ECON 4921: Lecture 10

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Roadmap

1. Introduction
2. Institutions and Economic Performance
3. The Firm
4. Organized Interest and Ownership
5. Complementarity of Institutions
6. Institutions and Commitment
7. Agency problems: Voters- Politicians-Bureaucrats
8. **Fiscal Federalism**
9. System Competition

Fiscal federalism

- Fiscal federalism (FF):
  - Hierarchical structure of autonomous government

- Key issues:
  - Responsibility for production of public services?
  - Responsibility for redistribution?
  - Responsibility for taxation?

First vs second generation FF

- FGFF (Musgrave, 1959, Oates, 1972)
  - Largely normative
  - Benevolent policymakers
- SGFF (described by Weingast, 2009)
  - Politicial institutions do not necessarily provide incentives to maximize citizens welfare
  - Common pool problems:
    - Centralized provision of local public goods (e.g. Besley and Coate, 2003)
    - Fiscal competition (e.g. Zodrow and Miezkowski, 1986, Wildasin, 1991)
    - Soft budget constraints (e.g. Inman, 2003, Fiva, 2007)

Plan

- Which level of government should be responsible for provision of local public goods?
  - First: Oates' decentralization theorem (FGFF)
  - Then: Discussion based on common pool problems stressed by SGFF.

Model

- Two regions (i=1,2)
- Identical households within region.
- Population size normalized to 1.
- Utility of household in region i :

$$u_i = u(g_i, g_j, \theta_i, x_i)$$

g_i – local public good
θ_i – willingness to pay for g_i
x_i –private good

- u_i linear in x_i :

$$u_i = u(g_i, g_j, \theta_i) + x_i$$

- Budget constraint:

$$x_i = X_i - \tau_i$$

X_i – inital level of x_i
τ_i- tax

  - One unit of g_i can be produced with one unit of X_i (no returns to scale).
- Benevolent planner (with utilitaristic preferences).

Standardmodellen (forts.)

- Decentralized solution

$$Max\ (\mathrm{u_i})_{g_i,\tau_i}\ \ \text{s.t. } \mathrm{g_i} = \tau_i,\ \text{i=1,2}$$

F.O.B. $\quad \dfrac{\partial u_1(g_1,g_2,\theta_1)}{\partial g_1} = 1\ ,\quad \dfrac{\partial u_2(g_2,g_1,\theta_2)}{\partial g_2} = 1$

- Centralized solution

$$Max\ (\mathrm{u}_1 + u_2)_{g_1,g_2,\tau_1,\tau_2}\ \ \text{s.t. } g_1 + g_2 = \tau_1 + \tau_2\ \text{og } g_1 = g_2$$

