Lecture 7: Decentralization

- Political economy of decentralization is a hot topic

- This is due to a variety of policiy initiatives all over the world

- There are a number of reasons suggested for preferring a more decentralized system of government

  - easier to match preference heterogeneity

  - better control of agency problems

  - (also differences in policy salience)

- But against this must be set the advantages of centralization

  - internalizing externalities

  - scale economies

  - coordination

Contractual Solutions

- Coasian view –

  – Allows jurisdictions to contract with one another

  – But problems of information/contractability.

    * Also there are issues of distribution – which efficient allocation is to be picked?

- Contractual view does not really give a preference for centralization or decenetralization.

- Implicit in most of the literature are failures of the Coase theorem – this could be due to imperfect information, or difficulties of enforcement.

Background

- I. Tiebout:

  - primary focus is on the role of exit.

  - sorting across jurisdictions yields optimal allocation

  - But two problems:

    * theoretical issues

    * not much evidence for mobility based on public goods

- II. Oates

- Once governance structures are imperfect, heterogeneity becomes a key barrier to solving multi-jurisdictional problems.

- This is a key theme in the literature, even going back to Oates (1972), the first systematic account of issues in fiscal federalism.

- But Oates assumes that policies under centralization must be uniform.

- This is traded off against spillovers for centralizaed decisions.

- There is a large literature that has attempted to look at different sources of spillovers: obvious examples are:

  - infrastructure projects

  - taxes/subsidies on mobile goods and factors

- In practice, we know little empirically about the magnitudes of these effects

- Sources of scale economies include (e.g.) law and order – we know very little empirically about this.

Recent Literature

- Exogenous jurisdictions:

  - Centralization versus decentralization:

    * Political economy: Besley/Coate;Lockwood

    * Key issue is how to model centralization and decentralization

    * Commitment: Qian/Weingast/Roland

      · Decentralization makes commitment easier.

  - How does decentralization work?

    * Is there better monitoring? Bardhan/Mookherjee

∗ Use of yardstick comparisons

∗ Is there more likely to be governmental capture by lobbies and elites?

- Endogenous jurisdictions

  - Secession: Bolton/Roland

  - Optimal size and shape of nations: Alesina/Spoalare

Centralization versus Decentralization

- Specify what would happen in the status quo under non-cooperative behavior. This could either use a political economy model or a model of local welfare maximizing governments.

- Point out the inefficiencies.

- (Sometimes but not always) Look to see whether a centralized solution will improve upon things.

- (Usually the latter is deliberately made imperfect to avoid the trivial Coasian outcome under which centralization is always preferred or the benevolent planner model in which centralization is always preferred.)

- Political economy ought to be a the heart of doing this properly.

Spillovers versus Heterogeneity

- The economy is divided into two geographically distinct districts indexed by $i \in \{1, 2\}$.

- Each district has a continuum of citizens with a mass of unity.

- There are three goods in the economy; a single private good, x, and two local public goods, g_1 and g_2, each one associated with a particular district.

- Preferences:

$$x + \lambda[(1 - \kappa) \ln g_i + \kappa \ln g_{-i}].$$

where $\kappa \in [0, 1/2]$ indexes the degree of *spillovers.*

- Each district has a the range of preference types $[0, \overline{\lambda}]$.

- M*ean type* in district i is denoted by m_i (=median type)

- Assume $m_1 \geq m_2$.

- In a *decentralized system*, the level of public good in each district is chosen by the government of that district and public expenditures are financed by a uniform head tax on local residents. Thus, if district i chooses a public good level g_i, each citizen in district i pays a tax of pg_i.

- In a *centralized system*, the levels of both public goods are determined by a government that represents both districts, with spending being financed by a uniform head tax on all citizens. Thus, public goods levels (g_1, g_2), result in a head tax of $\frac{p}{2}(g_1 + g_2)$.

