

Political Economy of Development: PPHA 42310

Lecture 1

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Themes and Issues

- This course is an introduction to the main issues and research topics in the Political Economy of Development.
- It's restricted to PhD students only.
- It will be evaluated on the basis of a series of small responses to the literature mostly trying to get you to formulate research questions, and research paper/proposal at the end of the course and the last week of the quarter will be given over to student presentations of their ideas.
- What is the course about? Let me spend the rest of today with some motivating examples..

Why the Political Economy of Development?

- The subject is premised on the idea that political factors play a critical role in determining patterns of comparative development.
- Most obviously policy (taxation, public goods provision, systems of property rights) is important for development, but actual policy choice depends on political incentives.
- These incentives are shaped by political institutions; (amongst other things) the state; and the regime (democracy, dictatorship).
- They are also shaped by the interests and ideas of those who have the power to influence policy.
- Comparative development can be explained by policy differences which themselves stem from differences in political institutions.
- Let me start with a very famous study.

Markets and States in Tropical Africa

- Bates (1981) studied the declining agricultural sectors in post-independence Africa.
- Poor agricultural performance in Ghana, Nigeria and Zambia was due to government controlled marketing boards systematically paying farmers prices for their crops much below world levels.

“Most African states possess publicly sanctioned monopsonies for the purchase and export of agricultural goods ... These agencies, bequeathed to the governments of the independent states by their colonial predecessors, purchase cash crops for export at administratively determined domestic prices, and then sell them at the prevailing world market prices. By using their market power to keep the price paid to the farmer below the price set by the world market, they accumulate funds from the agricultural sector” Bates (1981, p. 12).

Stabilizing the Market?

- The marketing boards made surpluses which were given to the government as a form of taxation. Bates (1981, p. 15) notes

“A major test of the intentions of the newly independent governments occurred ... [when] between 1959-1960 and 1961-62, the world price of cocoa fell approximately £ 50 a ton. If the resources generated by the marketing agencies were to be used to stabilize prices, then surely this was the time to use the funds for that purpose. Instead ... the governments of both Ghana and Nigeria passed on the full burden of the drop in price to the producers.”

Or Taxing the Farmers?

- Bates continues

“Using the price setting power of the monopsonistic marketing agencies, the states have therefore made the producers of cash crops a significant part of their tax base, and have taken resources from them without compensation in the form of interest payments or of goods and services returned.” (pp.181-9).

- As a result of this pernicious taxation, reaching up to 70% of the value of the crop in Ghana in the 1970s, investment in agriculture collapsed as did output of cocoa and other crops. In poor countries with comparative advantage in agriculture such a situation mapped into negative rates of economic growth.

The Motivations

- Why were resources extracted in this way? Though part of the motivation was to promote industrialization, the main one was to generate resources that could be either expropriated or redistributed to maintain power

“governments face a dilemma: urban unrest, which they cannot successfully eradicate through co-optation or repression, poses a serious challenge to their interests ... Their response has been to try to appease urban interests not by offering higher money wages but by advocating policies aimed at reducing the cost of living, and in particular the cost of food. Agricultural policy thus becomes a by-product of political relations between governments and urban constituents” (1981, p. 33)

The Form of Redistribution

- High rates of taxation killed investment in agriculture which started to contract.
- In response to this decline the natural thing might have been to increase the prices farmers got (and reverse the bad policy). But this is not what happened as Bates documents.
- Bates (1981, p. 114) observes:

“Were the governments of Africa to confer a price rise on all rural producers, the political benefits would be low; for both supporters and dissidents would secure the benefits of such a measure, with the result that it would generate no incentives to support the government in power. The conferral of benefits in the form of public works projects, such as state farms, on the other hand, has the political advantage of allowing the benefits to be selectively apportioned. The schemes can be given to supporters and withheld from opponents.”

But in Kenya and Colombia something Different Happened

- In contrast to the situation in Ghana, Zambia and Nigeria, Bates (1981, 1989, 1997) showed that agricultural policy in Kenya and Colombia over this period was much more pro-farmer.
- The difference was due to who controlled the marketing board.
- In Kenya, farmers were not smallholders, as they were in Ghana, Nigeria and Zambia, and concentrated landownership made it much easier to solve the collective action problem. Moreover, farming was important in the Kikuyu areas, an ethnic group closely related to the ruling political party, KANU, under Jomo Kenyatta (Bates, 1981, p. 122).
- Farmers in Kenya therefore formed a powerful lobby and were able to guarantee themselves high prices.

