Clientelistic Politics and Economic Development

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721 Lecture Notes

November 2016
Introduction

- Pervasiveness of vote-buying and clientelistic ‘machine politics’ in traditional societies
- Votes purchased:
  - either through upfront pre-election payments
  - or promises to deliver benefits (if elected) after the election to those that supported them
- Descriptive accounts, case-studies and political ethnographies:
  - contemporary practices in many middle income and LDCs (e.g., vote buying in Argentina (Stokes (2005)), ethnography of a Mumbai municipal ward election (Bjorkman (2013)))
Definitions of Clientelistic Politics

- (Wikipedia) definition: "exchange systems where voters trade political support for various outputs of the public decision-making process"

- Hicken (2011) argues that the key element is the contingent and reciprocal nature of the exchange: benefits delivered selectively by election winner only to those who it believes voted for them

- However, this excludes vote purchases via upfront pre-election payments or past one-time benefits such as land registration or housing/water/road benefits (which may influence recipients’ vote owing to induced gratitude/reciprocity norms)

- Expect latter benefits to have a smaller impact on votes cast
Contrast with Programmatic ‘Pork-Barrel’ Politics

- ‘programmatic politics’: where delivery of benefits is non-discretionary/formula-bound and **not conditioned on political support** (e.g., social security, CCTs, education or health entitlement programs, regulations enforced by non-partisan bureaucracy)

- we shall focus primarily on contrast of clientelistic politics with programmatic politics
Focus of Existing PE Literature: Programmatic Policy Distortions

- ‘programmatic politics’ can give rise to many distortions, focus of most existing formal political economy literature:
  - populism (a la Downs/Alesina-Rodrik)
  - limited commitment (a la Besley-Coate, Dixit-Londregan)
  - non-issue-based loyalties and swing voters (a la Dixit-Londregan)
  - elites or special interest capture (a la Acemoglu-Robinson, Grossman-Helpman)
  - unevenness of turnout/awareness (a la Benabou)
  - voter coordination problems (a la Myerson)
Relation between Clientelistic Politics and Programmatic Politics

- Relatively little attention devoted to clientelistic politics in formal ‘rational choice’ PE literature (in contrast to comparative politics)
- Partly because this is a phenomenon pertaining largely to developing countries
- PE literature on clientelism is just beginning to appear: formal models, econometric analyses
- Most tend to analyse features of clientelism by itself, many of which are shared by models of pork-barrel programmatic politics as well
- We shall focus on comparison between distortions generated by clientelistic and programmatic politics, and institutional dynamics between these two forms
2. Enforcement Mechanisms

- How can party operatives verify how a client voted?
  - reciprocity norms: (Paraguay evidence: Finan and Schechter (2012))
  - (marked) ballots handed out by party operatives: still legal in some countries such as Argentina, Uruguay and Panama (Stokes (2006))
  - group sanctions (Chandra (2004))
  - public signals of political support (eg participation in election rallies) (Sarkar (2014))
  - local brokers/patrons that ‘deliver’ votes of their clients to parties (Stokes (2005), Bjorkman (2013), Larreguy (2013))
3. Theoretical Models

- Stokes (2005): model of upfront payments and repeated interaction between voters and a single party ‘machine’ which faces a single passive challenger, generates predictions for how vote-buying varies with household and community characteristics (e.g., targeting of poor swing voters in small communities)
reward and votes for the machine, supported by a grim trigger strategy should the voter be observed to renege, is

\[
1/(1 - \beta)[b - (x_i - x_1)^2/2] 
\geq [b - (x_i - x_1)^2/2] + \beta/[1 - \beta][1 - p) 
\times [b - (x_i - x_1)^2/2] - p(x_i - x_2)^2/2].
\]

(1)

In other words, to sustain cooperation, the value to the voter in the current and all subsequent periods of voting for the machine and receiving a reward must equal or exceed the sum of the payoff from defecting in the current period plus (1) avoiding detection and returning to cooperation in the next and subsequent periods (with probability \( p \)), or (2) being caught and, in all subsequent periods, voting against the machine but foregoing rewards (with probability \( 1 - p \)).

Inequality [1] simplifies to

\[
x_i \leq x^* + \lambda(b/x_2 - x_1),
\]

where

\[
\lambda = p\beta/(1 - \beta + p\beta).
\]

Hence, the set of voters who would sell their votes in exchange for a private benefit is the set whose ideal point, \( x_i \), satisfies

\[
x^* \leq x_i \leq x^* + \lambda(b/x_2 - x_1).
\]

(2)

\[b/(x_2 - x_1)\] as \(\text{Opposition}\) voters. Opposition voters will oppose the machine even if offered \( b \) to change their votes. Define voters for whom \( x^* < x < x^* + b/(x_2 - x_1) \) as \(\text{Weakly opposed}\) voters. Weakly opposed voters prefer to vote against the machine in the absence of a reward, but prefer to vote for the machine if doing so brings them a reward. If the value of the vote to the machine exceeds \( b \), the machine and the Weakly opposed voter are in a prisoners’ dilemma. Table 2 gives the game between a Weakly opposed voter and a machine, with simplified payoffs that make clear the prisoners’-dilemma structure of the game.