Externalities

F.O.B. $\quad \dfrac{1}{2}\left(\dfrac{\partial u_1(g_1,g_2,\theta_1)}{\partial g_1} + \boxed{\dfrac{\partial u_2(g_2,g_1,\theta_2)}{\partial g_1} + \dfrac{\partial u_1(g_1,g_2,\theta_1)}{\partial g_2}} + \dfrac{\partial u_2(g_2,g_1,\theta_2)}{\partial g_2} \right) = 1$
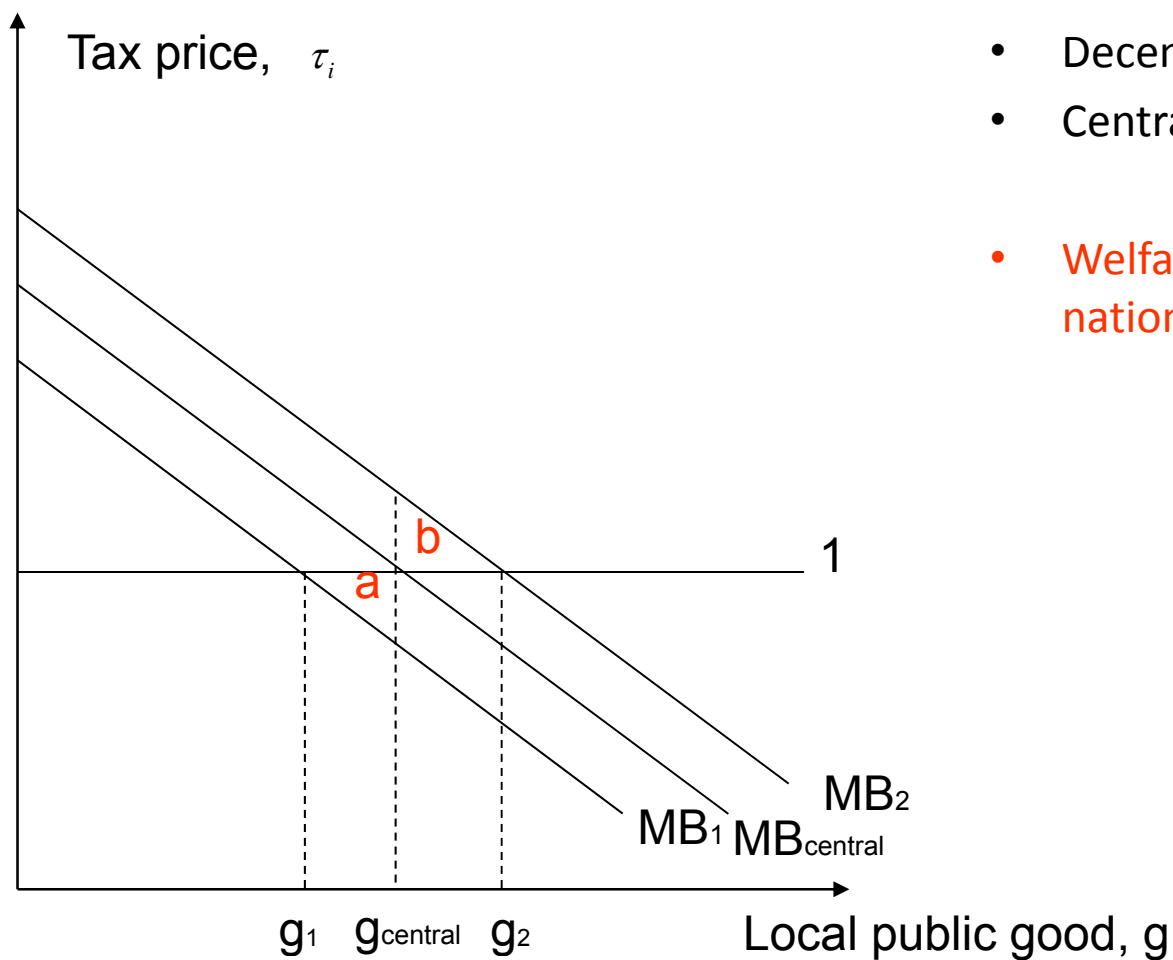
Oates' decentralization theorem

	Externalities? $\left(\dfrac{\partial u_i(g_i, g_j, \theta_i)}{\partial g_j} \neq 0 \right)$	Diff regions? $(\theta_1 \neq \theta_2)$	Decentralized vs centralized provision?
1	NO	NO	Irrelevant
2	NO	YES	Decentralized
3	YES	NO	Centralized
4	YES	YES	Unclear

Oates' decentralization theorem

(assume: no externalities)

Tax price, τ_i

- Decentralized solution: (g_1, g_2).
- Centralized solution, $(g_{central}, g_{central})$.

- Welfare loss from standardized national solution, a+b.

b

a

1

MB_2

MB_1 $MB_{central}$

g_1 $g_{central}$ g_2

Local public good, g

Oates' decentralization theorem

"The provision of public services should be located at the lowest level of government encompassing, in a spatial sense, the relevant benefits and costs" (Oates, 1999).

Tax competition

- Problem with decentralization stressed above: utility externality

- In addition: tax level in one region affect other regions budget.