“80% of the former white highlands were left intact and ... the government took elaborate measures to preserve the integrity of the large-scale farms ... [which] readily combine in defense of their interests. One of the most important collective efforts is the Kenya National Farmer’s Union (KNFU) ... The organization ... is dominated by the large-scale farmers .. [but] it can be argued that the KNFU helps to create a framework of public policies that provides an economic environment favorable to all farmers”
Bates (1981, pp. 93-94).

A Benefit of Land Inequality

- Bates concludes (p. 95) that in Kenya

“large farmers ... have secured public policies that are highly favorable by comparison to those in other nations. Elsewhere the agrarian sector is better blessed by the relative absence of inequality. But is also deprived of the collective benefits which inequality, ironically, can bring.”

Frontier Expansion in Colombia

- Cocoa farmers in Ghana couldn't exert power over policy because there were many of them and they faced a collective action problem.
- But in Colombia frontier expansion created a lot of smallholders growing coffee (as in Costa Rica) and yet paradoxically agricultural policy favored coffee growers and did not tax them.
- Why? Because of competition for their votes from the two main political parties. Bates (1997, *Open Economy Politics* p. 54) notes

“Being numerous and small, Colombia’s coffee producers, like peasants elsewhere, encountered formidable costs of collective action. In most similar instances such difficulties have rendered smallholders politically powerless. And yet ... Colombia’s peasants elicited favorable policies from politicians, who at key moments themselves bore the costs of collective action, provisioning the coffee sector with economic institutions and delegating public power to coffee interests.”

Bates' Contribution

- Differential economic growth (Kenya was doing well, Ghana and Zambia terribly) was explained by differences in agricultural policies.
- It wasn't just that policy was used to redistribute at the expense of economic disincentives, but the **form** of policy was highly inefficient - Bates proposed a profound explanation for the under-supply of public goods.
- Why were some policies better than others?
 - variation in mobilized interests (Kenya versus the rest)
 - variation in political institutions (Colombia had more political competition)

Public versus Private Goods

- The point Bates makes is that it is politically irrational to redistribute income using public goods because they cannot be targeted towards supporters and withheld from opponents. Trying to increase agricultural output by raising prices is therefore not an attractive strategy.
- It is politically much better to redistribute private goods which can be targeted or what Bates calls 'selectively apportioned'.
- These ideas were first modelled by Alessandro Lizzeri and Nicola Persico (2001 "The Provision of Public Goods Under Alternative Electoral Incentives," *American Economic Review*, 91, 225-245.)
- The probabilistic voting model provides an attractive model to investigate these ideas. (Persson and Tabellini, 2000, section 3.4).

The Model

- There are three groups of agents, $J \in \{P, M, R\}$ with exogenous incomes $y^R > y^M > y^P$. Total population is normalized to one and let α^J be the population share of group J with $\sum_J \alpha^J = 1$.
- Individuals have utility defined over their own consumption and the provision of public goods with utility function

$$c^{iJ} + H(G)$$

where c^{iJ} is the consumption of private good by agent i of group J . H is a strictly increasing and concave function with $H' > 0$ and $H'' < 0$.

- People are also ideological.

Ideology and Policy

- There are two political parties A and B and citizens of all groups can be more or less ideologically attached to these groups.
- We model this ideology as utility that individuals get from voting for a specific party. This ideological utility comes in two parts, σ^{iJ} is the utility that agent i of group J gets from voting for party A and we assume that σ^{iJ} is distributed uniformly on the support $\left[-\frac{1}{2\phi^J}, \frac{1}{2\phi^J}\right]$ so that the density is ϕ^J and group specific.
- In addition there is an aggregate preference shock δ distributed uniformly on $\left[-\frac{1}{2\psi}, \frac{1}{2\psi}\right]$ in favor of party A .
- There are 6 policy variables: public good provision G , a tax rate τ levied lump-sum on each individual, group specific transfers f^J and rents extracted by the politician in power R . The government budget constraint is