Next, I assume an infinite sequence of elections and model the interaction between the machine and a Weakly opposed voter as an iterated prisoners’ dilemma with one-sided uncertainty.\(^{14}\) I also assume that the two are playing a grim-trigger strategy, whereby when one player defects, the other defects in all subsequent rounds. Aside from theoretical reasons in favor of the grim trigger, interviews with Argentine party operatives suggest that they in fact follow a strategy of this sort. For instance, we asked a Peronist organizer how she responded when she suspected that a person to whom she had extended favors voted for another party. She answered, “He’s dead. He died, forever.”\(^{15}\)

Returning to the model, if the voter votes against the machine, I now assume, the machine observes the negative vote with a probability \( p \). Voters discount the future by a discount factor \( \beta \), which falls on the interval \([0, 1]\). The condition for a subgame-perfect equilibrium (SPE) in which the Weakly opposed voter receives the

\[\text{TABLE 2. Normal Form of the Game Between the Machine Operative and the Weakly Opposed Voter with Simplified Payoffs}\]

<table>
<thead>
<tr>
<th>Voter</th>
<th>Reward</th>
<th>No Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comply</td>
<td>3, 3</td>
<td>1, 4</td>
</tr>
<tr>
<td>Defect</td>
<td>4, 1</td>
<td>2, 2</td>
</tr>
</tbody>
</table>

\[\text{FIGURE 2. Types of Voters by Their Location on a One-Dimensional Policy Space}\]

\[\text{Loyal Weakly opposed Opposition}\]

\[x_1 \quad x^* \quad x^* + b/(x_2 - x_1) \quad x_2\]

\^[14] In a sense there is uncertainty on both sides, about whether the other will cooperate or defect in the future. This uncertainty characterizes all iterated prisoners’ dilemmas—indeed, all repeated games—in which there is more than one equilibrium. I model this game as one of one-sided uncertainty because only the machine is uncertain about whether the voter has cooperated or defected. The voter, by contrast, observes perfectly whether the machine gives him a reward.


\[\text{Perverse Accountability August 2005}\]

\[\text{320}\]

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as extending into the indefinite future; even if they could imagine hypothetical circumstances in which it might end (in the event, e.g., of a military coup), at the time of any given election since the return to democracy in that country, few would have anticipated a particular moment when it would end. The perception of an interaction with no identifiable stopping point makes it reasonable to model this as an infinitely repeated game.

To capture the repeated-play dynamic of machine politics, it is necessary to depart in a third way from received models of redistributive politics. These models assume that the machine’s ability to reward voters for their support depends on its winning elections. A voter whose support will only be rewarded if the machine wins anticipates that the game in effect ends each time the machine loses. Many machines, such as Mexico’s PRI (Diaz-Cayeros, Magaloni, and Weingast 2001), Singapore’s People’s Action Party (PAP; Tan 2003), or, for many decades, Italy’s Christian Democratic Party as it operated in the south (Chubb 1982), face negligible competition. Because the machine effectively cannot lose, voters anticipate that the game will continue. But other machines operate in settings where they can lose. Even in competitive settings, the game between machine and voter need not end when the machine finds itself in opposition. It does not end if the machine can carry over public funds from the party’s time in power, or if it can make use of resources donated by private actors, public officials who expect policy concessions from the machine when it is back in power (Stigler 1975). Note that two of the three long-term clientelist Latin American parties mentioned earlier, the Peronists and APRA, were more often in opposition than in power.

To summarize, my key assumptions are that machines can monitor voters’ actions and that both sides foresee their interaction extending indefinitely into the future. The latter assumption implies that machines don’t lose their ability to distribute goods when they find themselves in opposition.

The Model
I begin with a one-shot game in which a person’s vote is assumed to be perfectly observable by political parties. Let the ideological position of the machine in a one-dimensional policy space be represented by $x_1$, the ideological position of the opposition by $x_2$, and $x_1 < x_2$. Let $x^* = (x_1 + x_2)/2$ be the midpoint between the two parties (see Figure 1). Let the voters’ preferences be given by

$$u_i = -\frac{1}{2}(v_i - x_i)^2 + b_i,$$

where $v_i = \{x_1, x_2\}$ represents a vote for either the machine or the opposition, $x_i$ represents voter $i$’s position on the ideological spectrum, and $b_i = \{0, b\}$ represents the value the voter of the reward offered by the machine in exchange for votes, relative to the value of voting according to the voter’s preferences. Thus $-(1/2)(v_i - x_i)^2$ represents the expressive value of voting for one of the two parties. If the machine does not offer a gift, then $b_i = 0$ and the voter votes for the machine if $-(x_i - x_1)^2 \geq -(x_i - x_2)^2$, or if $x_i \geq x^*$. That is, if there is no gift the voter supports the party that falls closest to the voter on the ideological or programmatic dimension. If the machine offers a gift of $b > 0$, the voter will vote for it if

$$-1/2(x_i - x_1)^2 + b \geq -1/2(x_i - x_2)^2,$$

or

$$b \geq \frac{1}{2}[(x_i - x_1)^2 - (x_i - x_2)^2] = (x_2 - x_1)(x_i - x^*),$$

or

$$x_i \leq x^* + (b/(x_2 - x_1)).$$

The normal form of the stage game is depicted in Table 1. In the Table, the machine is represented as expending $b$ when it pays a reward, and gaining $v$ when it receives a vote.

Define voters for whom $x < x^*$ as Loyal voters (see Figure 2). Loyal voters’ dominant strategy is to vote for the machine. Define voters for whom $x > x^*$

<p>| Table 1. Normal Form of a Game Between the Machine Operative and a Voter |
|-----------------------------|--------------------|-----------------------|</p>
<table>
<thead>
<tr>
<th>Voter</th>
<th>Reward</th>
<th>No Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comply</td>
<td>$-1/2(x_1 - x_i)^2 + b, v - b$</td>
<td>$-1/2(x_i - x_2)^2, v$</td>
</tr>
<tr>
<td>Defect</td>
<td>$-1/2(x_1 - x_i)^2 + b, -b$</td>
<td>$-1/2(x_i - x_2)^2, 0$</td>
</tr>
</tbody>
</table>

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13 In static models of clientelism in which the party only pays a reward if it wins, a voter’s actions depend on his or her beliefs about the likely actions of other voters. A collective-action problem arises when voters prefer, on programmatic grounds, to vote against the machine. Then defeating the machine is a public good, but individual voters pay a cost for attempting to unseat it if the attempt fails. See Medina and Stokes 2003, and Diaz-Cayeros, Magaloni, and Weingast 2001.
FIGURE 2. Types of Voters by Their Location on a One-Dimensional Policy Space

