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Political Competition and the Study of Public Policy

Lecture 1 *A neo-classical political economy approach to normative policy analysis in a liberal democracy*

Lecture 2 *Chaos and equilibrium*

Lecture 3 *What exactly is electoral competition, and how can it be measured?*

Lecture 1 A neo-classical political economy approach to normative policy analysis

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Major traditions in normative economics

- Social planning
- Public finance
- Exchange-contractarianism

Some problems with social planning

- Information problems lead to ad hoc policy prescriptions
- At odds with the classic solution to the information problem, which is….
- No accounting for the costs or consequences of collective choice. In particular, political feasibility (consistency with electoral equilibrium) is ignored.

A (neo-classical) political economy approach to normative analysis

- Starts in a different place and asks different questions than social planning, though social well-being is also a primary objective.

- Differs from exchange-contractarianism (in ways described later), but shares some of its foundations:

i) *An observation*: Every policy in a liberal democracy arises as the outcome of competition among parties for support from a diverse electorate. This process plays an important role in determining how resources are used in both public and private sectors.

ii) *Main premise*: A full understanding of either part of the polity must consider the relationship between political competition and resource use, whether we want to understand policy choices, make normative judgements, or formulate alternatives.

There are three steps in the neo-classical approach, paralleling the steps of contemporary welfare economics:

I Choice of a standard of reference appropriate for a liberal democracy

II An analysis of conditions under which a competitive political equilibrium will result in such an outcome

III An analysis of what can go wrong and why

(IV? We might also include a fourth step: Give advice - to whom?)

Step one: choosing a standard of reference

- There are other features besides the excess burden of taxation that make political institutions look inefficient:
  - Behind written constitutions and social conventions which protect private property and civil and political rights lies a pluralist distribution of political power as well as the principle of countervailence, or competition among centers of power (Riker 1982, Gordon 1999, Congleton 2011).
  - These features of a democracy show up in part as constraints that make it impossible for the state to achieve the same allocative efficiency as a market…….

- For example:
  - Buying votes through outright bribery is illegal, large contracts must go to firms which offer the lowest price, and merit principles imposed on public sector employment;
  - There are rules forcing executives to seek approval from the legislature to spend revenues (Cox and Weingast 2018);
  - Veto points make redeployment of public resources difficult (Tsebelis 2002);
  - Other constraints on legislative authority help to ensure that durable political bargains can be made despite the potential instability of majority rule (eg, Weingast and Marshall 1988).

- Implication: policy instruments that redistribute are imprecise, because of 'spillovers' that extend beyond intended recipients, increasing the social costs of democracy (Hartle 1993).

- In principle, these institutional constraints ought to be considered when making an economic assessment of a political equilibrium. (How?)

- Aside: Link to the exchange-contractarian view.

Step two: An analogue to the first theorem of welfare economics for a competitive political economy

Voting is deterministic. Probability that *j* votes for the incumbent is:

$$\pi_j^i = \begin{cases} \mathbf{1} & \boldsymbol{if}\ v_j(s^i) - v_j(s^o) > 0 \\ \mathbf{0} & \boldsymbol{otherwise}. \end{cases} \qquad (1)$$

where $s = \{s_l, l = 1,2, \dots, L)$, is a multi-dimensional set of policies, and (WLOG) the number of voters ***J = L***.

Competing parties only have probabilistic knowledge of voting behavior:

$$f_j(v_j(s^i) - v_j(s^o)); \qquad \partial f_j / \partial (v_j^i - v_j^o) > 0 \qquad (2)$$

Each party maximizes its total expected vote (or vote share):

$$Max_{\{s^i\}} EV_i = \Sigma_j^J f_j(v_j(s^i) - v_j(s^o)) \text{ subject to } R(s) = 0. \qquad (3)$$

where $EV_o = J - EV_i$ (or $= 1 - EV_i$ if we model vote shares)

Nash equilibrium:

- If each party's expected vote is continuous in *s,* and globally concave in s^i for given s^o - so there always is a positive probability of each voter supporting either party **=>** Nash equilibrium in pure strategies..

