LECTURE 4

Politics of Public Economics

Leonid Polishchuk

Department of Economics, Higher School of Economics

If It's Public, It's Political

All public economics decisions are indeed *public* – they involve numerous individuals and touch upon various interests in economy and society. Tax rules, laws, regulations etc. are uniform and cannot be customized to diverse individual preferences. This inevitably causes conflicts and tradeoffs.

Hence public economic decisions are necessarily *political* – they are outcomes of political processes, and reflect conflicting preferences and the allocation of political power.

Key Divide

The main dichotomy in the politics of public economics is between democracy and authoritarianism. In democracies, public economic decisions are driven, even if imperfectly, by societal interests. In autocracies such decisions serve the interests of the ruling class, and put the principal-agent relations between government and society in reverse. In reality there is a vast range of political regimes with various degree of democratic accountability of government to society, with a strong impact on taxes, public expenditures and other government's economic decisions.

Basic Setup (McGuire, Olson, 1996)

t – tax rate, $0 \le t \le 1$;
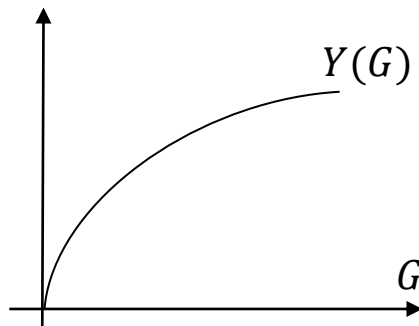
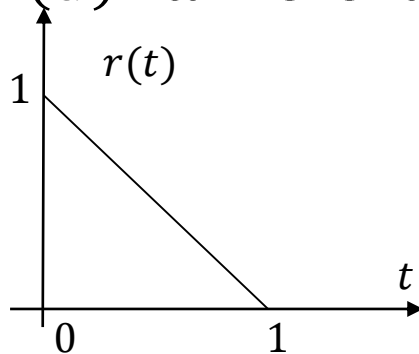$1 - r(t)$ – proportional deadweight loss

G – public good (production input);

$Y(G)$ – potential income

$r(t)Y(G)$ – actual pre-tax income (tax base);

$r(t)Y(G) - G$ – net social welfare

$tr(t)Y(G)$ – tax revenues

Tax and Expenditure Decisions in Democracy and Autocracy

Budget constraints in both regimes are identical, but objectives differ – maximization of social welfare in the former and maximization of revenue surplus in the latter.

Democracy:
$$\max_{t,G}[r(t)Y(G) - G]$$
$$tr(t)Y(G) \geq G$$

Autocracy:
$$\max_{t,G}[tr(t)Y(G) - G]$$
$$tr(t)Y(G) \geq G$$
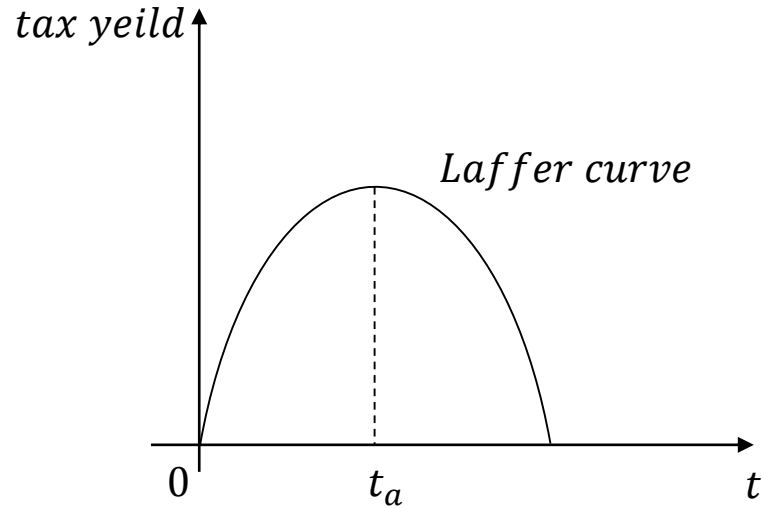
Autocrat's Fiscal Policies

Authoritarian rulers have some incentives to supply public goods and avoid excessively heavy taxes, to maintain their tax base. Budget constraint for them is not binding, and their tax rate t_a maximizes the tax yield $tr(t)$ at the top of the Laffer curve. Some portion of tax revenues $tr(t)Y(G)$ is spent on public goods to maximize the difference between the gross revenues and public goods outlays.
The "invisible political hand" provides a degree of reconciliation of the interests of the   autocrat and society.