$$\tau = R + G + \sum_J \alpha^J f^J$$

- We shall assume that political parties are perfectly committed to any policy they announce. Parties play first and simultaneously announce policy platforms. Next uncertainty is resolved. Then individuals vote for the party they prefer, one of them wins and implements the policy it offered at the start of the game.
- As before we solve the game by backward induction. The first thing to do is to construct the function $P(\mathbf{q}_A, \mathbf{q}_B)$ which is the probability that party A wins where each party offers a policy vector and $\mathbf{q}_I = (\tau_I, G_I, \mathbf{f}_I, R_I)$ for $I = A, B$.
- Individual i of group J votes for politician A if

$$y^J - \tau_A + f_A^J + H(G_A) + \sigma^{iJ} + \delta \geq y^J - \tau_B + f_B^J + H(G_B)$$

- Or if

$$\sigma^{iJ} \geq \tau_A - \tau_B + f_B^J - f_A^J + H(G_B) - H(G_A) - \delta$$

For a given vector of policies and realization of δ we can define a critical value of σ^{iJ} , call it $\tilde{\sigma}^J$ which is the level of heterogeneity at which an individual in group J is just indifferent between party A and B . Clearly,

$$\tilde{\sigma}^J = \tau_A - \tau_B + f_B^J - f_A^J + H(G_B) - H(G_A) - \delta$$

If $\sigma^{iJ} \geq \tilde{\sigma}^J$ then an individual prefers to vote for party A while if $\sigma^{iJ} < \tilde{\sigma}^J$ they prefer to vote for party B .

- We can thus calculate the number of votes that each party gets in each group. Let π_A^J the total share of votes that party A gets from group J this is

$$\begin{aligned}\pi_A^J &= \int_{\bar{\sigma}^J}^{\frac{1}{2\phi^J}} \phi^J dz \\ &= \int_{\tau_A - \tau_B + f_B^J - f_A^J + H(G_B) - H(G_A) - \delta}^{\frac{1}{2\phi^J}} \phi^J dz \\ &= \frac{1}{2} - \phi^J \left(\tau_A - \tau_B + f_B^J - f_A^J + H(G_B) - H(G_A) - \delta \right)\end{aligned}$$

This has very intuitive properties. Holding the policy of party B constant it is increasing in f_A^J and G_A and decreasing in τ_A .

Win Probabilities

Define $\pi_A = \sum_J \alpha^J \pi_A^J$ to be the total number of votes that party A gets. Then the probability that party A wins the election, P is

$$\begin{aligned} & P(\mathbf{q}_A, \mathbf{q}_B) \\ &= \Pr \left\{ \pi_A \geq \frac{1}{2} \right\} \\ &= \Pr \left\{ \frac{1}{2} - \sum_J \alpha^J \phi^J \left(\tau_A - \tau_B + f_B^J - f_A^J + H(G_B) - H(G_A) - \delta \right) \geq \frac{1}{2} \right\} \\ &= \Pr \left\{ \delta \geq \tau_A - \tau_B + H(G_B) - H(G_A) + \frac{\sum_J \alpha^J \phi^J}{\phi} \left(f_B^J - f_A^J \right) \right\} \end{aligned}$$

where $\phi = \sum_J \alpha^J \phi^J$ is the average density.

- Therefore, using the distribution of δ we have

$$\begin{aligned} & P(\mathbf{q}_A, \mathbf{q}_B) \\ &= \int_{\tau_A - \tau_B + H(G_B) - H(G_A) + \frac{\sum_J \alpha^J \phi^J}{\phi} (f_B^J - f_A^J)}^{\frac{1}{2\psi}} \psi dx \\ &= \frac{1}{2} - \psi \left(\tau_A - \tau_B + H(G_B) - H(G_A) + \frac{\sum_J \alpha^J \phi^J}{\phi} (f_B^J - f_A^J) \right) \end{aligned}$$

This again has intuitive properties. Note that if both parties offer exactly the same policy in all dimensions then $P = \frac{1}{2}$.