- Social surplus:

$$
\begin{aligned}
S(g_1, g_2) &= [m_1(1 - \kappa) + m_2\kappa] \ln g_1 \\
&\quad + [m_2(1 - \kappa) + m_1\kappa] \ln g_2 - p(g_1 + g_2).
\end{aligned}
$$

- This is maximized by:

$$
(g_1, g_2) = \left(\frac{m_1(1 - \kappa) + m_2\kappa}{p}, \frac{m_2(1 - \kappa) + m_1\kappa}{p} \right).
$$

- When m_1 exceeds m_2, district 1's level is higher for all $\kappa < 1/2$.

The Standard Approach (Oates 1972)

- Decentralization: Expenditures (g_1^d, g_2^d) form a Nash equilibrium. This requires that $g_i^d =$:

$$\arg \max_{g_i}\{m_i[(1-\kappa)\ln g_i + \kappa \ln g_{-i}^d] - pg_i\}, \ i \in \{1,2\}.$$

- Implies

$$(g_1^d, g_2^d) = (\frac{m_1(1-\kappa)}{p}, \frac{m_2(1-\kappa)}{p}).$$

- Centralization:

$$g^c = \arg \max_{g}\{[m_1 + m_2]\ln g - 2pg\},$$

yielding

$$g^c = \frac{m_1 + m_2}{2p}.$$

Proposition 1 *Suppose that the assumptions of the standard approach are satisfied. Then*

(i) If the districts are identical and spillovers are present ($\kappa > 0$), a centralized system produces a higher level of surplus than does decentralization. Absent spillovers ($\kappa = 0$), the two systems generate the same level of surplus.

(ii) If the districts are not identical, there is a critical value of κ, greater than 0 but less than $\frac{1}{2}$, such that a centralized system produces a higher level of surplus if and only if κ exceeds this critical level.

A Political Economy Approach

- Policy makers are elected citizens who follow their policy preferences when in office.

- Voters elect candidates whose policy preferences yield outcomes they like.

- Each model has an election stage and a policy making stage

- Under centralization policy making is in a legislature.

- This requires modeling legslative behavior:

– Two main choices:

  * Minimum winning coalition view (Riker)

  * Universalistic view (Weingast/Shepsle/Johnson)

- Decentralization:

  - Each district elects a single representative from among its members to choose policy.

  - Representatives are characterized by their public good preferences λ. The policy determination process has two stages.

  - First, elections determine which citizens are selected to represent the two districts.

  - Second, policies are chosen simultaneously by the elected representative in each district.

  - Working backwards, let the types of the representatives in districts 1 and 2 be λ_1 and λ_2.

– Then the policy outcome $(g_1(\lambda_1), g_2(\lambda_2))$ satisfies $g_i(\lambda_i) =$

$$\arg\max\{\lambda_i[(1 - \kappa)\ln g_i + \kappa \ln g_{-i}(\lambda_{-i})] - pg_i\} \text{ for } i \in \{1, 2\}.$$

Solving this yields $(g_1(\lambda_1), g_2(\lambda_2)) =$

$$(\frac{\lambda_1(1 - \kappa)}{p}, \frac{\lambda_2(1 - \kappa)}{p}).$$

- – Election stage: If the representatives in districts 1 and 2 are of types λ_1 and λ_2, a citizen of type λ in district i will enjoy a public goods surplus

$$\lambda[(1 - \kappa)\ln \frac{\lambda_i(1 - \kappa)}{p} + \kappa \ln \frac{\lambda_{-i}(1 - \kappa)}{p}] - \lambda_i(1 - \kappa).$$

– These preferences over types determine citizens' voting decisions.

– A pair of representative types $(\lambda_1^*, \lambda_2^*)$ is majority preferred under decentralization if, in each district i, a majority of citizens prefer the type of their representative to any other type $\lambda \in [0, \overline{\lambda}]$, given the type of the other district's representative λ_{-i}^*.

– Citizens' preferences over types are *single-peaked* implying that a pair of representative types is majority preferred under decentralization if and only if it is a median pair; i.e., $(\lambda_1^*, \lambda_2^*) = (m_1, m_2)$. Thus we have:

Lemma 1 *Under the assumptions of the political economy approach, the policy outcome in a decentralized system is*

$$(g_1, g_2) = (\frac{m_1(1 - \kappa)}{p}, \frac{m_2(1 - \kappa)}{p}).$$

Centralization

- One citizen from each district is elected to a legislature

- Minimum winning coalition view: each district's representative is selected with equal probability.