Autocrat's Fiscal Policies

Fiscal Policies in Democracy

For a democracy the budget constraint is binding – public revenues' only purpose is to fund public goods, and democratic governments seek the optimal combination of taxes and public expenditures along the budget curve $r(t)Y(G) = G$, which is qualitatively similar to the Laffer curve. The choice is made on the ascending part of the Laffer curve, and hence society's indifference curve $r(t)Y(G) - G$ has a positive slope, which leads to a lower tax rate t_d and higher public good provision G_d.

Democracy and Autocracy Compared

G

Society's indifference curve
$r(t)Y(G) - G = const$

G_d

G_a

Budget line $tr(t)Y(G) = G$

0 t_d t_a t
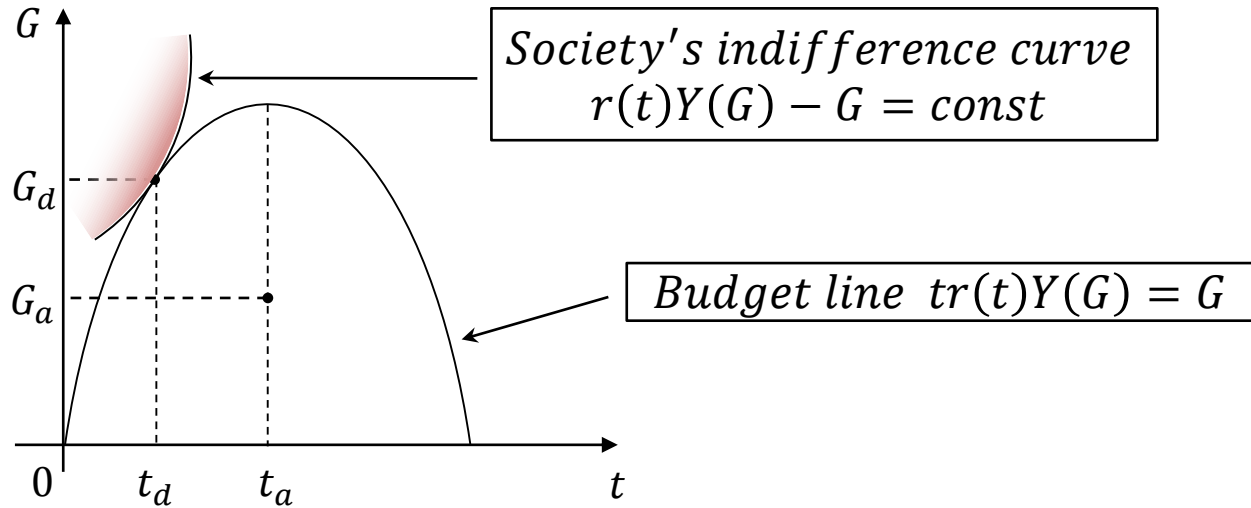
Democracy Does Not Have to Be Perfect

Under imperfect democratic accountability government's fiscal decisions are driven by a combination of interests of the ruling class and society: $[\delta r(t) + (1-\delta)tr(t)]Y(G) - G$ is maximized under the same budget constraint. For small δ the budget constraint is not binding; it becomes binding at some interim level $\delta^*, 0 < \delta^* < 1$, and from that point onwards government's fiscal policies are socially optimal.

Democracy Does Not Have to Be Perfect
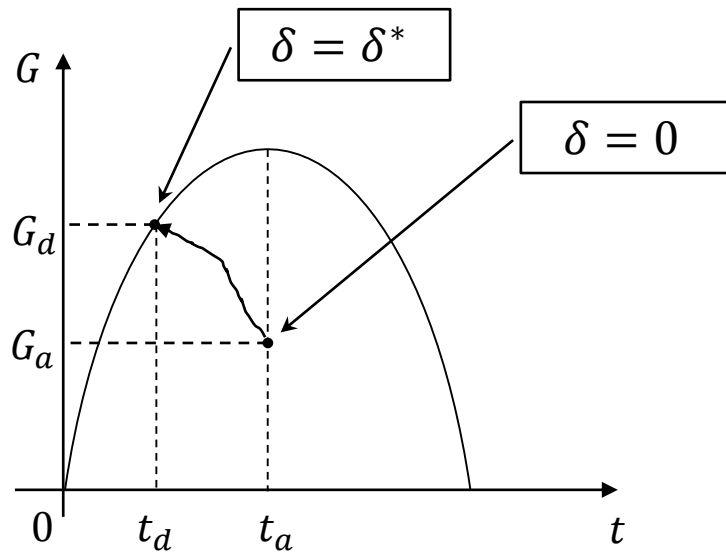
Democracy has Fiscal Problems of Its Own