- Assume that parties, like in the Downsian model wish to maximize their expected rents. A crucial difference however is that the level of rents is not endogenous and determined residually from the government budget constraint. A Nash equilibrium is now a pair of policy vectors, $(\mathbf{q}_A^*, \mathbf{q}_B^*)$ which simultaneously solve the following two optimization problems

$$\max_{\mathbf{q}_A} P(\mathbf{q}_A, \mathbf{q}_B) R_A$$

$$\max_{\mathbf{q}_B} (1 - P(\mathbf{q}_A, \mathbf{q}_B)) R_B$$

Calculating the Equilibrium

Let's examine the optimal policy of party A. This solves the optimization problem

$$\begin{aligned} & \max_{\tau_A, G_A, f_A} \\ & \left[\frac{1}{2} - \psi \left(\tau_A - \tau_B + H(G_B) - H(G_A) + \frac{\sum_J \alpha^J \phi^J}{\phi} (f_B^J - f_A^J) \right) \right] \\ & \times \left(\tau_A - G_A - \sum_J \alpha^J f_A^J \right) \end{aligned}$$

where I have eliminated R_A using the government budget constraint.

First-Order Conditions

In principle there are five first-order conditions. Let's examine the one for G_A

$$\frac{\partial P(\mathbf{q}_A, \mathbf{q}_B) R_A}{\partial G_A} = 0 \Rightarrow \quad (1)$$

$$\psi H'(G_A) \left(\tau_A - G_A - \sum_J \alpha^J f_A^J \right) - P = 0 \text{ if } G_A > 0. \quad (2)$$

For f_A^J we have three conditions of form

$$\frac{\partial P(\mathbf{q}_A, \mathbf{q}_B) R_A}{\partial f_A^J} = 0 \Rightarrow \psi \frac{\alpha^J \phi^J}{\phi} \left(\tau_A - G_A - \sum_J \alpha^J f_A^J \right) - \alpha^J P = 0 \text{ if } f_A^J > 0 \quad (3)$$

for f_A^J , $J \in \{P, M, R\}$.

Targeted Transfers

- The first observation is that (3) cannot hold as an equality for all three groups. This follows because P is the same for all three equations, as is $\tau_A - G_A - \sum_J \alpha^J f_A^J$ and $\psi \frac{\phi^J}{\phi}$ is a constant. If it holds as an equality at all, it can only do so for one of the groups. Intuitively, when the party decides to spend more on transfers, the marginal cost is P since with probability P party A wins in which case it could consume the tax revenues as rents. The marginal benefit to spending revenues on redistribution is $\psi \frac{\phi^J}{\phi} R$ which is the marginal effect on P of making transfers to group J times the benefit of winning, R . Note that this marginal benefit is linear, but differs across groups. Since this is linear it suggests that it will be better to focus all redistribution on the group with the highest marginal benefit, here the highest ϕ^J . Let's assume this is group M .
- Note this is a candidate equilibrium, a more careful Kuhn-Tucker analysis is required here more generally.

The Swing Voters

- If (3) holds for $J = M$ then for $J \neq M$

$$\psi \frac{\phi^J}{\phi} \left(\tau_A - G_A - \sum_J \alpha^J f_A^J \right) - P < 0 \text{ and } f_A^J = 0.$$

Combining (3) and (1) we find

$$H'(G_A) = \frac{\phi^M}{\phi} > 1$$

since the group for which (3) holds as an equality must have $\frac{\phi^M}{\phi} > 1$.

The Efficient Provision of Public Goods

- Is G_A socially efficient?
- To understand the answer to this we must calculate what the Pareto Optimal provision of public goods would be in this model. To do this we conceive of a 'social planner' choosing how much public goods to supply by maximizing the sum of individual utilities taking as given the available amount of resources. For simplicity assume as in the above analysis that each member of a group gets the same level of consumption:

$$\max_G \sum_J \alpha^J c^J + H(G) \text{ subject to } \sum_J \alpha^J y^J - G = \sum_J \alpha^J c^J$$

- Substituting the resource constraint into the objective function, this problem has the first-order condition (the Lindahl-Samuelson rule - the sum of the marginal rates of substitution is equal to the marginal rate of transformation between private and public goods)

$$H'(G^e) = 1$$

The Comparison

- Now

$$H'(G_A) = \frac{\phi^M}{\phi} > 1 = H'(G^e) \text{ so } H'(G_A) > H'(G^e)$$

Therefore $G^e > G_A$ by the concavity of $H(\cdot)$. So public goods are undersupplied.