<table>
<thead>
<tr>
<th>Loyal</th>
<th>Weakly opposed</th>
<th>Opposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$x_1$</td>
<td>$x^*$</td>
<td>$x^* + b(x_2 - x_1)$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$x_2$</td>
</tr>
</tbody>
</table>

TABLE 2. Normal Form of the Game Between the Machine Operative and the Weakly Opposed Voter with Simplified Payoffs

<table>
<thead>
<tr>
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<th>Reward</th>
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</thead>
<tbody>
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$b/(x_2 - x_1)$ as Opposition voters. Opposition voters will oppose the machine even if offered $b$ to change their votes. Define voters for whom $x^* < x < x^* + b/(x_2 - x_1)$ as Weakly opposed voters. Weakly opposed voters prefer to vote against the machine in the absence of a reward, but prefer to vote for the machine if doing so brings them a reward. If the value of the vote to the machine exceeds $b$, the machine and the Weakly opposed voter are in a prisoners’ dilemma. Table 2 gives the game between a Weakly opposed voter and a machine, with simplified payoffs that make clear the prisoners’-dilemma structure of the game.

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\times [b - (x_i - x_1)^2/2] - p(x_i - x_2)^2/2).
$$

In other words, to sustain cooperation, the value to the voter in the current and all subsequent periods of voting for the machine and receiving a reward must equal or exceed the sum of the payoff from defecting in the current period plus (1) avoiding detection and returning to cooperation in the next and subsequent periods (with probability $p$), or (2) being caught and, in all subsequent periods, voting against the machine but foregoing rewards (with probability $1 - p$).

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Hence, the set of voters who would sell their votes in exchange for a private benefit is the set whose ideal point, $x_i$, satisfies

$$
x^* \leq x_i \leq x^* + \lambda(b/x_2 - x_1).
$$

Lambda falls on the $[0, 1]$ interval. Lambda is an increasing function of the discount rate ($\beta$) and of the probability of a defector being caught ($p$). If $p = 0$ (there is no possibility that the machine would observe a defection by the voter), or if $\beta = 0$ (the voter cares nothing about future consumption), then inequality [2] reduces to $x_i = x^*$. In these cases the machine can buy the votes only of voters who are indifferent, on ideological grounds, between the parties.

Loyal voters do not meet the condition in [2]. As illustrated in Figure 2, for Loyal voters $x_L < x^*$. Intuitively, Loyal voters who want to extract private rewards from their preferred party would, under the grim trigger, have to threaten to vote against the party forever if the machine denied them a reward once. Such a threat would lack credibility: the party knows that the Loyal voter, even without rewards, is better off cooperating forever than defecting forever.

In a sense there is uncertainty on both sides, about whether the other will cooperate or defect in the future. This uncertainty characterizes all iterated prisoners' dilemmas—indeed, all repeated games—in which there is more than one equilibrium. I model this game as one of one-sided uncertainty because only the machine is uncertain about whether the voter has cooperated or defected. The voter, by contrast, observes perfectly whether the machine gives him a reward.\(^{15}\)

\(^{15}\) Interview conducted in January 2003 in the city of Córdoba by Valeria Brusco, Marcelo Nazaren, and Susan Stokes.

\(^{14}\) The loyal voter’s diehard ideological commitment to the party allows the machine, in a sense, to exploit him, garnering his vote without having to spend scarce resources on him. Loyalists would...
do Opposition voters, those who oppose the machine on programmatic grounds more strongly than do the Weakly opposed, satisfy condition (2) (for Opposition voters, \( x_0 \geq x^* + \lambda(b/2x_2 - x_1) \)). The reason is that even though the Opposition voter would like to receive a reward, the machine cannot use the threat of withholding a reward to secure this voter’s compliance: he is always better off forgoing the reward and voting against the machine. The machine knows this and does not offer him a reward.

Weakly opposed voters (and indifferent voters, where \( x_i = x^* \)) are the only types whose policy ideal points make them potential vote sellers.\(^{17}\) The intuition behind this result is that, in contrast to the Opposition voter, Weakly opposed voters can credibly commit to voting for the machine in exchange for a gift; the machine knows that the voter is better off cooperating forever than defecting forever. In contrast to the Loyal voter, the threat to punish the machine by voting against it in the future by the Weakly opposed voters is credible: left to their own devices, this is their preferred course of action.

Inequality (2) implies four comparative statics:

- As the ideological distance between the two parties \((x_2 - x_1)\) shrinks, the potential for vote buying grows. Intuitively, when the two parties are ideologically or programatically close, there is less at stake for the voter in the decision of which to vote for, and the value of the private reward becomes more salient.

- As the value of the private reward \((b)\) relative to the value of voting in accordance to one’s policy or ideological preference increases, the potential for vote buying increases. The reward must be worth a lot to the voter. But its value to the machine must be less than the value of a single vote—not very much. This suggests that, given decreasing marginal utility from income, machines will target poor voters.

- The more accurately the machine can monitor voters, the greater the potential for vote buying \((\lambda\) is an increasing function of \(p\)). This accuracy is a function of the technology for monitoring voters’ actions and of the machine’s organizational structure.

- Among its core constituents—those whom it can observe well—the machine is most effective when it targets Weakly opposed voters (for whom \( x^* \leq x_i \leq x^* + \lambda(b/2x_2 - x_1) \)), rather than Loyal (\( x_i < x^* \)) or Opposition voters (\( x_i > x^* + b/(x_2 - x_1) \)) voters.