- Why?
  - Public sector services financied by taxes on mobile taxbases
  - Strategic interaction among governments
  - Fiscal externality

- Utility externality exists only in a decentralized structure.
- Fiscal externality depends endogenously on degree of decentralization

Tax competition (cont.)

- Tax competition can give sub-optimal level of public spending.
  - MC by tax financing perceived as higher than society's actual MC.
  - Strategic behavior: zero-sum game
  - Welfare loss in comparison to setting where every region act as if tax base where immobile.

- Tax competition model formalized by Zodrow and Mieszkowski (1986), but topic in public finance for a long time:

  - Break, 1967: *"Active tax competition, in short, tends to produce either a generally low level of state-local tax effort or a state-local tax structure with strong regressive features"*.

  - Oates, 1972: *"The result of tax competition may well be a tendency toward less than efficient levels of output of local services"*.

Selection principle

- Sinn (1997): *"Since governments have stepped in where markets have failed, it can hardly be expected that a reintroduction of a market through the backdoor of systems competition will work. It is likely to bring about the same kind of market failure that justified government intervention in the first place."*

Tax competition as a disciplining device

- But welfare consequences of tax competition is not trivial…
    - Brennan and Buchanan, 1980: *"The primary purpose of federalism … is to create competition between jurisdictions"*
    - Second best solution: Tax competition restrains a public sector that otherwise would have been too large.
    - Competition among jurisdictions limits ability to abuse its policy authority.
    - Incentives to pursue policies that provide health local economy

Yardstick competition as a disciplining device

- Introduced by Salmon (1987) and Besley andCase (1995).
- Information assymmetry between politicians and voters
- Politicians can be comparatively evaluated→ Information externality.
  - Key assumption: voters can identify regions that are hit by same shock.
- Yardstick competition allow voters to identify politicians of low quality → welfare gain.

Transfers

- So far: decentralization *or* centralization

- But we most often see, decentralization with transfers from central government.
- Why?

Table 1

Descriptive Statistics for the Measures of Fiscal Decentralization

Country	Tax Revenue Decentralization[a]					Expenditure Decentralization[a]				
	Mean	Standard Deviation	Coefficient of Variation	Minimum	Maximum	Mean	Standard Deviation	Coefficient of Variation	Minimum	Maximum
Australia	20.35	1.59	0.08	18.84	23.09	41.23	0.99	0.02	40.11	42.63
Austria	3.44	0.12	0.04	3.20	3.54	30.85	0.70	0.02	29.88	31.80
Belgium	12.68	8.18	0.64	5.94	24.24	11.90	1.15	0.10	10.97	13.65
Canada	51.73	1.97	0.04	48.21	54.22	57.58	0.95	0.02	56.34	58.82
Denmark	29.46	1.54	0.06	27.44	31.80	45.42	1.74	0.04	43.56	48.00
Finland	26.25	1.57	0.06	24.71	29.15	37.95	2.07	0.06	35.11	40.11
France	12.30	7.59	0.62	1.72	19.17	18.07	2.36	0.13	16.47	22.81
Germany	7.46	0.35	0.05	6.81	7.77	42.02	2.22	0.05	39.26	45.65
Ireland	4.50	3.16	0.70	2.34	10.39	25.21	1.90	0.08	23.32	28.28
Japan	33.05	2.21	0.07	29.71	36.48	43.46	0.00	0.00	43.46	43.46
Netherlands	3.76	1.03	0.27	2.13	5.12	25.09	1.43	0.06	23.34	26.96
Norway	27.02	3.08	0.11	23.14	31.05	34.66	2.81	0.08	31.81	38.90
Portugal[b]	1.55	1.32	0.85	0.28	3.10	8.74	3.95	0.45	3.46	12.41
Spain[b]	12.01	6.17	0.51	7.17	22.40	23.02	9.02	0.39	10.14	31.69
Sweden	41.33	3.90	0.09	35.91	46.39	37.83	4.17	0.11	33.25	44.07
Switzerland	56.84	1.82	0.03	53.88	59.06	51.77	3.76	0.07	47.30	56.86
United Kingdom	10.34	4.30	0.41	4.83	13.50	25.52	3.25	0.13	21.90	31.03
United States	37.24	1.04	0.03	35.99	38.81	44.90	2.29	0.05	41.44	47.91