- The intuition for this is just like in *Markets and States in Tropical Africa*. Political parties are trying to devise their platform to win office. Public goods, however, benefit everyone, but what they would like to do is to target resources at the swing voters. Hence they reduce the amount of public good they offer in order to free up resources and offer them as private benefits to swing voters.

Taxation

Now return to the optimal rate of taxation and consider the first-order condition

$$\frac{\partial P(\mathbf{q}_A, \mathbf{q}_B) R_A}{\partial \tau_A} \Rightarrow -\psi \left(\tau_A - G_A - \sum_J \alpha^J f_A^J \right) + P$$

Now note that the marginal cost of raising taxes is P while the marginal benefit is $-\psi R$.

Now compare this to (3). If (3) holds as an equality then since $\psi \frac{\phi^J}{\phi} > \psi$ we must have

$$-\psi \left(\tau_A - G_A - \sum_J \alpha^J f_A^J \right) + P > 0 \text{ and } \tau_A = y^P$$

so that taxes are at a corner solution and equal to the highest possible rate. Intuitively, the benefit in terms of the increase in the probability of winning by using tax revenues on redistribution to the middle class, is greater than the loss in the probability of winning caused by raising taxes on everyone.

- In this model you have power if you are a “swing voter” - if you easily switch sides and not ideologically dispersed.
- The model is easy to change, a la Grossman and Helpman, so that you also have power if you are mobilized. (Persson and Tabellini, section 3.5).
- Assume $\phi^J = \phi$ but that groups may be ‘organized’ this is exogenous. If group J is organized then $O^J = 1$.
- Organized groups make campaigns contributions to politicians with C_P^J denoting the amount given per member by J to politician P .

$$C_P = \sum_J O^J \alpha^J C_P^J$$

The new Game

- After the two candidates choose their platforms organized groups noncooperatively decide how much money to give to politicians.
- Money is useful to politicians in winning elections because we now assume

$$\delta = \tilde{\delta} + h(C_A - C_B)$$

where h is a constant. Now

$$P(\mathbf{q}_A, \mathbf{q}_B) = \frac{1}{2} - \psi(\tau_A - \tau_B + H(G_B) - H(G_A)) \\ - \psi\left(\frac{\sum_J \alpha^J \phi^J}{\phi} (f_B^J - f_A^J) + h(C_B - C_A)\right)$$

Contribution Decision

- Groups, if mobilized, choose contributions to maximize

$$P(\mathbf{q}_A, \mathbf{q}_B)W^J(A) + (1 - P(\mathbf{q}_A, \mathbf{q}_B))W^J(B) - \frac{1}{2}((C_B^J)^2 - (C_A^J)^2)$$

where $W^J(A)$ and $W^J(B)$ are the payoffs to group J from the different candidates winning.

- Since the marginal benefit is constant and in each case the marginal cost is C the group gives money only to the party with the highest marginal benefit.

The Equilibrium

- Now when the parties choose their platforms they take into account how the groups which are organized will respond with their contributions. The more a group likes a policy, for example, the more money they will give, and the more likely the party is to win.
- Candidate A (dropping terms in G_B) ends up maximizing

$$\sum_J \alpha^J \left[\psi + O^J (\psi h)^2 \right] W^J(A)$$

- Now

$$H'(G_A) = \frac{1}{y} \frac{\sum_J \alpha^J [\psi + O^J \psi h^2] y^J}{\sum_J \alpha^J [\psi + O^J \psi h^2]} > 1 \text{ if there is an } O^J = 1$$

If one group is organized but the others not, for example, then again public goods are under-supplied to free up resources to target that mobilized group since this translates into 'campaign contributions'.