Therefore, there is an incentive to masquerade as indifferent voters, a possibility that I do not model here. It might, however, be psychologically difficult for party enthusiasts to feign indifference. Note also that any ideological shift by the machine runs the risk of turning the loyalist into an indifferent or even an opposition voter. Machines would then have to consider the distribution of loyal voters and the additional resources that might be needed to retain their support, were it to consider a change in its ideological stance.\(^{17}\)

Their minmax payoffs are, for the machine, 0, and, for WO, 
\[ -1/2(x_{WO} - x_2) \] . Hence, the feasible and individually rational payoffs they will accept in repeated play include the cooperation payoffs of
\[ (v - b - 1/2(x_{WO} - x_1)^2 + b) \]

MACHINE POLITICS AND VOTE BUYING IN ARGENTINA

The comparative statics from my formal model generate hypotheses about the causes of machine or clientelist politics. In this section, I test these hypotheses with evidence from one developing democracy, Argentina.\(^{18}\) The evidence I present comes mainly from a survey of 1,920 voters, conducted in December 2001 and January 2002, in three Argentine provinces.\(^{19}\)

The survey allows us to explore the strategies of clientelist parties indirectly, by revealing what kinds of voters these parties target and who among the voters are responsive to private rewards.\(^{20}\) Respondents were asked whether they had received any goods from a political party during the election campaign that had taken place two months earlier (variable name, Reward). Of low-income respondents in the sample, 12% (89 out of 734) reported having received goods. Most of them said that they had received food; other items mentioned frequently were building materials, mattresses, and clothing. In an open-ended question about whether receiving goods influenced their vote (Influence), about one in five of the low-income voters, and one-quarter of low-income Peronist voters, said it did. We asked other questions meant to detect clientelism, such as whether the person had turned to a locally important political actor for help during the past year (Patron) and whether, if the head of their household lost his or her job, the family would turn to a party operative for help (Job).

Poverty and Vote Buying

I discuss five pieces of evidence from the survey that lend support to my theory of machine politics. The first has to do with the effect of poverty on a voter’s willingness to sell his or her vote. The formal model analyzed earlier predicts that vote buying is more easily

\(^{17}\) Their minmax payoffs are, for the machine, 0, and, for WO, \(-1/2(x_{WO} - x_2)^2\). Hence, the feasible and individually rational payoffs they will accept in repeated play include the cooperation payoffs of \((v - b - 1/2(x_{WO} - x_1)^2 + b)\).

\(^{18}\) The one comparative static from the model that I do not test is that ideological proximity between the parties encourages vote buying. The surveys did not elicit respondents’ views of the ideological distance between Argentina’s two major parties.

\(^{19}\) As in the 2003 survey reported on earlier, we used multistage cluster sampling techniques, based on census tracks. In this earlier survey we selected 480 adults each in the provinces of Buenos Aires, Córdoba, and Misiones, and from the area of Mar del Plata. The margin of error was plus or minus 4.5%.

\(^{20}\) Students of political clientelism and redistributive politics have typically observed the distribution of resources and their effects on voting at aggregated levels, such as the district or the country (see, e.g., Ansolabehere and Snyder, 2002, or Díaz-Cayeros, Magalonl, and Weingast, 2001). The problem of ecological inference can mar this approach. In contrast, the main problem with the survey approach used here is that people may be reluctant to acknowledge receiving handouts, in the Argentine case probably as much because of the implication that they are poor enough to sell their votes as out of concern about the illegality or immorality of their actions. It is probably evidence of this reluctance that only 7% of our sample acknowledged having received goods, whereas 44% said goods were distributed in their neighborhood, 39% could mention exactly what items were distributed, and 35% could name the party that gave them out. The effect of underreporting of clientelism is, in estimations where it is the dependent variable, to bias coefficients downward and make statistically significant associations appear insignificant.
sustained, all else equal, when the voter values the private reward relatively highly but the party values it relatively little. The picture this paints is of parties giving minor benefits to voters who are poor enough to value them highly—a picture consistent with much of the qualitative literature on machine and clientelist parties. To cite just one of many examples, Wilson and Banfield (1963) explain that U.S. machines operated in a city’s “river wards,” where working-class residents lived, but not in the “newspaper wards,” where middle-class residents lived.

Table 3 reports regression estimates of the likelihood of a clientelistic response to the set of questions discussed earlier, including whether the respondent received a private reward from a party. The negative and significant coefficients on Income, Education, and Housing quality variables show that poverty predicts clientelism. To illustrate the effect, the simulated expected probability that a wealthy person (one with the highest income, education, and housing-quality level) would have received a reward and acknowledged that it influenced her vote is 0.2%. The probability that a poor person (one with the lowest income, education, and housing-quality level) would have received a reward and allowed his or her vote to be influenced by it is 65 times greater: 13%.21

In sum, political machines buy the votes of poor people in Argentina.

**Monitoring Voters**

**Machine Organizational Structure.** In the presence of the secret ballot, parties make inferences about how people vote by observing their type—where they fall on the dimension of programmatic support for the parties. A tentacle-like organizational structure is a great asset to parties in this regard. We know from a large secondary literature that the Argentine party with the organizational structure most like that of the machine is the Peronist party (see, e.g., Auyero 2000, and Levitsky 2003). And our surveys indicate that the Peronist party was by far the most active in distributing private rewards. Eight hundred thirty-nine of our respondents said that a party distributed private rewards in their neighborhoods during the campaign; of these, 423 (50%) said that the Peronists distributed them. The next most frequently mentioned party, the Radical Party, was mentioned by only 49 respondents.

21 All simulations reported in this section were executed with the Clarify program (King, Tomz, and Wittenberg, 2000, and Tomz, Wittenberg, and King, 2001). Clarify draws simulations of parameters of statistical models (in this case, ordered logit regressions) from their sampling distribution and then converts these simulated parameters into expected values, such as expected probabilities of an answer to a survey question, given hypothetical values of explanatory variables. Clarify software and documentation are available from Gary King’s web site at http://gking.harvard.edu. For this simulation I assumed the female Peronist supporter whose age and municipality were average for the sample. Confidence intervals around the 0.2% expected probability were 0.05% and 0.5%, and around the 13% probability, 7% and 22%.

