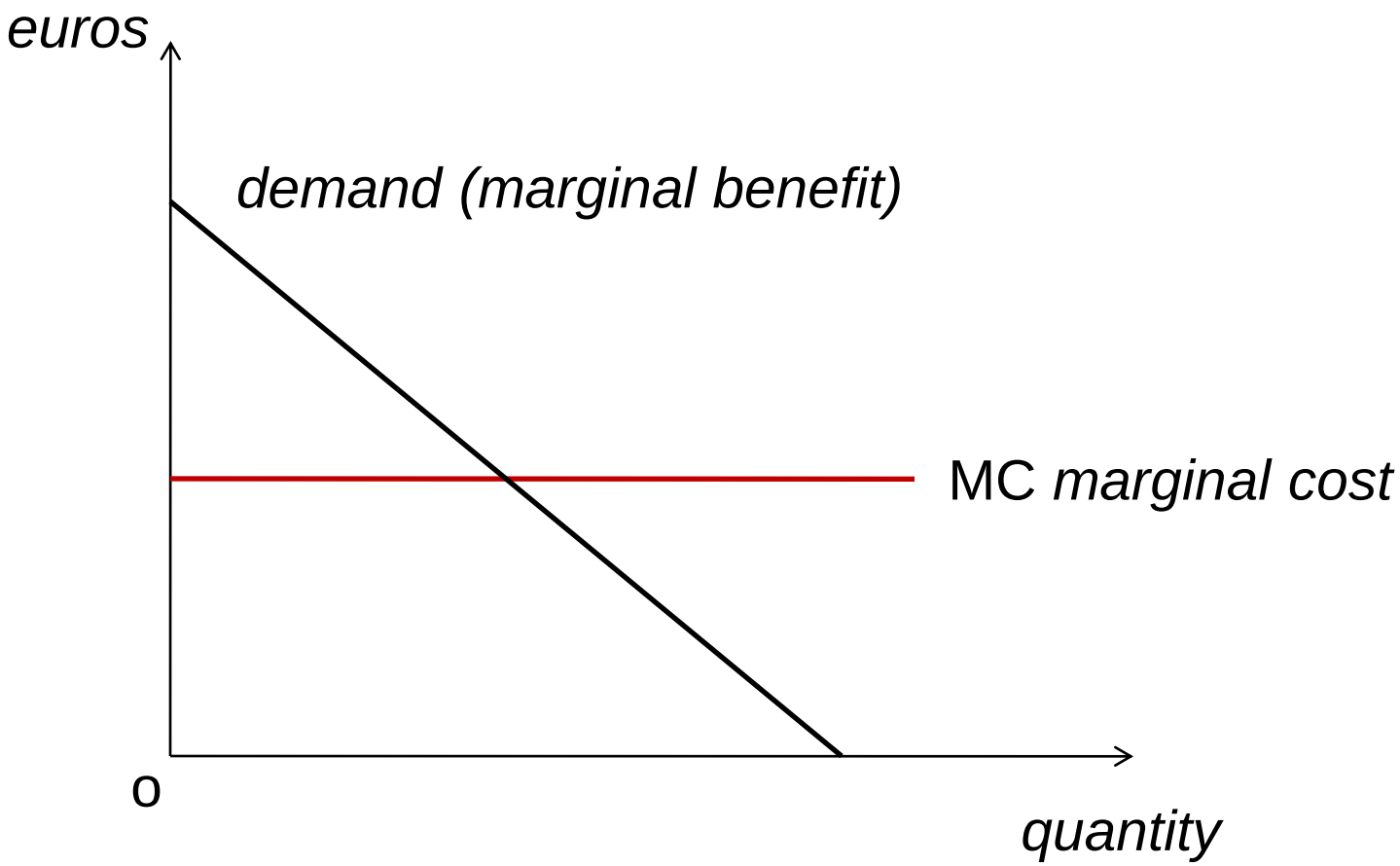
Fiscal federalism: The basic trade-offs

- What is optimal allocation of tasks?
- There is no clear answer from theory, just of list of trade-offs to be considered:
  - diversity and local informational advantages
  - scale economies
  - spillovers
  - democracy
  - jurisdictional competition
- Before we introduce some tools to evaluate welfare