1)Democratic processes that reconcile diverse interests do not necessarily deliver fiscal public decisions maximizing aggregate social welfare – democracy is sensitive to distributional aspects.
2)Democracy implements a majority will, but the latter as a decision-making rule could lead to contradictions ("Condorcet cycles"). Aggregation of the following three preference profiles: xP_1yP_1z; yP_2zP_2x; zP_3xP_3y, leads to a cyclical majority ranking $xP_myP_mzP_mx$ which is useless in public decision-making.

Preference Aggregation Problem

Could there be a better aggregation rule which does not produce cycles and meets other reasonable requirements?

Arrow's impossibility theorem:
If there are at least three alternatives to choose from, there is no preference aggregation rule $P = F(P_1, \ldots, P_n)$ which meets the following requirements:

- Unrestricted domain
- Pareto efficiency
- Independence of irrelevant alternatives
- Rationality (no cycles)
- Non-Dictatorship
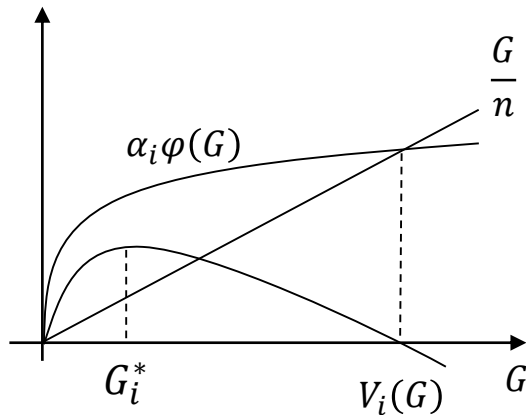
Single-Peaked Preferences

Individual preferences over fiscal decisions are often **single-peaked**

Utility function: $u_i(x, G) = x + \alpha_i \varphi(G), i = 1, \dots, n.$
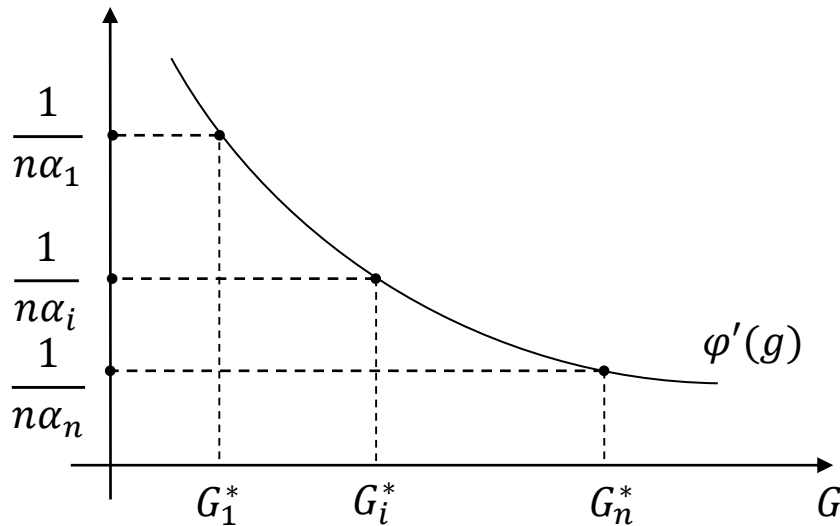
Fiscal burden is shared evenly: $\tau = G/n.$

Preference profile over public good provision is single-peaked:

$$V_i(G) = w_i - \frac{G}{n} + \alpha_i \varphi(G).$$

Diversity of Preferences and Political Conflict

Optimal public policy from agent i's perspective: $\varphi'(G_i^*) = \dfrac{1}{n\alpha_i}$