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**TABLE 3. Model Estimations of Vote Buying**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Estimated</td>
<td>Logit</td>
<td>Logit</td>
<td>Logit</td>
<td>Ordered Logit</td>
</tr>
<tr>
<td>Income</td>
<td>$-0.126$</td>
<td>$-0.054$</td>
<td>$-0.195$</td>
<td>$-0.194$</td>
</tr>
<tr>
<td>Education</td>
<td>$(0.058)$</td>
<td>$(0.037)$</td>
<td>$(0.074)$</td>
<td>$(0.070)$</td>
</tr>
<tr>
<td>Housing quality</td>
<td>$-0.005$</td>
<td>$-0.197$</td>
<td>$-0.212$</td>
<td>$-0.223$</td>
</tr>
<tr>
<td>Log population</td>
<td>$(0.014)$</td>
<td>$(0.073)$</td>
<td>$(0.131)$</td>
<td>$(0.022)$</td>
</tr>
<tr>
<td>Ballot</td>
<td>$0.578$</td>
<td>$0.572$</td>
<td>$(0.225)$</td>
<td>$(0.211)$</td>
</tr>
<tr>
<td>Peronist sympathizer</td>
<td>$0.594$</td>
<td>$0.735$</td>
<td>$0.550$</td>
<td>$0.549$</td>
</tr>
<tr>
<td>Age</td>
<td>$-0.005$</td>
<td>$-0.022$</td>
<td>$-0.016$</td>
<td>$-0.017$</td>
</tr>
<tr>
<td>Gender</td>
<td>$-0.178$</td>
<td>$0.208$</td>
<td>$-0.158$</td>
<td>$0.092$</td>
</tr>
<tr>
<td>Radical sympathizer</td>
<td>$0.357$</td>
<td>$0.146$</td>
<td>$-0.455$</td>
<td>$0.026$</td>
</tr>
<tr>
<td>Constant</td>
<td>$3.254$</td>
<td>$1.879$</td>
<td>$1.580$</td>
<td>$2.254$</td>
</tr>
<tr>
<td>N observations</td>
<td>1114</td>
<td>1920</td>
<td>1618</td>
<td>1619</td>
</tr>
</tbody>
</table>

Note: Cell entries are coefficients, and standard errors are in parentheses. Boldface indicates significance at the $p = 0.05$ level or smaller.

Explanation of dependent variables: Patron: “In the past year, have you turned to [the person the respondent previously identified as the most important local political figure] for help?” Coded yes $= 1$. Job: “If the head of your household lost his or her job, would you turn to a party operative for help?” Coded yes $= 1$. Reward: “Did you receive goods distributed by a party in the last campaign?” Coded yes $= 1$. Influence: “Did the fact of having received goods influence your vote?” Coded $1$ = Did not receive goods; $2$ = received goods, no influence; $3$ = received goods, acknowledged influence. Based on responses to open-ended question.

Explanation of independent variables: Log population: natural log of population of respondent’s municipality (2001 census). Ballot: coded $1$ for people who reported voting with a ballot given to them by a party operative, $0$ for people who voted with a ballot they acquired in the voting booth. Peronist sympathizer: coded $1$ for respondents who said they liked the Peronist Party more than others, $0$ otherwise. Income: Self-reported by respondent, 9-level scale. Education: 9-level scale, from no formal education to postgraduate. Housing quality: Assessed by interviewer, 5-level scale (1 = poorest quality, 5 = highest quality). Gender: female $= 1$. Radical sympathizer: coded $1$ for respondents who said they liked the Radical Party more than others, $0$ otherwise.

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**Community Structure.** The ease of monitoring is also influenced by the structure of communities where machines operate. We expect voters to be less anonymous, their partisan predispositions or types more a matter of public knowledge, in smaller towns and cities, where social relations are multifaceted and where, as one person we interviewed put it, “everyone knows each other.”22 These are places where it is easier for parties to know

22 Interview conducted by Valeria Brusco, Lucas Lázaro, and Susan Stokes, July 2003.
do Opposition voters, those who oppose the machine on programmatic grounds more strongly than do the Weakly opposed, satisfy condition [2] (for Opposition voters, \( x_0 > x^* + \lambda (b/x_2 - x_1) \)). The reason is that even though the Opposition voter would like to receive a reward, the machine cannot use the threat of withholding a reward to secure this voter’s compliance: he is always better off forgoing the reward and voting against the machine. The machine knows this and does not offer him a reward.

Weakly opposed voters (and indifferent voters, where \( x_i = x^* \)) are the only types whose policy ideal points make them potential vote sellers.

The intuition behind this result is that, in contrast to the Opposition voter, Weakly opposed voters can credibly commit to voting for the machine in exchange for a gift; the machine knows that the voter is better off cooperating forever than defecting forever. In contrast to the Loyal voter, the threat to punish the machine by voting against it in the future by the Weakly opposed voters is credible: left to their own devices, this is their preferred course of action.

Inequality [2] implies four comparative statics:

- As the ideological distance between the two parties \( (x_2 - x_1) \) shrinks, the potential for vote buying grows. Intuitively, when the two parties are ideologically or programatically close, there is less at stake for the voter in the decision of which to vote for, and the value of the private reward becomes more salient.

- As the value of the private reward \( b \) relative to the value of voting in accordance to one’s policy or ideological preference increases, the potential for vote buying increases. The reward must be worth a lot to the voter. But its value to the machine must be less than the value of a single vote—not very much. This suggests that, given decreasing marginal utility from income, machines will target poor voters.

- The more accurately the machine can monitor voters, the greater the potential for vote buying (\( \lambda \) is an increasing function of \( p \)). This accuracy is a function of the technology for monitoring voters’ actions and of the machine’s organizational structure.