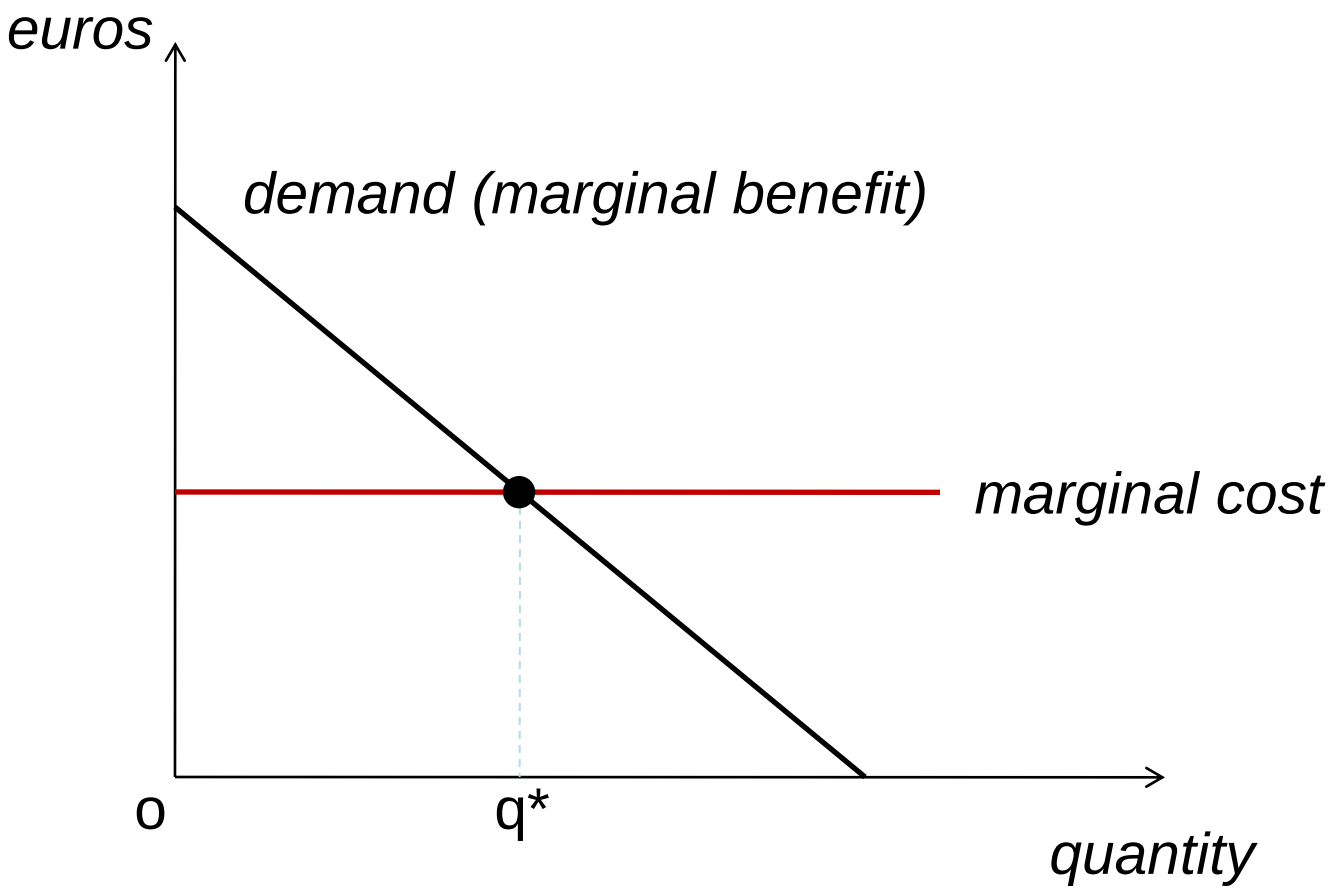
Tools



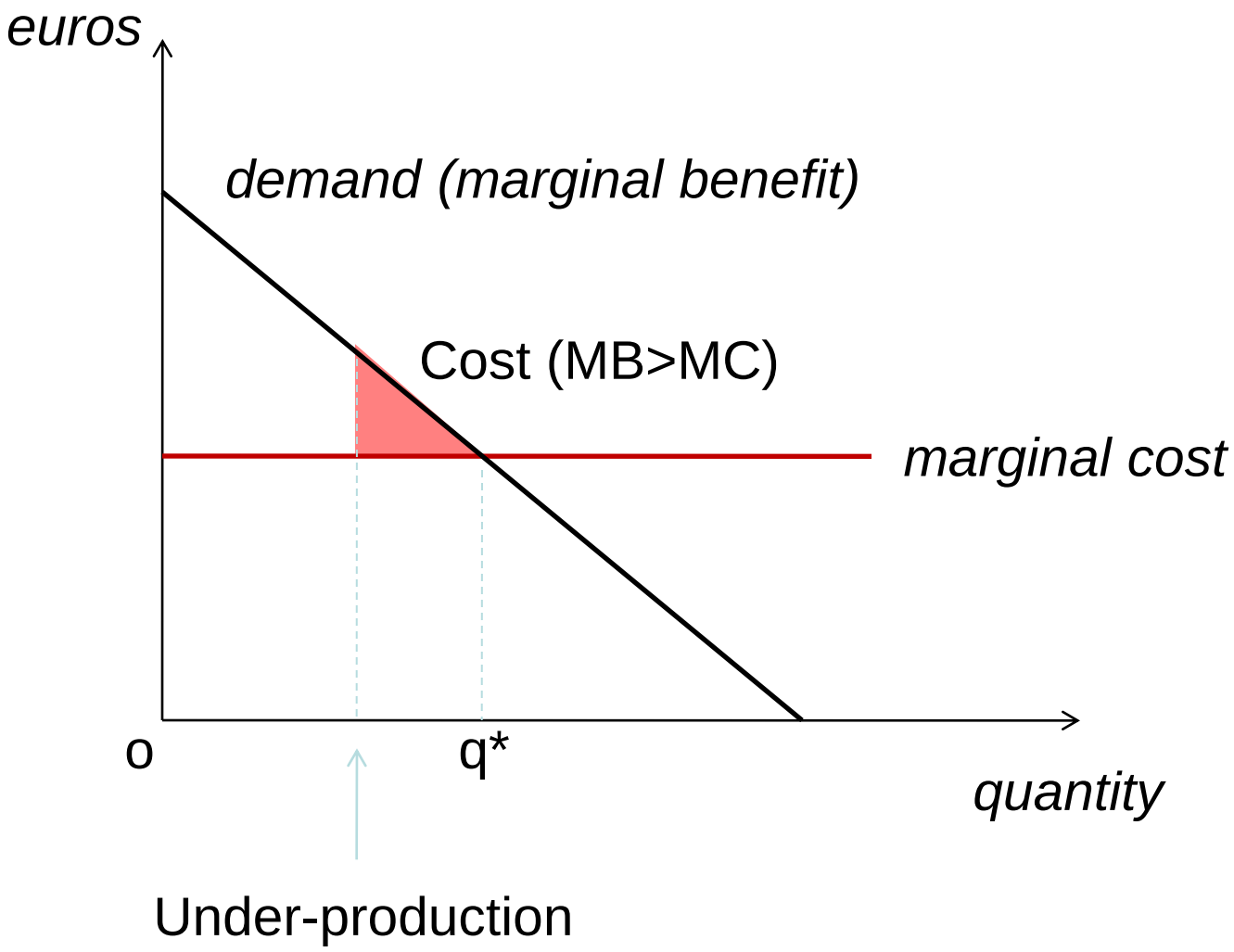
Tools



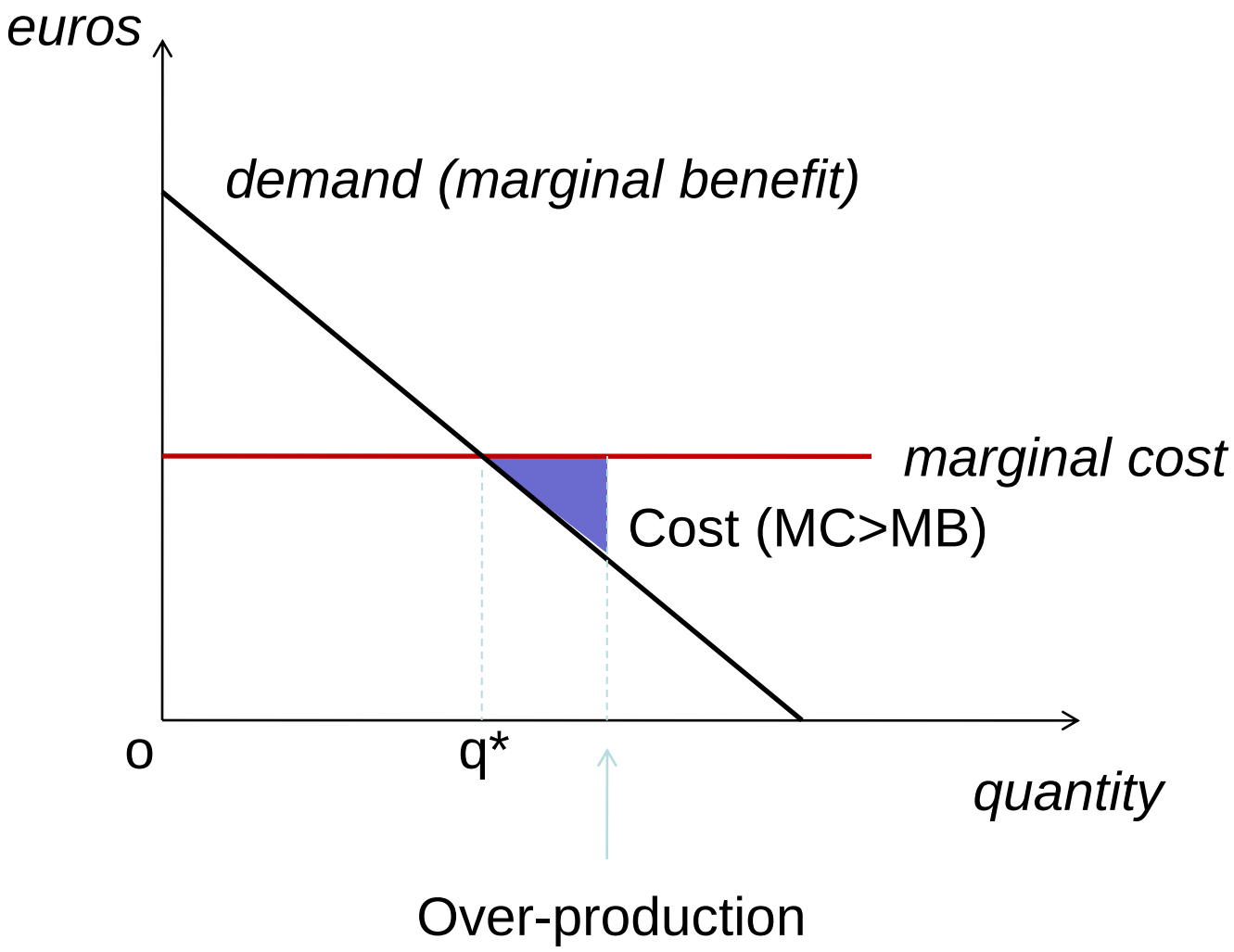
Tools



Tools


euros
demand (marginal benefit)
Cost (MB>MC)
marginal cost
o
q*
quantity
Under-production