Income Inequality and Political Conflict

With a flat tax rate, wealthier agents make bigger contributions to the provision of public good: $\tau_i = \frac{w_i}{\overline{w}} \frac{G}{n}$. Agent i's optimal provision of the public good solves the following problem:
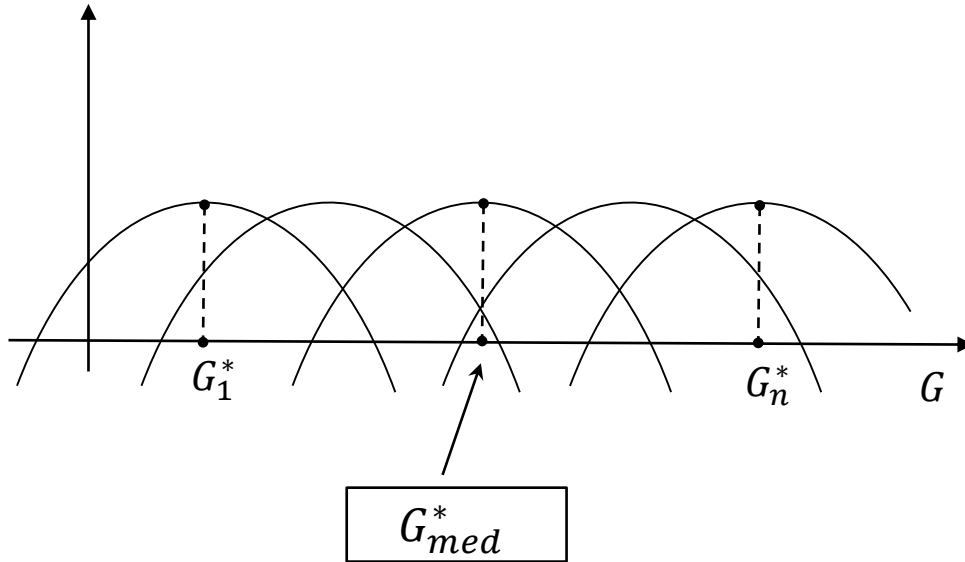
$$\max_{x, G} u(x, G) \text{ s. t. } x + \frac{w_i}{\overline{w}} \frac{G}{n} = w_i$$

Wealthier agents can afford more public goods (income effect), but could be reluctant to pay a higher individual price for it (price effect).

Median Voter Implements Majority Rule

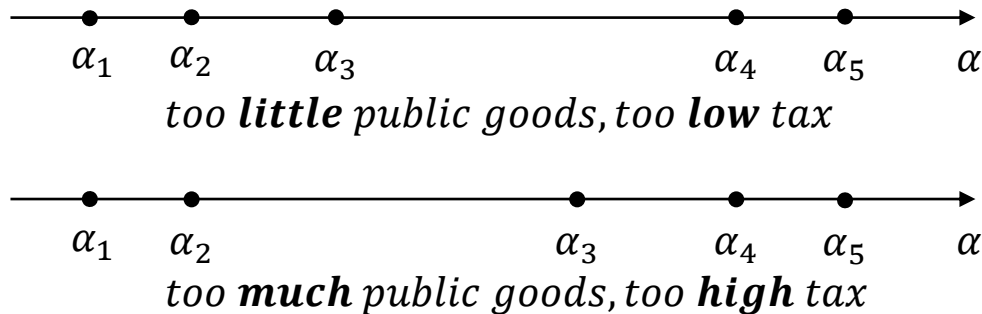Median voter's choice is called **Condorcet winner**

Democracy and Social Efficiency

Social optimum: $\max_{G}[(\sum_{i=1}^{n} \alpha_i)\varphi(G) - G]; \varphi'(G^{opt}) = 1/(n\overline{\alpha});$

Democratic choice: $\varphi'(G^{opt}) = 1/(n\alpha_{med})$

If $\alpha_{med} \neq \overline{\alpha}$, democratically chosen fiscal policies are *not* socially optimal.

$\alpha_1 \quad \alpha_2 \quad \alpha_3 \qquad\qquad \alpha_4 \quad \alpha_5 \quad \alpha$
*too **little** public goods, too **low** tax*

$\alpha_1 \quad \alpha_2 \qquad\qquad \alpha_3 \quad \alpha_4 \quad \alpha_5 \quad \alpha$
*too **much** public goods, too **high** tax*

Polarization Causes Conflict and Potential Inefficiency

When preferences are homogeneous (α_i close to each other) democracy delivers public policies which are close to what is preferred by every voter. Such policies therefore approximate social optimum and do not cause political conflict.

Preference disparity could sway public policies away from social optimum and leaves many voters disgruntled and disappointed of the democratic outcome.

Democracies are shown to be more prosperous and politically stable in more homogeneous nations and societies.

Jointly or Separately?