- Among its core constituents—those whom it can observe well—the machine is most effective when it targets Weakly opposed voters (for whom \( x^* \leq x_1 \leq x^* + \lambda (b/x_2 - x_1) \)), rather than Loyal (\( x_i < x^* \)) or Opposition voters (\( x_i > x^* + b/(x_2 - x_1) \)) voters.

therefore have an incentive to masquerade as indifferent voters, a possibility that I do not model here. It might, however, be psychologically difficult for party enthusiasts to feign indifference. Note also that any ideological shift by the machine runs the risk of turning the loyalist into an indifferer or even an opposition voter. Machines would then have to consider the distribution of loyal voters and the additional resources that might be needed to retain their support, were it to consider a change in its ideological stance.

Their minmax payoffs are, for the machine, 0, and, for WO, \(-1/2(x_{WO} - x_3)^2\). Hence, the feasible and individually rational payoffs they will accept in repeated play include the cooperation payoffs of \((v - b - 1/2(x_{WO} - x_3)^2 + b)\).

MACHINE POLITICS AND VOTE BUYING IN ARGENTINA

The comparative statics from my formal model generate hypotheses about the causes of machine or clientelist politics. In this section, I test these hypotheses with evidence from one developing democracy, Argentina.\(^{18}\) The evidence I present comes mainly from a survey of 1,920 voters, conducted in December 2001 and January 2002 in three Argentine provinces.\(^{19}\) The survey allows us to explore the strategies of clientelist parties indirectly, by revealing what kinds of voters these parties target and who among the voters are responsive to private rewards.\(^{20}\) Respondents were asked whether they had received any goods from a political party during the election campaign that had taken place two months earlier (variable name, Reward). Of low-income respondents in the sample, 12% (89 out of 734) reported receiving having goods. Most of them said that they had received food; other items mentioned frequently were building materials, mattresses, and clothing. In an open-ended question about whether receiving goods influenced their vote (Influence), about one in five of the low-income voters, and one-quarter of low-income Peronist voters, said it did. We asked other questions meant to detect clientelism, such as whether the person had turned to a locally important political actor for help during the past year (Patron) and whether, if the head of their household lost his or her job, the family would turn to a party operative for help (Job).

Poverty and Vote Buying

I discuss five pieces of evidence from the survey that lend support to my theory of machine politics. The first has to do with the effect of poverty on a voter’s willingness to sell his or her vote. The formal model analyzed earlier predicts that vote buying is more easily

\(^{18}\) The one comparative static from the model that I do not test is that ideological proximity between the parties encourages vote buying. The surveys did not elicit respondents’ views of the ideological distance between Argentina’s two major parties.

\(^{19}\) As in the 2003 survey reported on earlier, we used multistage cluster sampling techniques, based on census tracks. In this earlier survey we selected 480 adults each in the provinces of Buenos Aires, Córdoba, and Misiones, and from the area of Mar del Plata. The margin of error was plus or minus 4.5%.

\(^{20}\) Students of political clientelism and redistributive politics have typically observed the distribution of resources and their effects on voting at aggregated levels, such as the district or the county (see, e.g., Ansolabehere and Snyder, 2002, or Díaz-Cayeros, Magaloni, and Weingast, 2001). The problem of ecological inference can mar this approach. In contrast, the main problem with the survey approach used here is that people may be reluctant to acknowledge receiving handouts, in the Argentine case probably as much because of the implication that they are poor enough to sell their votes as out of concern about the illegality or immorality of their actions. It is probably evidence of this reluctance that only 7% of our sample acknowledged having received goods, whereas 44% said goods were distributed in their neighborhood, 39% could mention exactly what items were distributed, and 35% could name the party that gave them out. The effect of underreporting of clientelism is, in estimations where it is the dependent variable, to bias coefficients downward and make statistically significant associations appear insignificant.

- Start with Dixit-Londregan model, then show effects of replacing program politics by clientelistic politics.
- Model formalizes intuitive verbal arguments frequently made in the comparative politics literature.

- Voter group $i(=1,\ldots,n)$, with given income $y_i$ with $y_i < y_{i+1}$ and proportion $\alpha_i \in (0, 1)$
- utility $u(y_i + t_i) + v(g)$ where $u, v$ are strictly increasing, concave and Inada, $g \geq 0$ is public good, $t_i \geq 0$ is entitlement of private good transfer to each voter in group $i$
- Two parties $k = L, R$ each interested in maximizing probability of winning, a monotonically increasing function of its vote share
- Party $k$ commits to policy $g^k, t^k_i, i = 1,\ldots,n$ satisfying budget constraint $\sum_i \alpha_i(1 + \lambda_i)t^k_i + cg^k \leq R$ where revenue $R$ is given, and $\lambda_i$ is a given delivery leakage rate (assumed same for both parties)
**Dixit-Londregan ‘Swing Voter’ Model of Pork-Barrel Program Politics**

- Voters of type \(i\) loyalty to party L \(\epsilon_i\) distributed uniformly with zero mean and density (swing) \(s_i\), where every \(s_i\) is small enough to ensure interior vote shares.