Tools

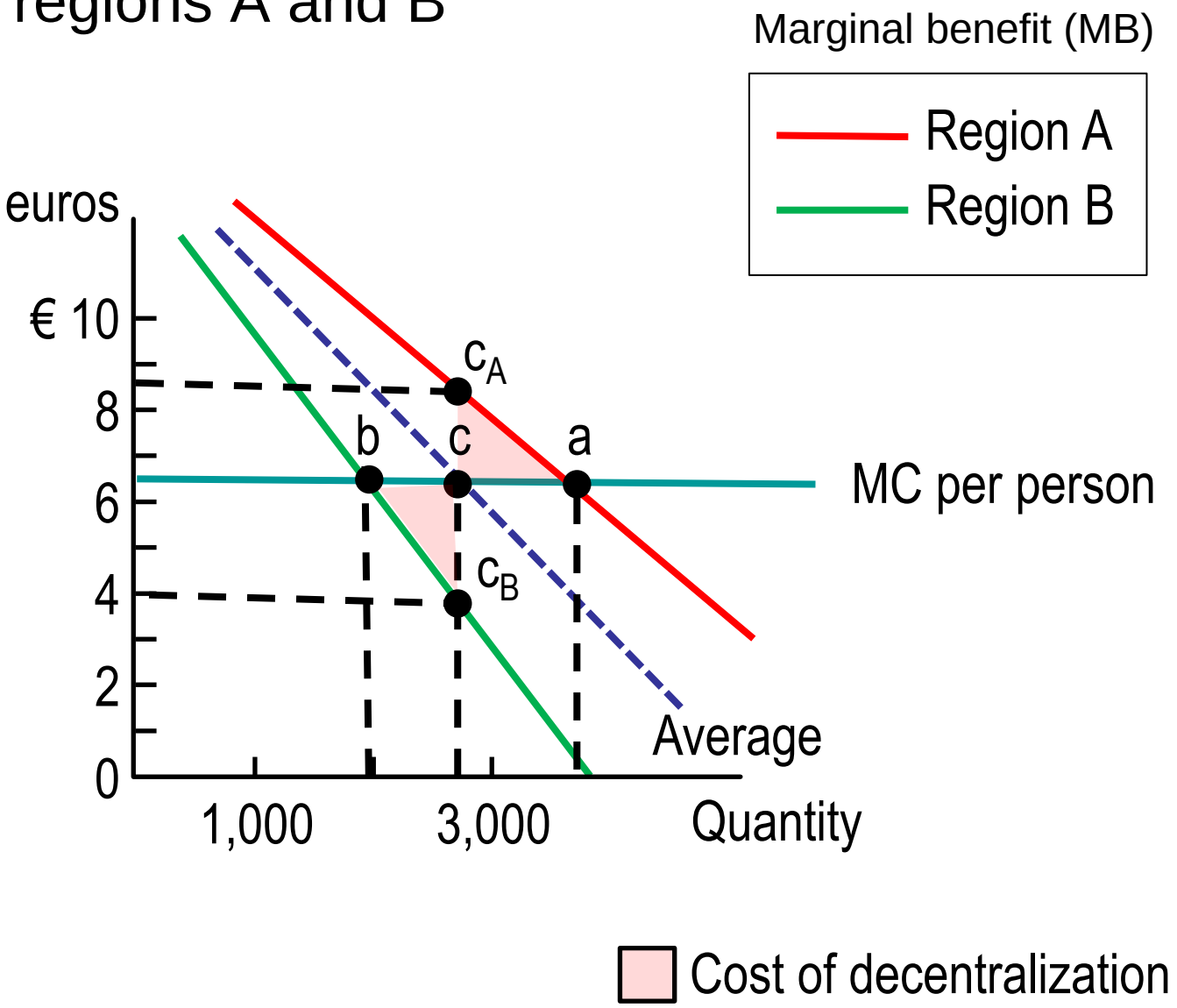

euros
demand (marginal benefit)
marginal cost
Cost (MC>MB)
o
q*
quantity
Over-production

Diversity and local information

- Consider the case where in two areas:
  - Different preferences;
  - Preferences are a local information.
- One-size-fits-all policies tend to be inefficient since too much for some and too little for others.
- Central government could set different local policies, but Local Government likely to have an information advantage.
- Diversity of preference and local informational advantages argue for setting policy at low level (i.e., close to people).