Provision of public goods exhibits powerful economies of scale which is an argument in favor of big states (or subnational jurisdictions). Smaller units might have difficulties in separately funding universities, health care facilities, military, major infrastructure etc.
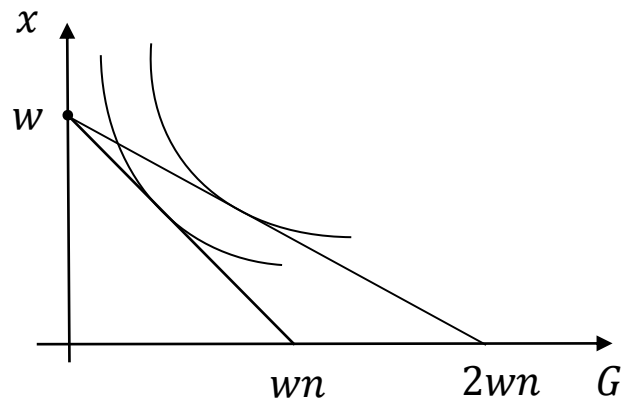

Economic benefits of integration:

$$\max_{x,G} u(x, G)$$

s.t. $x + \dfrac{G}{n} = w$ or s.t. $x + \dfrac{G}{2n} = w$

Public Economics of Separation

Diverse preferences could be an argument for separate provision of public goods, perhaps through a political break-up of a bigger jurisdiction. The economy of scale is sacrificed in favor of customized provision of public goods with tax-expenditure mixes closer to what is preferred by different regions. Indeed, heterogeneity of social, cultural, linguistic and religious preferences which affect public goods provision are major causes of   break-up and cession in modern world.
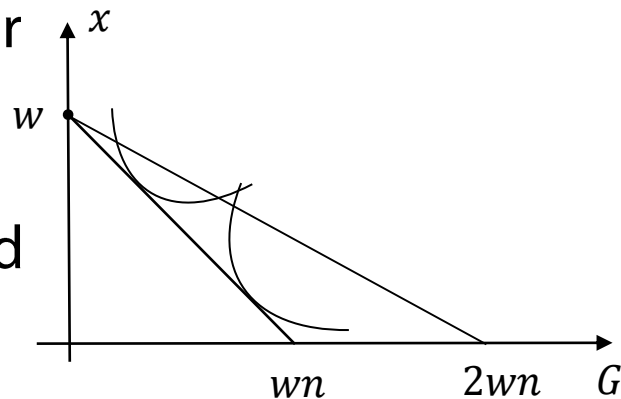
How to Preserve Economy of Scale under Diversity?

Public policies should meet the "equal treatment" principle, i.e. the same rule for everyone. If it cannot be implemented as the same tax and access to public goods, then a way out could be toll (paid-for) public good, whereby everyone pays the same price per public good unit. Restricting access to a public good is economically inefficient (greater access comes at no extra cost to the society and produces additional benefits), but it allows to reap some economy of scale gains without violating the "equal treatment" rule.

Demand for Public Good

$$\max_{x,G} u_i(x, G) \text{ s.t. } x + pG = W \implies G = D_i(p), i \in \{1,2\}$$
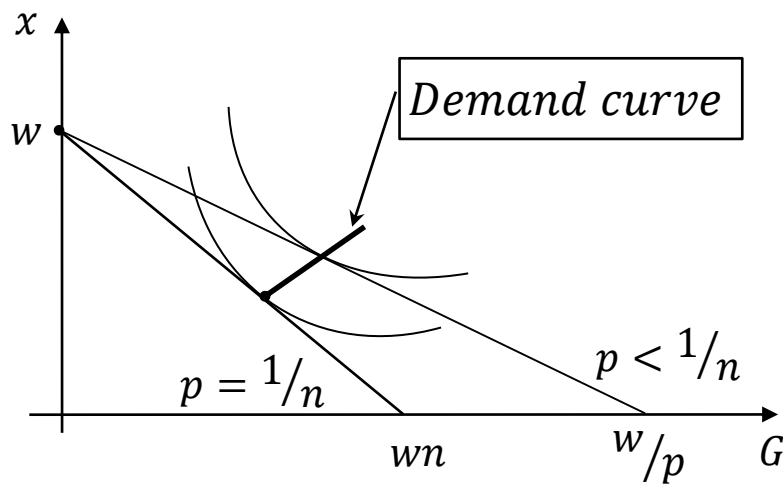
Toll Calculus

Budget constraint for toll public good provision:

$$\max(D_1(p), D_2(p)) \leq np(D_1(p) + D_2(p))$$

The above constraint is satisfied as a strict inequality for $p = 1/n$ (which corresponds to separate funding of unlimited-access public good in each jurisdiction), and hence also holds for some $p < \dfrac{1}{n}$, which is a Pareto-improvement over separate provision, and meets the "equal treatment" requirement.