- The equilibrium policy platform to which both parties converge is:

$$\sum_j^J \frac{\partial f_j}{\partial v_j} \cdot \frac{\partial v_j}{\partial s_l} + \lambda \cdot \frac{\partial R}{\partial s_l} = 0; \quad l = 1, 2, \dots, L \qquad (4)$$

- If concavity of *EV* is strict, the equilibrium is unique.

A Representation Theorem – a 'first theorem' for this political economy:

- The competitive political equilibrium can be *represented* by the maximization of a *political support function* $\boldsymbol{S}$ subject to the same constraint(s) facing the parties:

$$\boldsymbol{Max}_{\{s\}}\, \boldsymbol{S}(\boldsymbol{s}) = \boldsymbol{\Sigma}_{\boldsymbol{j}}^{\boldsymbol{J}}\, \boldsymbol{\theta}_{\boldsymbol{j}} \cdot \boldsymbol{v}_{\boldsymbol{j}}(\boldsymbol{s}) \;\; \textbf{subject to} \;\; \boldsymbol{R}(\boldsymbol{s}) = \boldsymbol{0} \qquad (5)$$

  where $\boldsymbol{\theta}_{\boldsymbol{j}} = \boldsymbol{\partial f}_{\boldsymbol{j}}/\boldsymbol{\partial v}_{\boldsymbol{j}}$ is the sensitivity of each voter to a change in their welfare *evaluated at the Nash equilibrium.*

- Note: Influence weights in support function $\boldsymbol{S}$ are defined in the equilibrium: $\boldsymbol{S(s)}$ **is *not* a social welfare function.**

- Assuming *S* is concave in *s*, the above problem replicates the Nash equilibrium because the first order conditions for its solution are exactly those in (4) defining each party's policy choices in the equilibrium.

- Thus, electoral equilibrium lies on the Pareto utility frontier **(!)**.

Some remarks about the Representation Theorem:

- Inefficiencies inherent in the standard of reference are *not* reflected here. (Nor do transactions costs appear in the first theorem of welfare economics.)

- Other forms of the support function will arise depending on the nature of the density functions for voting behavior.
  See Coughlin and Nitzan (1981).

- Political decision making in this voting framework can be compared to use of the Hicks–Kaldor criterion in B-C analysis**……**

- Voting converts ordinal, non-comparable preference rankings into cardinal, interpersonally comparable numbers - a probability of voting for each party - allowing the interests of different voters to be traded off.

- But unlike most B-C analyses, ‘social’ weights from the equilibrium are applied to each citizen's welfare.

- **Other ways of proceeding with step two?**

  - Model equilibrium directly and find conditions under which it lies on the Pareto utility frontier. (e.g., lecture 2)

  - Use a different equilibrium model instead of spatial voting.

Some interesting normative issues that arise in neo-classical normative political economy:

i) Efficient redistribution and identification of inefficient policies

- Let *s = {*a set of tax rates t_j, one for each voter, levied on some base in order to finance a public good *G}*

- If total revenue is $R(t_1,\ t_2, \ldots, t_J, G)$, first order conditions characterizing equilibrium fiscal structure are:

$$\frac{\boldsymbol{\theta_j} \cdot \frac{\boldsymbol{\partial v_j}}{\boldsymbol{\partial t_j}}}{\frac{\boldsymbol{\partial R}}{\boldsymbol{\partial t_j}}} = -\boldsymbol{\lambda}, \quad \boldsymbol{j = 1, 2, \dots, J} \qquad (6)$$

$$\sum_{\boldsymbol{j}} \boldsymbol{\theta_j} \cdot \frac{\boldsymbol{\partial v_j}}{\boldsymbol{\partial G}} = \boldsymbol{\lambda} \left(\mathbf{1} - \frac{\boldsymbol{\partial R}}{\boldsymbol{\partial G}}\right) \qquad (7)$$

where λ is the Lagrange multiplier associated with the g.b.r. $R(t_1,\ t_2, \dots, t_J, G) = G$.

- (6) and (7) **=>** in this (well-functioning, perfectly competitive) political economy, redistribution is conducted as efficiently as possible.