Sources of Power

- Power to influence policy comes from the institutions - when there is competition the preferences of the swing voters are important.
- Power also comes from being organized, as in the last example.
- Mao Zedong said “power grows out of the barrel of a gun”
- There are many other sources of influence or power. One comes from just holding office. In the above model politicians only care about rents (the ‘Downsian assumption’) but if they care about policy too and they are imperfect agents of the electorate then you’d expect their preferences to matter in determining policy.

- **Chattopadhyay, Raghavendra and Esther Duflo (2004)** “Women as Policy Makers: Evidence from a Randomized Policy Experiment in India,” *Econometrica*, 72, No. 5 1409-1443.
- They exploited a unique natural experiment in West Bengal and Rajasthan. In 1993 a constitutional amendment stipulated that 1/3 of all Pradhans, the head of the Indian local councils, then Gram Panchayat (GP), had to be reserved for women as well as 1/3 of the seats on the GP. The GP's which were to have women Pradhans were chosen at random and only women allowed to run.
- They showed that when the Pradhan's were women there were significant changes in the types of public goods chosen.

TABLE V
EFFECT OF WOMEN'S RESERVATION ON PUBLIC GOODS INVESTMENTS

Dependent Variables	West Bengal			Rajasthan		
	Mean, Reserved GP (1)	Mean, Unreserved GP (2)	Difference (3)	Mean, Reserved GP (4)	Mean, Unreserved GP (5)	Difference (6)
<i>A. Village Level</i>						
Number of Drinking Water Facilities	23.83	14.74	9.09	7.31	4.69	2.62
Newly Built or Repaired	(5.00)	(1.44)	(4.02)	(.93)	(.44)	(.95)
Condition of Roads (1 if in good condition)	.41 (.05)	.23 (.03)	.18 (.06)	.90 (.05)	.98 (.02)	-.08 (.04)
Number of Panchayat Run Education Centers	.06 (.02)	.12 (.03)	-.06 (.04)			
Number of Irrigation Facilities	3.01	3.39	-.38	.88	.90	-.02
Newly Built or Repaired	(.79)	(.8)	(1.26)	(.05)	(.04)	(.06)
Other Public Goods (ponds, biogas, sanitation, community buildings)	1.66 (.49)	1.34 (.23)	.32 (.48)	.19 (.07)	.14 (.06)	.05 (.09)
Test Statistics: Difference Jointly Significant (<i>p</i> -value)			4.15 (.001)			2.88 (.02)
<i>B. GP Level</i>						
1 if a New Tubewell Was Built	1.00	.93 (.02)	.07 (.03)			
1 if a Metal Road Was Built or Repaired	.67 (.06)	.48 (.05)	.19 (.08)			
1 if There Is an Informal Education Center in the GP	.67 (.06)	.82 (.04)	-.16 (.07)			
1 if at Least One Irrigation Pump Was Built	.17 (.05)	.09 (.03)	.07 (.05)			
Test Statistics: Difference Jointly Significant (<i>p</i> -value)			4.73 (.001)			

Notes: 1. Standard errors in parentheses. 2. In West Bengal, there are 322 observations in the village level regressions, and 161 in the GP level regressions. There are 100 observations in the Rajasthan regressions. 3. Standard errors are corrected for clustering at the GP level in the village level regressions, using the Moulton (1986) formula, for the West Bengal regressions.

Why does politics lead to inefficient policies?

- One can always apply 'Coase theorem' type logic to critique models of inefficient policy choice like the one above (in a sense the inefficiency comes from the fact that there are not instruments to claw back the surplus from public good provision...).
- Wittman's *JPE* paper is the most famous example, see Acemoglu from a critique. It's the usual stories of asymmetric information and commitment problems.
- I think the empirical evidence is against Wittman's view. For instance, according to this view democratization, a change in political institutions, should not influence public good provision (at least with quasi-linear preferences), but it does; "Democracy Does Cause Growth," (2019) *Journal of Political Economy*, 127. 1, 47-100.

The Agenda...

- A lot of political economy is about studying a particular mapping from political institutions into policy outcomes.
- What sort of political institutions or sources of power and conducive to economic development?
- There's a folk wisdom that a 'balance of power' is useful. Madison's notion of checks and balances and separation of power was about this.
- Interestingly in the probabilistic voting model when everyone has the same density, or either all groups are organized or none are organized then the equilibrium policy is socially efficient.