Diversity and local information

- Two regions A and B



Example: Decentralized solution

- Two regions A and B

$$U_A = -(x-10)^2/2$$
$$U_B = -(x-5)^2$$

- Marginal cost (per capita)

$$MC = 8$$

- Marginal benefits

$$MB_A = dU_A/dx = -(x-10)$$
$$MB_B = dU_B/dx = -2(x-5)$$

- Region A

$$MB_A = MC \Longrightarrow -(x-10) = 8 \Longrightarrow x_A = 2$$

- Region B

$$MB_B = MC \Longrightarrow -2(x-5) = 8 \Longrightarrow x_B = 1$$

Example: Centralized solution

- Two regions, one authority

$$U_C = \frac{1}{2}U_A + \frac{1}{2}U_B = -(x-10)^2 - \frac{1}{2}(x-5)^2$$

- Marginal cost (per capita)

$$MC = 8$$

- Marginal benefits

$$MB_C = dU_C/dx = -(x-10) - 2(x-5)$$

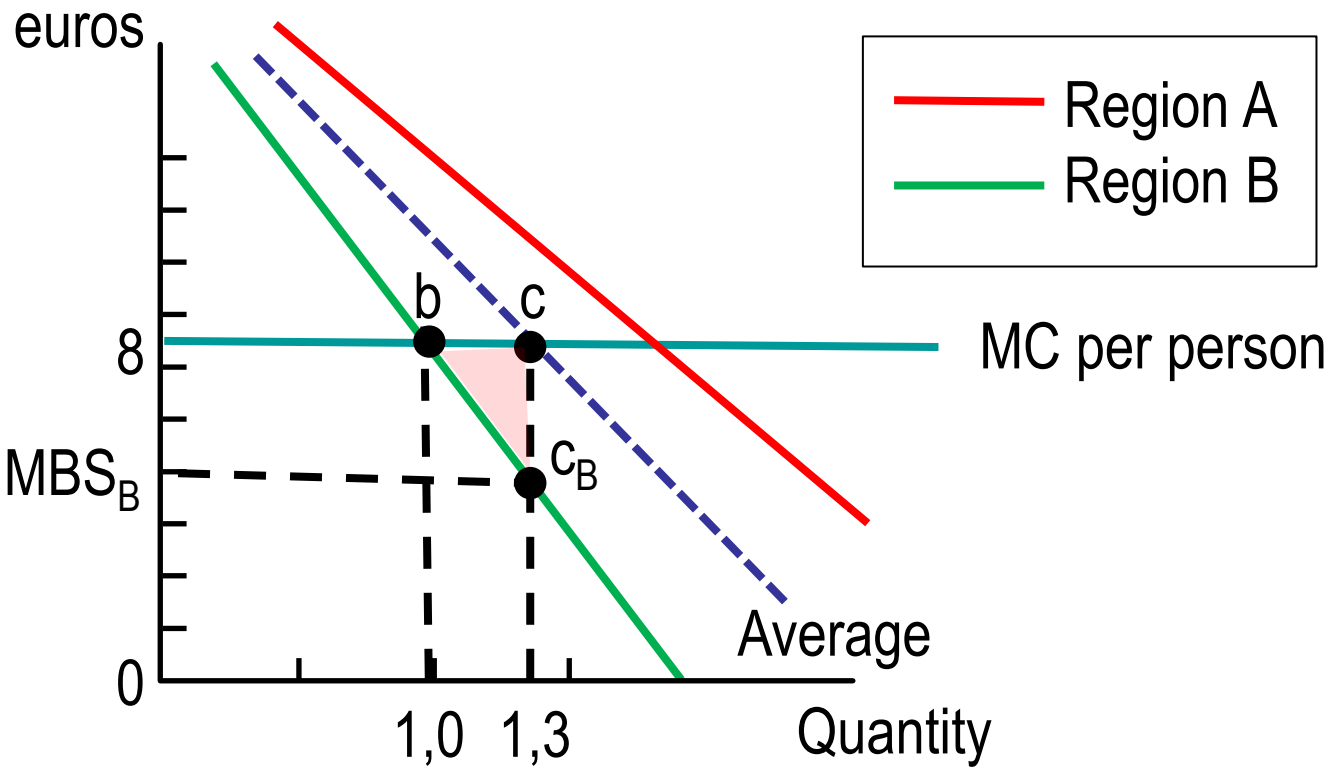
- Solution

$$MB_C = MC \Longrightarrow x = \frac{4}{3} = 1{,}33$$

Cost of centralization (Region B)

- Find the shadow price:

$$MBS_B = MB_B(1{,}3) = -2(1{,}3 - 5) = 7{,}4$$



- Cost is then:

(8–7,4) 0,3 / 2 = 0,09

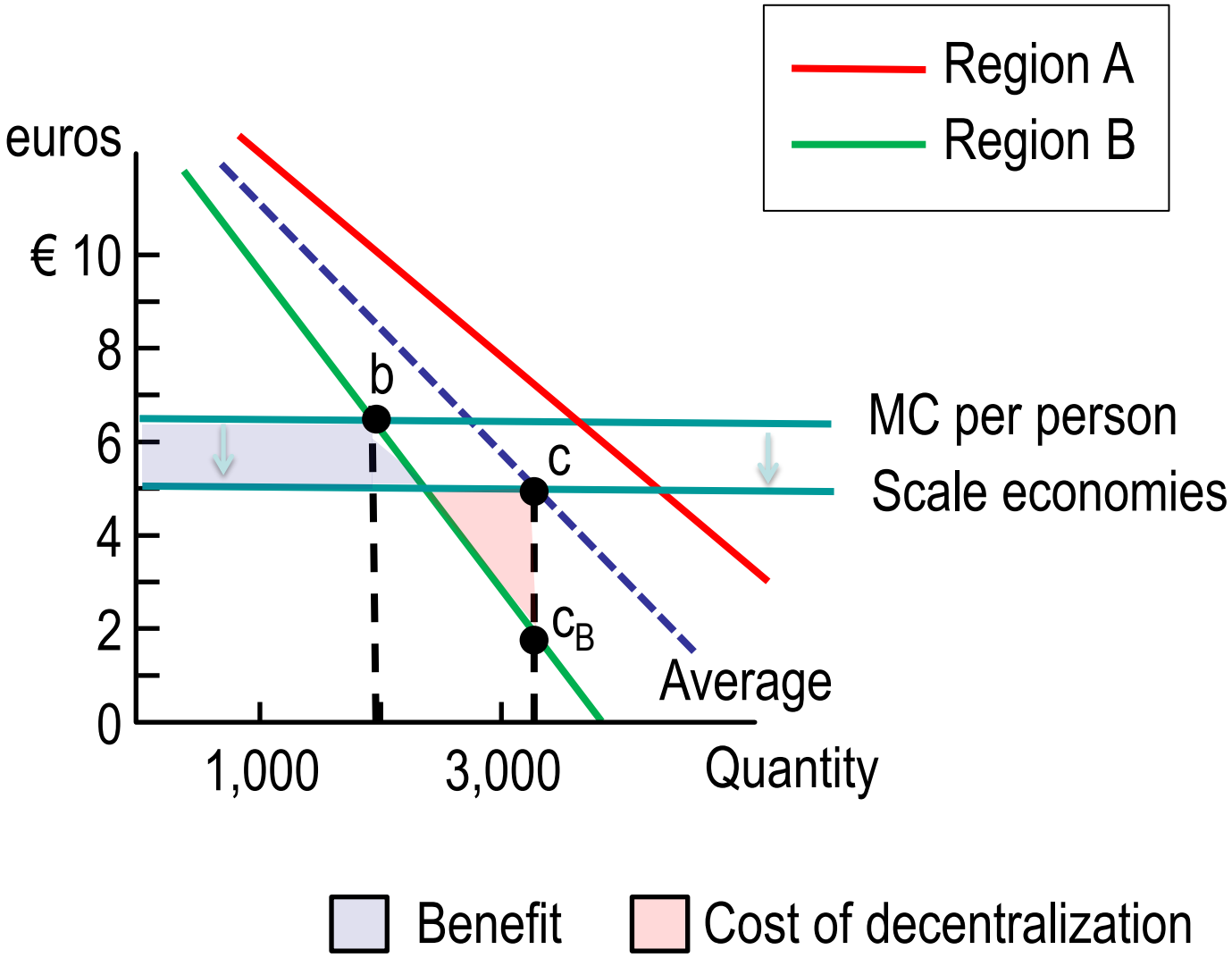
Cost of decentralization

Scale factors

- Producing public goods at higher scale reduced average cost.
- This ends to favor centralization.
- Scale economies tend to favour centralisation and one-size-fits-all to lower costs.
- Example: Foreign policy, Army.

Scale factors

- Two regions A and B: Costs & benefits for B



Example: Centralized solution

- Two regions, one authority

$$U_B = \frac{1}{2}U_A + \frac{1}{2}U_B = -(x-10)^2 - \frac{1}{2}(x-5)^2$$

- Marginal cost (per capita) under decentralization

$$MC = 8$$

- Marginal cost (per capita) under centralization

$$MC = 6$$

- Marginal benefits

$$MB_C = dU_C/dx = -(x-10) - 2(x-5)$$

- Solution

$$MB_C = MC \Longrightarrow x = 2{,}6$$

Example: Comparison

- Decentralized solution for A, production was 2 (see previous slides), thus

$$U_A = -\frac{1}{2}(x-10)^2 = -\frac{1}{2}(2-10)^2 = -32$$

- Decentralized solution for B, production was 1

$$U_B = -(x-5)^2 = -(1-5)^2 = -16$$

- Under a common level of government production is 2,6, it follows:

$$U_A = -\frac{1}{2}(2{,}6-10)^2 = -27{,}4$$

$$U_B = -(2{,}6-5)^2 = -5{,}8$$

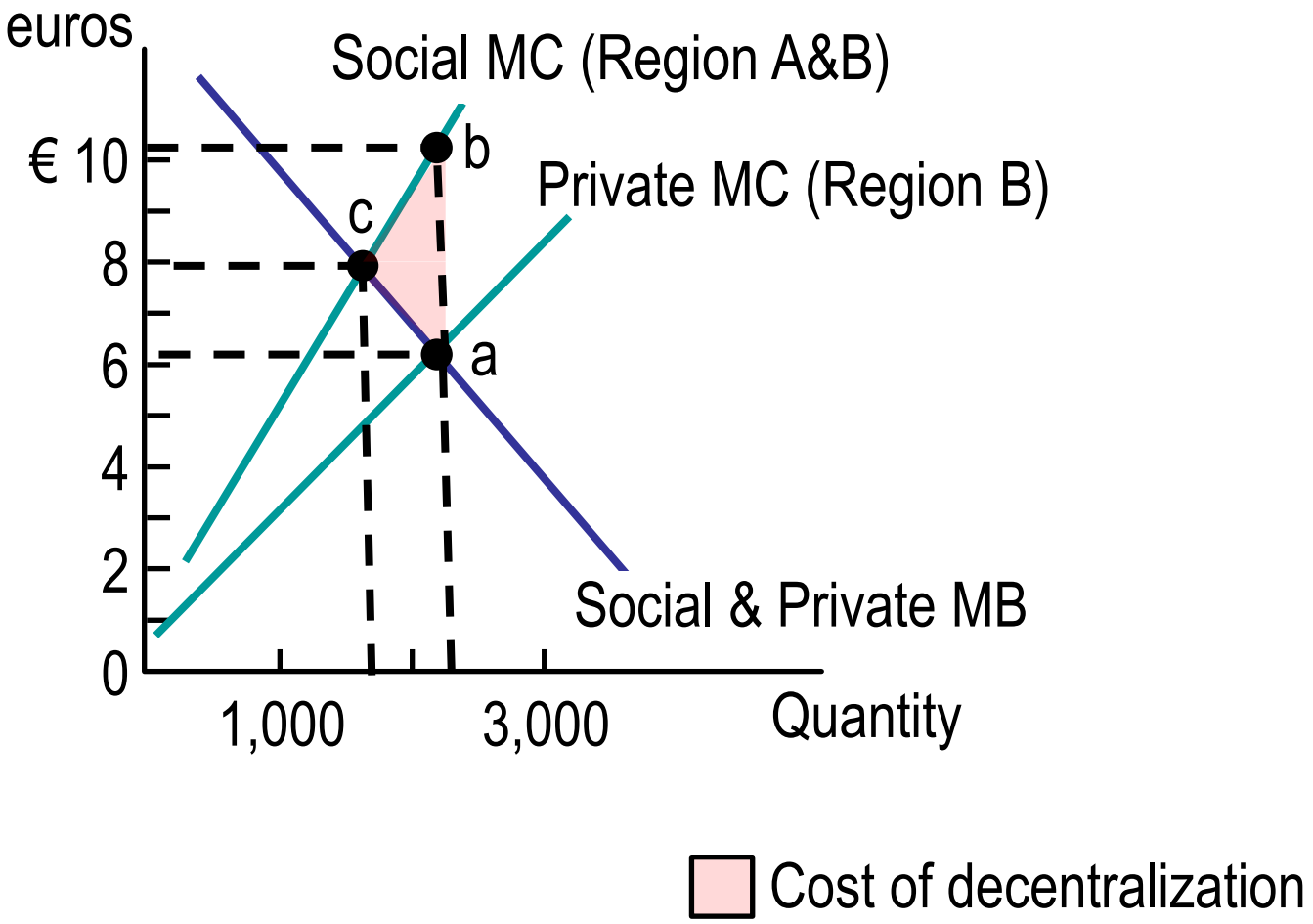
- Recall that we are using cost functions, A gains 14% and B 64% for centralization!

Spillovers (externalities)

- Local governments tend to underappreciated the positive or negative impact on other jurisdictions. (Passing Parade parable).
- Negative and positive spillovers argue for centralization.