- Now, suppose all influence weights θ_j are equal:

$$\frac{\cdot \frac{\partial v_j}{\partial t_j}}{\frac{\partial R}{\partial t_j}} = -\lambda, \quad j = 1, 2, \ldots, J \qquad \text{(6a)}$$

Then, tax instruments equalize marginal welfare costs per unit of revenue, minimizing the total welfare cost of financing a *G* of given size.[1]

- But if influence distributed *unequally*, as in (6), unweighted marginal welfare losses for different tax sources may vary significantly as parties trade off the welfare of, and support from, distinct groups even though equilibrium lies on the Pareto frontier……

[1] **For a restatement in terms of marginal excess burdens and marginal efficiency costs, see Winer and Hettich (1998, 382).**

So, there is a problem of distinguishing between efficient redistribution and inefficient tax design:

> *In a well-functioning, competitive electoral system with unequal equilibrium influence weights, a standard analysis that detects faults in tax design by looking for inequalities in unweighted welfare costs across tax instruments will associate **all** of the observed inequalities with bad tax design, even though competition between parties fully incorporates all relevant welfare losses*.

- Even if actual political equilibria are not fully efficient, some parts of existing inequalities in unweighted welfare costs across instruments may arise from redistribution that is being conducted at reasonable cost in the pursuit of electoral support.

But which parts?

ii) A challenge for second best analysis

"the second-best problem aris[es] either from immutable distortions in a subset of markets or from limitations in the policy instruments available to government." (Boadway 2017)

- The challenge involves the initial condition: In a political economy setting, the initial constraint on a policy instrument is the outcome of prior political optimization (McKee and West 1981)

- Suppose we have a distortion due to monopoly in one sector:

  A government subsidy – a second-best policy – is then given to a monopolist's competitor in the same or a closely related sector in order to minimize the consequences of the difference between the monopolist's price and marginal cost, thereby offsetting the consequences of the monopoly for economic welfare.

- **The McKee-West argument:** the second distortion, due to the subsidy, is unlikely to increase efficiency. Why?

  the granting of the monopoly represents an equilibrium result of prior political choices and, as such, reflects a first best solution given the operation of a political process in which production inefficiency is one of many costs of allocating property rights.

- Under the pressure of electoral competition, the 2nd best policy will illicit further reaction to restore the advantage originally conferred. Moreover, adjustments arising elsewhere in response to this 'improvement' would represent movements away from a previously optimal solution.

Do information problems facing governments constitute a special case?

- Tax structures may be chosen to overcome incentive compatibility constraints arising from asymmetric information concerning the ability of individuals to lower their tax liabilities. These are second best policies *if the source of the asymmetry is assumed to be out of reach of the policy maker*.

  But.....

- The mechanisms the government is allowed to use to acquire information derive from a political equilibrium in which the community has decided how much personal privacy is permissible.

- The McKee-West critique suggests that policies to get around the asymmetric information problem may challenge the implied social contract concerning knowledge and control of private behavior in a liberal democracy.

iii) Political feasibility, tectonic policy and Schumpeterian competition

- Social planning explicitly refrains from considering political feasibility.

- Two examples illustrating a general problem of policy design that arises when political feasibility is ignored:

  - *Treasury 1 (1984): Broad base expenditure taxation versus the Schanz-Haig-Simons income tax (*McLure and Zodrow 2007)

  - *The Mirrlees Review's (2011) advocacy of reduced corporate taxation*

Takeaway:

- In both cases, the advocacy of a multi-part social plan was likely to result in only part of the overall proposal being accepted, producing an outcome that is no longer optimal *when judged from the original standpoint.*

  This is an important point (especially for social planners).

Some formalization, and Schumpeterian political competition

- Consider a proposed policy in period 1, s_1, that affects welfare now $\left(v_j^1\right)$ and in the future (v_j^2).

- Suppose also that policy in period 1, by changing the distribution of income or other factors, also changes the political weight of some groups in a second period.