Notes: [a] Tax revenue decentralization is based on Stegarescu (2005), and expenditure decentralization is based on GFS data, period averages.
[b] Data before 1977 are not included for Portugal and Spain. There are additionally eight missing variables on *ExpDec* (five periods for Japan, and one period each for Belgium, Portugal, and Switzerland).
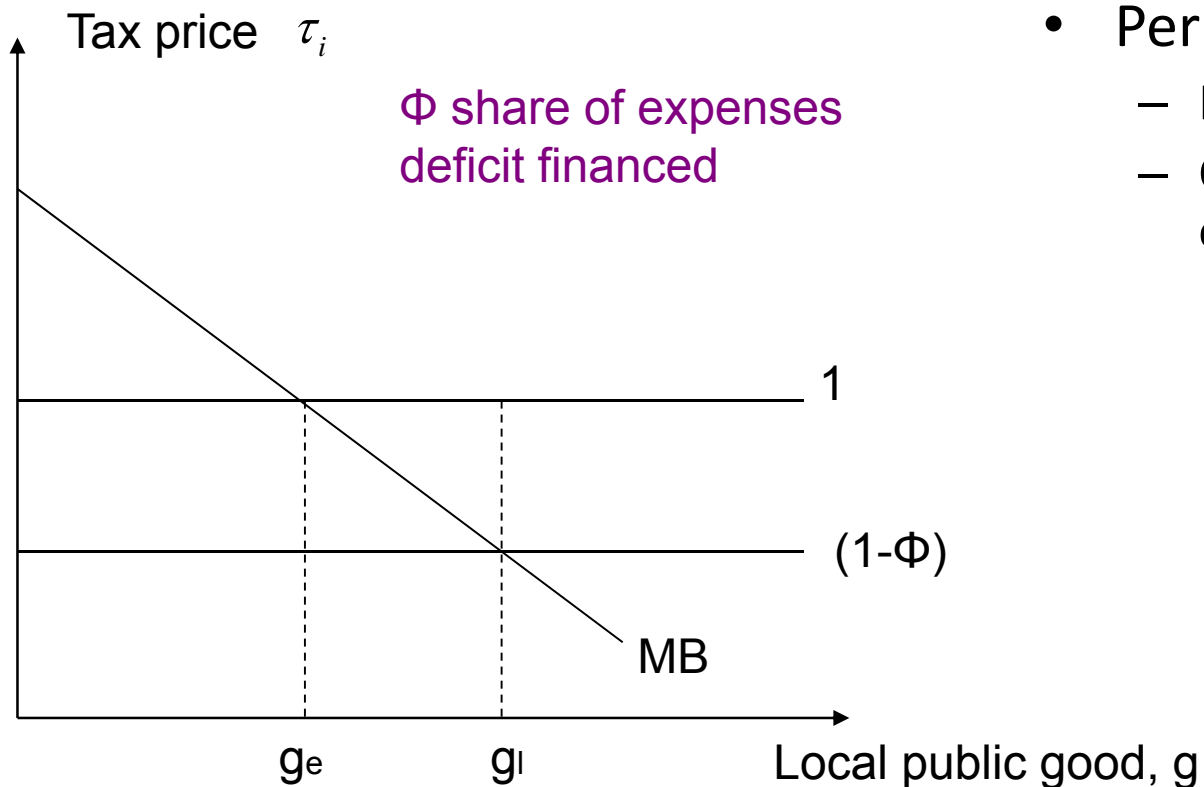
Transfers

- ## Vertical fiscal imbalance
  - Asymmetry between costs and revenues at the local level

- ## Worry:
  - Incentives to opportunistic behavior, e.g. soft budget constraints