- Voter of type \(i\) with loyalty \(\epsilon_i\) votes for L party iff

\[
    u(y_i + t^L_i) + v(g^L_i) + \epsilon_i > u(y_i + t^R_i) + v(g^R_i)
\]

- Unique equilibrium in dominant strategies: both parties converge to the same policy which maximizes

\[
    \sum_i \alpha_i s_i [u(y_i + t_i) + v(g)]
\]

subject to the budget constraint, and each party wins with probability \(\frac{1}{2}\) (*contested elections*)
Proposition

An increase in $s_i$ the swing propensity of group $i$ voters results in an increase in $t_i$ the transfer directed to group $i$ voters. The effect on public good provision $g$ is ambiguous; with Cobb-Douglas utility functions, the effects are purely redistributive: $g$ is unaffected and transfers to all other groups decline.
Replace Programmatic Politics by Clientelist Politics

- Key difference in Clientelism: elected officials have discretionary power to withhold delivery of private transfers to specific citizens
- Allows them to increase their vote share by threatening to withhold transfers to those that they believe did not vote for them
- Hence private transfers are delivered *conditionally* to citizens, only to those that officials believe supported them in the previous elections
- How can officials figure out who voted for them?
- The following mechanism can elicit this information in an incentive compatible manner
Modify pre-election game to one where each party holds a public rally, and each voter decides at most one rally to attend (at zero cost)

Party $k$ commits to policy $g^k, t^k_i, i = 1, \ldots, n$ conditional on being elected, where private transfers will be delivered only to voters that attend its rally

Then it will be optimal for every voter to select one rally to attend, and subsequently vote for that party
Clientelist Politics: How Do Voters Decide Who to Support?

- How does the voter select between the two parties?
- A fundamental difference in how voters decide, compared with programmatic politics: the decision instrumentally affects the voters access to private transfers
- Voter type $i$ will attend party L’s rally and then vote for L iff

$$p^L[u(y_i + t^L_i) + v(g^L)] + (1 - p^L)[u(y_i) + v(g^R)] + \epsilon_i >$$

$$p^L[u(y_i) + v(g^L)] + (1 - p^L)[u(y_i + t^R_i) + v(g^R)]$$

where $p^L$ is voter’s prior that $L$ will win the election.
Clientelistic Politics: How Do Voters Decide?

- Observe that voting decisions are independent of public goods provided by either party!
- Because votes are now cast on instrumental/personal motivation grounds (rather than moral, judgmental or chances of being pivotal): likely to increase election turnout
- Parties will then be motivated to not provide any public goods at all
- Modify model to include $\theta$ proportion of voters in each group in the formal sector, with secure property rights over direct transfer entitlement
- Formal sector citizens will then vote as in the Dixit-Londregan model; clientelist model reduces to programmatic model if $\theta = 1$
Clientelistic Politics: How Do Voters Decide?

Vote Share of L equals

\[
\frac{1}{2} + \sum s_i \{ \theta [u(y_i + t^L_i) + v(g^L)] + (1 - \theta) p^L [u(y_i + t^L_i) - u(y_i)] \\
- \theta [u(y_i + t^R_i) + v(g^R)] - (1 - \theta)(1 - p^L) [u(y_i + t^R_i) - u(y_i)] \}
\]

where \( \pi^k \equiv (\{ t^k_i \}, g^k) \) denotes the platform of party \( k \), and \( p^L \) the voters expectation concerning party L’s winning probability.

Party \( k = L, R \) will select its policy platform to maximize

\[
\sum \alpha_i s_i \{ \theta [u(y_i + t^k_i) + v(g^L)] + (1 - \theta) p^k [u(y_i + t^k_i) - u(y_i)] \} \quad (1)
\]

subject to the budget constraint \( \sum \alpha_i (1 + \lambda_i) t^k_i + cg^k \leq B \),

where \( p^R \equiv 1 - p^L \).
Clientelistic Equilibrium

- Each party takes voter assessments of their respective electoral prospects $p^L, 1 - p^L$ as given
- $\pi^k(p^L)$ denotes best response of party $k$ to voter expectation $p^L$ be denoted $\pi^k(p^L)$
- Equilibrium condition:

$$p^L = \psi(p^L) \equiv \phi(V^L(\pi^L(p^L), \pi^R(p^L); p^L))$$

- $\psi(.)$ is strictly increasing and continuous. Hence an equilibrium exists.
Clientelistic versus Programmatic Politics: Result 1

Proposition

In any equilibrium of the clientelist politics game, party $k$ will select a policy which maximizes

$$\sum_i \alpha_i s_i \left[ \left\{ 1 + p^k \frac{1 - \theta}{\theta} \right\} u(y_i + t_i) + v(g) \right]$$

subject to the budget constraint, where $p^k$ is the equilibrium probability of party $k$ winning. A fall in $\theta$ (rise in size of informal sector) lowers the supply of the public good, and increases private transfers unambiguously.

- Clientelism raises private good transfers and lowers supply of the public good, so it can lower efficiency/growth
- This effect is larger, the greater the proportion of voters in the informal sector
Clientelistic versus Program Politics, Result 2

Proposition

(a) There is an equilibrium with $p^L = \frac{1}{2}$ and policy convergence.

(b) This equilibrium is locally unstable if

$$\phi'(\frac{1}{2}) > \phi^* \equiv \frac{1}{2(1 - \theta) \sum_i \alpha_i s_i [u(y_i + t_i^*) - u(y_i)]}$$

and locally stable if the direction of the inequality is reversed (where $t_i^*$ denotes symm equi policy).
Proposition

If

\[ \phi'(\frac{1}{2}) > \frac{1}{2 \sum_i \alpha_i s_i [u(y_i + t_i^*) - u(y_i)]} \]

there exists \( \theta^* \in (0, 1) \) such that the symmetric equilibrium is locally unstable and there exist multiple asymmetric locally stable equilibria where \( p^- \) is different from \( \frac{1}{2} \), if and only if \( \theta < \theta^* \).
Implications for Political Competition

- Implications of Clientelism:
  - *(Private Recurring Benefits and Redistributive Bias):* Bias in favor of private recurring benefits against public goods or private one-time benefits; in favor of transfers to poor voters (contrast to elite capture distortion)
  - *(Contagion/Strategic Voting):* informal sector voters’ response to directed benefits depends on their assessment of party’s ‘credibility’ (likelihood of winning)
  - *(Multiple Equi/Lopsided Competition/Incumbency Advantage):* If size of informal sector is large enough, there will be an unstable symmetric equilibrium, and multiple asymmetric (stable) equilibria where one of the two parties wins with probability greater than $\frac{1}{2}$; otherwise equilibrium is unique where each party is equally likely to win
4. Empirical Evidence