- Leaving discounting and structural economic constraints aside, given the political support function

$$\boldsymbol{S(s_1) = \sum_j \theta_j v_j^1(s_1) + \sum_j \theta_j(s_1) v_j^2(s_1)}, \qquad (7)$$

- The governing party will adopt s_1 only if

$$\frac{dS}{ds_1} = \sum_j \theta_j \frac{dv_j^1}{ds_1} + \sum_j [\frac{d\theta_j(s_1)}{ds_1} v_j^2 + \theta_j \frac{dv_j^2}{ds_1}] > 0 \qquad (8)$$

(A minimal condition: ideal policy makes *S* as high as possible.)

- This differs from advice given by a B-C analyst - who avoids politics - for two reasons: this analyst does not consider the heterogeneity of political influence, nor the impact of policy on the equilibrium.

- The B-C analyst only considers whether

$$\frac{dS}{ds_1} = \sum_j \frac{dv_j^1}{ds_1} + \sum_j \frac{dv_j^2}{ds_1} > 0. \qquad (9)$$

- Political strategists will be interested in the economist's evaluation of the economic consequences of policy choices - the terms in dv_j^k/ds_1 - and will fill in their own estimates of the θ_j and of the $d\theta_j(s_1)/ds_1$.

- Political parties also recognize that the feasibility of policies evolve over time: e.g., aging alters the relative influence of young and old.

- And sometimes policy is designed to pro-actively alter future political behavior…..

- For example:

  - The policy of PM Margaret Thatcher of selling public housing to their occupants was intended to change the voting behavior of new homeowners in a Conservative direction

  - Immigration policy may be intended to alter the long term configuration of political support

  - The European Union can be seen as a long term project aimed at shifting attitudes towards political integration across member states

- These are examples of *tectonic policies* (Young 1991), an outcome of a type of political competition that is analogous to *Schumpeterian creative destruction* in a market.

Step three: what can go wrong?

- A useful way to categorize and think about the issue: consider the reason for differences in the following pairs:

  (i) voters vs. consumers
  (ii) political parties vs. firms
  (iii) elections vs. markets

  - *Example of type (i)*: roles of information and campaign finance in attenuating economic efficiency - because voters are rational but not always instrumental.

  - *Example of type (iii)*: the common pool problem - because it is costly for individuals to avoid the economic consequences of a fiscal system

- **Information and inefficiency**

  - Let *C(s)* proxy for political persuasion, which has an influence on voting behavior independently of its consequences for individual welfare

    This could involve i) manipulation of biases in personal decision making; ii) false signals about party platforms; or iii) false information about the voter's economic and social situation.

  - **=>** a representative voter's probability of voting is

$$\boldsymbol{f_j(v_j^o(s^o) - v_j^i\ (s^i), C(s))} \qquad (10)$$

- The synthetic problem that replicates the electoral equilibrium is now different from that stated earlier:

$$\boldsymbol{Max}_{\{s\}}\ \boldsymbol{S(s) = \Sigma_j\{\theta_j \cdot v_j + \theta_j^C \cdot C(s)\}}\ \ \textbf{subject to}\ \ \boldsymbol{R(s) = 0} \qquad (11)$$

where $\theta_j^C = \partial f_j / \partial C$ at the equilibrium.[2]

- Public policy no longer leads to a socially efficient outcome, as the welfare of voters is traded off for resources used for influencing voting behavior in other ways.

[2] **Grossman and Helpman (2001) use this kind of support function in their analysis of special interest politics.**

- If *C* enters the indirect utility function of voters *only because* it reduces their information costs, the situation reverts to the efficient result of the Repr. Thm.

- The difficulty of distinguishing between the two cases serves as a foundation for election laws that equalize resources among contending parties, while also limiting the overall amount of money in electoral contests.

- Does political competition make this problem better, e.g., by leading to better informed citizens, or does electoral competition make the situation worse?

Last thoughts:

- The three steps of the normative political economy framework are intended as part of an alternative to the social planning paradigm.

- By its nature, the outcome of competitive politics in a liberal democracy can never be known with certainty – at best, only up to a probability distribution over alternatives. Moreover, policy choices and the policy process may be altered to some extent, albeit with costly effort, through democratic participation and institutional reform …..

There will always be room for discussion and debate.