Transfers

- *The term soft budget constraint describes the situation when an entity (say, a province) can manipulate its access to funds in undesirable ways"* (Rodden et al., 2003).
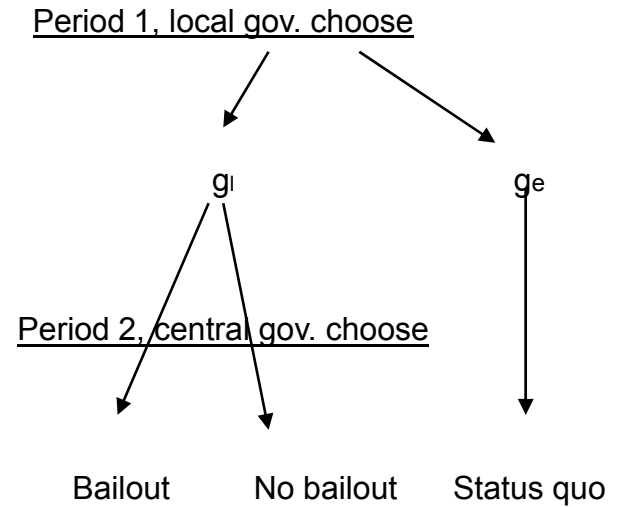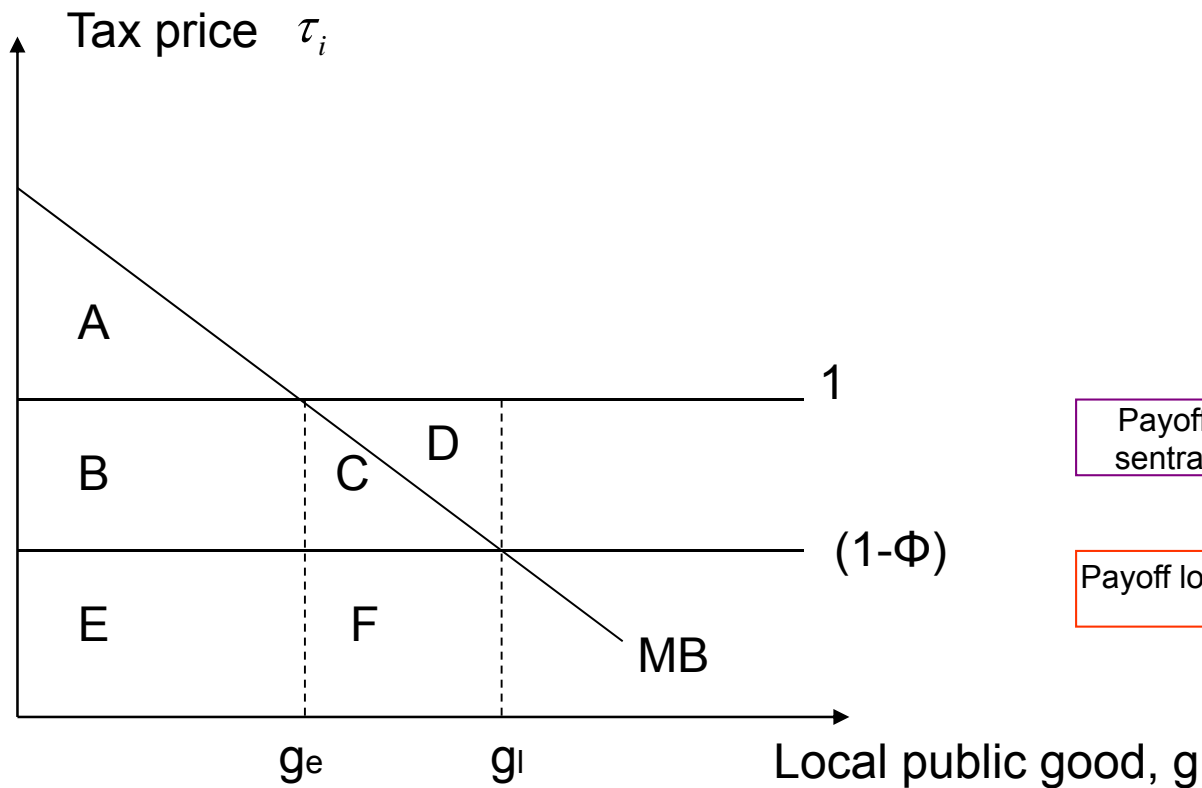
Default-bailout game