- If the representatives are of types λ_1 and λ_2, the policy outcome will be $(g_1^1(\lambda_1), g_2^1(\lambda_1))$ with probability $1/2$ and $(g_1^2(\lambda_2), g_2^2(\lambda_2))$ with probability $1/2$ where $(g_1^i(\lambda_i), g_2^i(\lambda_i))$ is the optimal choice of district i's representative; that is, $(g_1^i(\lambda_i), g_2^i(\lambda_i)) =$

$$\arg \max_{(g_i, g_{-i})} \{\lambda_i[(1-\kappa)\ln g_i + \kappa \ln g_{-i}] - \frac{p}{2}(g_i + g_{-i})\}.$$

It is easily checked that $(g_i^i(\lambda_i), g_{-i}^i(\lambda_i)) =$

$$(\frac{2\lambda_i(1-\kappa)}{p}, \frac{2\lambda_i\kappa}{p}), \ i \in \{1,2\}.$$

- If the representatives' types are λ_1 and λ_2, a citizen of type λ in district i obtains an expected public goods' surplus of

$$\frac{1}{2}\{\lambda[(1-\kappa)\ln\frac{2\lambda_i(1-\kappa)}{p} + \kappa\ln\frac{2\lambda_i\kappa}{p}] - \lambda_i$$
$$+\lambda[(1-\kappa)\ln\frac{2\lambda_{-i}\kappa}{p} + \kappa\ln\frac{2\lambda_{-i}(1-\kappa)}{p}] - \lambda_{-i}\}.$$

- A pair of representative types $(\lambda_1^*, \lambda_2^*)$ is majority preferred if, in each district a majority of citizens prefer the type of their representative to any other type, given the other district's representative type. As above, we

assume that the elected representatives in the two districts will be of the majority preferred types.

- Thus, if the majority preferred representative types are $(\lambda_1^*, \lambda_2^*)$, the policy outcome will be $(\frac{2\lambda_1^*(1-\kappa)}{p}, \frac{2\lambda_1^*\kappa}{p})$ with probability $1/2$ and $(\frac{2\lambda_2^*\kappa}{p}, \frac{2\lambda_2^*(1-\kappa)}{p})$ with probability $1/2$.

Lemma 2 *Under the assumptions of the political economy approach, the policy outcome under a centralized system with a non-cooperative legislature is random, generating $(g_1, g_2) = (\frac{2m_1(1-\kappa)}{p}, \frac{2m_1\kappa}{p})$ with probability $1/2$ and $(g_1, g_2) = (\frac{2m_2\kappa}{p}, \frac{2m_2(1-\kappa)}{p})$ with probability $1/2$.*

- Two problems with centralization with a non-cooperative legislature:

– *Uncertainty:* each district is unsure of the amount of public good that it will receive, reflecting the uncertainty in the identity of the minimum winning coalition.

– *Misallocation:* public spending across the districts is skewed towards those inside the winning coalition.

Decentralization versus centralization

Proposition 2 *Suppose that the assumptions of the political economy approach are satisfied and that the legislature is non-cooperative. Then*

(i) If the districts are identical, there is a critical value of κ, strictly greater than 0 but less than $\frac{1}{2}$, such that a centralized system produces a higher level of surplus if and only if κ exceeds this critical level.

(ii) If the districts are not identical, there is a critical value of κ, strictly greater than 0 but less than $\frac{1}{2}$, such that a centralized system produces a higher level of surplus if and only if κ exceeds this critical level. This critical level is higher than that in the standard approach.

- This model can be used to think about the conditions under which the districts will choose to centralize or decentralize (the formation and dissolution of federations). Following Bolton and Roland, we can identify two main effects: (they have a third effect because they assume proportional income taxes)

  - A political effect: how close will policy making be to the preferences of the median type in the district that chooses to join

  - A spillover effect: to what extent will the new allocation internalize externalities?