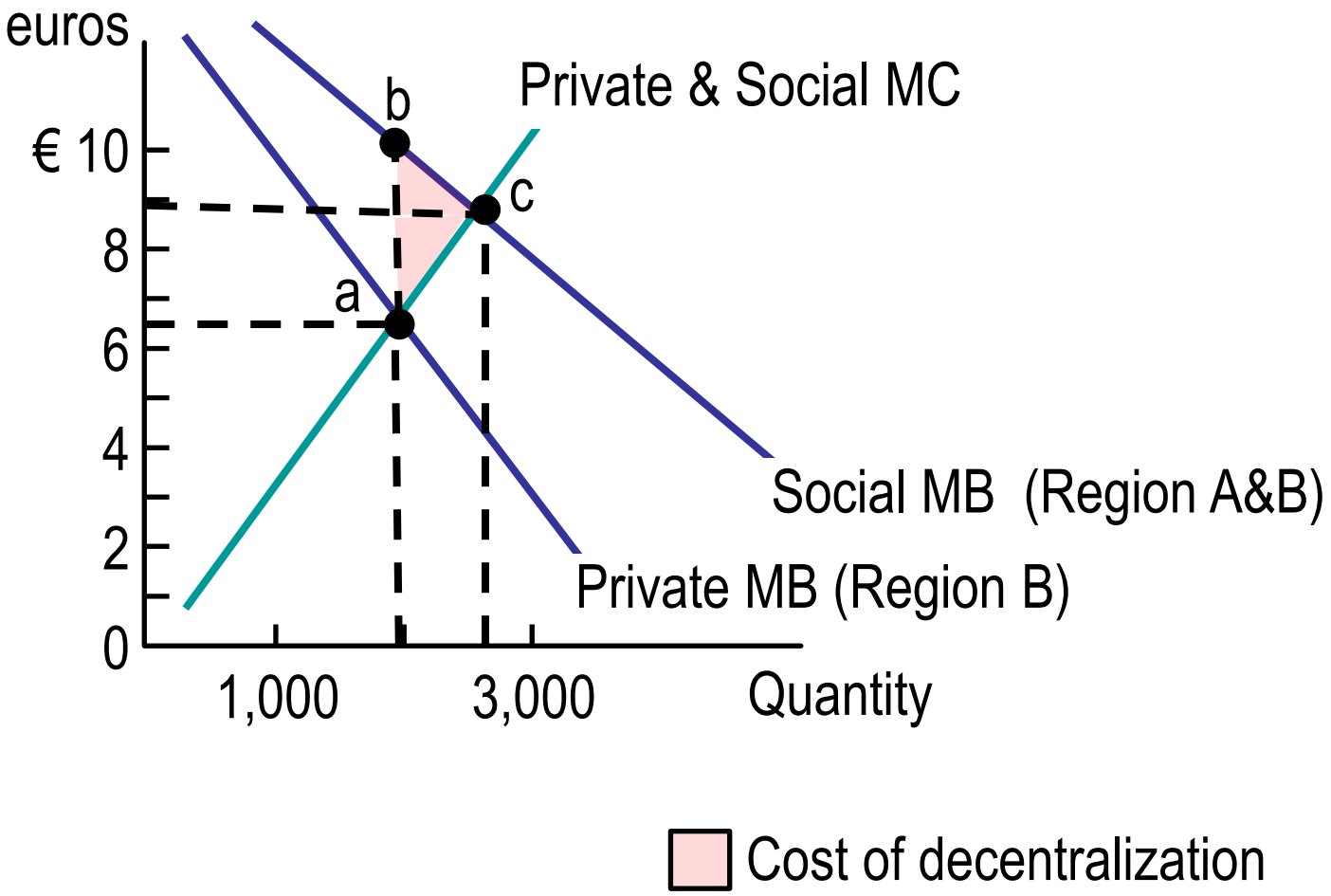
Spilllovers

- Negative spillover (e.g., CO2 emission law)



Spilllovers

- Positive spillover (e.g., public investment in R&D)



Example: Decentralized solution

- Two regions A and B

$$U_A = -(x_A - 10)^2/2 + x_B/10$$
$$U_B = -(x_B - 5)^2 + x_A/10$$

- Marginal cost (per capita): $MC = 8$
- Marginal benefits

$$MB_A = dU_A/dx = -(x_A - 10)$$
$$MB_B = dU_B/dx = -2(x_B - 5)$$

- Region A

$$MB_A = MC \Longrightarrow -(x_A - 10) = 8 \Longrightarrow x_A = 2$$

- Region B

$$MB_B = MC \Longrightarrow -2(x_B - 5) = 8 \Longrightarrow x_B = 1$$

- Welfare for A? (similar for B)

$$U_A = -(2 - 10)^2/2 + 1/10$$

Example: Centralized solution

- Two regions, one authority

$$U_B = \frac{1}{2}U_A + \frac{1}{2}U_B = -(x-10)^2 - \frac{1}{2}(x-5)^2 + \frac{x}{5}$$

- Marginal cost (per capita)

$$MC = 8$$

- Marginal benefits

$$MB_C = \frac{dU_C}{dx} = -(x-10) - 2(x-5) + 1$$

- Solution

$$MB_C = MC \Longrightarrow x = 6{,}7$$

- Welfare for A is $-4{,}77$ (instead of $-31{,}0$) and for B is $-2{,}22$ (instead of $-15{,}8$).

Democracy as control mechanism

- If policy is in hands of local officials and these are elected, then citizens' votes have more precise control over what politicians do.
- High level elections are take-it-over-leave-it for many issues since only a handful of choices between promise packages (parties/candidates) and many, many issues.
  - Example of such packages:
    - Foreign policy & economic policy.
    - Centre-right's package vs. Centre-left's package.
    - At national level, can't choose Centre-right's economics and Centre-left's foreign policy.

Democracy as a control mechanism

- If policy is in the hands of local officials and these are elected, then citizens' votes have more precise control over what politicians do.
- High level elections are take-it-over-leave-it for many issues since only a handful of choices between promise packages and many issues.
- This logic is important: it underpins the basic presumption that decisions should be made at the lowest practical level of government (i.e., as close to the voters as possible).

Jurisdictional competition

- Voters influence government they live under via:
  - voice ⇒ voting, lobbying, etc.
  - exit ⇒ change jurisdictions (e.g. move between cities).
- While exit is not a option for most voters at the national level, it usually is at the sub-national level. And more so for firms.
  - Since people/firms can move, politicians must pay closer attention to the wishes of the people.
  - With centralized policy making, this pressure evaporates.

Summing up

- Diversity of preference and local conditions argues for setting policy at low level. One-size-fits-all policies tend to be inefficient since too much for some and too little for others.
- Scale economies tend to favor centralization and one-size-fits-all to lower costs.
- Spillovers argue for centralization. Local governments in fact tend to underappreciated the positive or negative impact on other jurisdictions.
- Democracy as a control mechanism favors decentralization so voters have finer choices.
- Jurisdictional competition favors decentralization to allow voters a choice.