- Period 1:
  - Loc. Gov. choose g_e (tax financing) or g_l (partial deficit financing)

- Period 2:
  - If g_l → fiscal crisis in loc gov.
  - Central gov. choose to bail out or not

Default-bailout game

1. Loc. Gov. prefer g_l given bailout, but g_e without bailout

2. Aggregate inefficiency

3. Central gov. prefer bailout if loc. Gov choose gl?

Tax price τ_i

Period 1, local gov. choose

g_l g_e

Period 2, central gov. choose

Bailout   No bailout   Status quo

A

1

D

B   C

(1-Φ)

E   F

MB

g_e g_l Local public good, g

	Bailout	No bailout	Status quo
Payoff sentral	-(B+C+D)	?	0
Payoff lokal	A+B+C	A-D	A

Evt. -1/N(B+C+D)

Time inconsistency problem

- Potential substantial costs by no –bailout policy:
    1. Financial costs ('spillovers')
    2. Distributive costs (future tax payers vs. General tax payers)
    3. Political costs (who is responsible?)
- Loc. Gov. Behavior depends on expectations on centr. Gov. Behavior.
- Ex ante optimal policy (no bailout) is not optimal ex post.
    - Strategic deficit financing and soft budget constraints.
- Source of problem built into system.
    - Φ endogenous in system with multiplie tiers.

Empirical relevance

- ## Germany's
  - States with responsibility for large share of gov. Spending
  - Little own-source revenue
  - Shared taxes
  - Objective of grant system: horizontal equalization

  →cent. Gov. Promise of no-bailout not credible.

- ## Canada /US
  - Much own-source revenue
  - Reputation built over time

  → cent. Gov. Promise of no-bailout credible.

Potential solutions?

- 'Rules rather than discretion' (Kydland og Prescott, 1977).
    - Balanced budget rules
    - Delegation to independent unit

    - Limit incentives to opportunistic behavior

        - Clear connection between spending and taxation

        - Own-source revenues.

        - Accountability

    - *"Subnational governments that lack independent sources of revenue can never truly enjoy fiscal autonomy; they may be – and probably are – under the thumb of the central government"* (McLure, 1998).

    - Alternatively: simple, transparent grant system based on objective criteria

Market preserving federalism

(F1) *Hierarchy*. A hierarchy of governments exists with each level having a *delineated scope of authority*.

(F2) *Subnational autonomy*. Subnational governments have primary both *local regulation of the economy and authority over public goods and service provision*.

(F3) *Common market*. The national government provides for and polices a *common market* that allows factor and product mobility.

(F4) *Hard budget constraints*. All governments, especially subnational ones, face *hard budget constraints*.

(F5) *Institutionalized authority*. The allocation of political authority is *institutionalized*.

Market preserving federalism

- The absence of subnational policy authority (F2) inhibits the subnational competitive process and the ability of subnational governments to tailor policies to local conditions.
- The absence of a common market (F3) directly hinders competition among jurisdictions, so that subnational governments are more likely to engage in corruption, rent-seeking, and inefficient resource allocation. Restrictions on factor mobility have a similar effect.
- The absence of a hard budget constraint (F4) allows subnational governments to live beyond their means so that they engage in more corruption, non-remunerative benefits to interest groups, and endless subsidies to inefficient enterprises.
- Finally, the absence of institutionalized authority (F5) allows the center to threaten subnational jurisdictions who seek policy independence.

Next

- Lecture 11: in a political economy setting, the decentralization theorem get a twist (Besley and Coate, 2003).

- Lecture 12: What happens when local governments supply redistributive services? (Wildasin,1991)