  - We can get errors running in both directions –

    * welfare reducing centralization (when median exceeds the mean preference)

* welfare reducing decentralization: (median sufficiently below the mean)

* heterogeneity will also typically lead to less desire for centralization

– Transfers are also important for this logic. Clearly if one side can commit to a sequence of transfers to the other over time, then this would make centralization desirable if and only the sum of surplus is higher. (again we have a failure of the Coase theorem implicit in this).

How many nations?

- In a recent article Alesina and Spolaore considered what the optimal number of nations should be.

- Their approach trades off scale economies and preference heterogeneity.

- Suppose that preferences are $U_i = g\left(1 - a\ell_i\right) - t_i + y$

- where ℓ_i is i's "distance" from the government. Individuals can live in up to N nations and it costs k to finance government in any nation. Then the aggregate budget constraint for government is

$$\int t_i di = Nk.$$

- The optimal number of nations is assumed to maximize $\int U_i di$ subject to this constraint. Assuming equal sized nations this boils down to choosing N such that $ga/4N + kN$ is minimized. (The first term is the average "distance" between the government and its citizens in an N nation world.) The optimum is $N^* = \sqrt{(ga/4)}$.

- They contrast this with what would happen if individuals were allowed to sort themselves endogenously and choose how many nations to form. Suppose that a set of N nations is stable if any individual at the border is indifferent between any two nations. Then they show that this implies that N nations can survive if $N < \sqrt{(ga/2)}$.

- In general there are too many nations! This can be thought of as down to the Coase theorem failing by not allowing individuals to negotiate. All

the power to determine the stable outcome here is held by the indifferent citizen.

The Value of Intergovernmental Competition?

- The presumption in a good deal of the recent solution is that the cooperative solution is the valid benchmark.

- Note that this raises similar issues to those that arise in thinking about markets.

- Scale economies and spillovers are at the heart of why firms would have an incentive to collude with on another. However, in the process they may also choose to collude on price. Hence, collusion is most often frowned upon and would not be a good social welfare benchmark.

- So what is different about government?

  - Clearly if government is benevolent, then the cooperative benchmark is appealing.

  - However, if there is some agency problem between government and government, due to agency problems, then allowing governments to collude can be as questionable as allowing firms to collude.

- Intergovernmental competition can be important

  - as a form of yardstick competition used to reveal imperfect information to voters. Besley and Case found evidence for the US that there was some sensitivity of voters to policy outcomes in neighboring states.

– if there are optimal locations for economic activity. A good example here is in allowing state aids to achieve an optimal location of industrial activities when geography matters.

– There is also the possibility of encouraging policy innovation where some regions try some particular kind of policy and others benefit from seeing the results.

• These issues are at the heart of some of the recent views about tax competition in Europe and elsewhere. There is a tendency to focus mainly on the costs and little on the benefits.

Decentralization, Commitment and Capture

- One possible difference between centralized and decentralized decision making is the extent to which governments can commit.

- Weingast and Qian have recently argued that decentralization limits state power (they have the example of China in mind).

  - They argue that the Chinese government has deliberately limited state power by preventing information flows.

  - This appears to be the opposite of the experience with municipal level regulation of utilities in the United States. (Democratic decentralization may to contend with populism).

- In general, decentralization will be expected change government incentives, although I would argue that issue bundling and political salience of issues is key to understanding this as well.

- There has also been some discussion of whether changing the locus of decision making power changes the likelihood that governments are subject to capture by special interests - the answer is far from clear-cut theoretically and I am not aware of convincing empirical evidence on this.

- This goes to the heart of whether we expect more decentralized forms of governance to be responsive to local needs/tastes.

Other Aspects of Governmental Architecture

- Most of the literature on fiscal federalism takes very simplistic perspectives on the kind of governmental structures that are permissible.

- Yet, the world reveals a complex of overlapping jurisdictional arrangements that overlap in complicated ways.

- One important issue that has received less treatment in the literature, but is closely related to fiscal federalism is the possibility of functional separation of tasks. In practice, this might take the form of particular single issue authorities that chooses policy in a particular dimension. However, there is no need to make this a regional body. I suspect that these issues of disaggregating democracy may become more debated in the next few years.