- Most studies examine correlations between supply of targeted versus non-targeted goods, with measured proxies (indirect correlates) of clientelism.
- Standard econometric concerns of measurement, endogeneity and omitted variables.
- Additional problem with most of these studies: the observed correlations could also be consistent with programmatic politics.
Evidence: Examples

- Wantchekon (2003): Benin RCT study of effect of targeted versus non-targeted campaign promises on votes
- Stokes (2005): Argentina cross-sectional variation of targeted benefits with household and village characteristics
- Bardhan et al (2009, 2015a): West Bengal household panel data shows high positive correlation between party supported by a household in opinion poll, and receipt of recurring benefits (food-for-work employment, subsidized loans, agri. inputs); but no such correlation with one-time/local public benefits (roads, water, housing) received
- supply-side endogeneity problems addressed in Bardhan et al (2015b)
Evidence: contd.

Khemani (2015):

- uses direct measure of vote-buying, reported by households
- in sample of 60 Philippine villages, 38% households reported awareness of vote-buying in their village
- positive cross-sectional correlation of non-targeted benefits (health services provision, child health measures) with household reports of vote-buying
- Similar results in cross-section of 43 African countries using Afrobarometer data
Evidence, contd.

Larreguy (2013):

- argues plausible exogenous determinant of vote-buying effectiveness in rural Mexican municipalities is geographical match (*FIT*) between electoral boundaries and rural communal lands (*ejidos*) managed by political incumbents
- Because this enables parties to more precisely gauge effort of local brokers in delivering votes
- FIT interacted with PRI incumbency at state level is positively correlated with PRI votes at municipality level, and negatively correlated with per capita teachers and schools
- Leaves open question of what determined drawing of electoral boundaries; however, FIT by itself is uncorrelated with PRI votes at municipality level
5. DEVELOPMENT AND INSTITUTIONAL DYNAMICS

- Historically, clientelistic political practices tend to decline as countries develop
- Clientelistic politics tends to be replaced by programmatic politics and rule of law
- A fundamental institutional transformation
- Cause or effect of development?
Why Development Can Undermine Clientelist Politics

- as voter incomes rise, vote price goes up, rendering vote-buying more expensive for parties
- rising connectivity and mobility weaken social networks in traditional rural societies, lowering the ability of brokers to monitor voters and mediate clientelist transactions
- increasing migration opportunities and growth of formal sector lowers dependence of voters on local leaders for their livelihoods
- rising citizen demand for public, non-targeted benefits (such as public health, education, low corruption, better governance quality) relative to targeted benefits
Historical Role of Changes in Political Institutions

- **Extension of the franchise** (Cox (1987), Lizzeri and Persico (2004)): increased number of votes that would have to be purchased to win elections
- **Secret ballots**: made it harder for party operatives to monitor/manipulate votes
- **Rising power of executive branch relative to legislatures**: Cox (1987) argues this was critical in 19th century UK in controlling individual legislators and enforcing party discipline
- **Anti-bribery legislation** (Camp, Dixit and Stokes (2014)): 1883 Act in UK outlawing hiring of electioneering agents by political candidates, following bipartisan consensus
What Motivated The Change in Political Institutions?

- Deeper question
- Lizzeri-Persico (2004): franchise extension was a response to rising concern with public health issues in urban areas which affected elites and non-elites alike; alternative explanations provided by Acemoglu-Robinson (2001) based on threat of revolution
- Camp-Dixit-Stokes (2014): decline in effectiveness of election agents resulted from rising incomes, education of masses etc., so hiring them became less profitable for political candidates
- Suggests economic development drove change in political institutions
Role of Rise in Programmatic Politics

- Factors undermining decline of clientelism in US experience during late 19th-early 20th century:
  - adoption of Australian ballot in many states
  - bureaucratic (Progressive Era) reforms
  - social security and New Deal

- Latter two factors highlight how rise in programmatic politics can crowd out clientelist politics

- Related phenomenon in some middle income countries (Brazil, Mexico) implementing nation-wide entitlement and land titling programs
Brazil: Bolsa Familia

- Bolsa Familia (BF): large CCT program covering 12 million household, designed to be a nation-wide formula-driven entitlement program administered by the Federal government, with cash transfers deposited directly into beneficiary bank accounts.
- Fried (2011) provides evidence that BF delivery was politically neutral:
- BF program coverage deviations from planned targets exhibited quantitatively small correlations of the ‘wrong’ sign with various political criteria (e.g., local vote share of the federal incumbent party PT, measures of local political competition and swing characteristics).
Bolsa Familia Effects

- Frey (2015) estimates impact of BF coverage using an instrumental variable regression discontinuity design: 10% increase in BF coverage
  - reduced incumbency advantage of local mayors by 8%
  - increased political competition (lowering victory margins by 6%, raising the number of candidates by 0.6, and educational qualifications of candidates)
  - lowered private campaign contributions to incumbents by 40%
  - increased health care and education spending shares by between 2-3%
PROCEDE: Rural land titling program creating and distributing individual property rights over rural communal lands (ejidos) enacted between 1993-2010

de Janvry et al (2014), Dower and Pfutze (2015) provide evidence using DID design that these reduced votes of political incumbents

Consistent with decline in local clientelism based on political management of ejidos
Political Motivation for Creation of Entitlement Programs?

*Key Question:* Why do political incumbents that benefit from clientelistic practices create entitlement programs that undermine such practices?

Lessons from case studies:

- **PROCEDE:** technocrat economists within PRI administration wanted to pass land reforms to raise competitiveness of Mexican agriculture when NAFTA was being implemented.
- **Federal gains versus local losses:** FDR’s anti-corruption investigation of NYC Mayor Jimmy Walker (Mitgang (2000)), CORETT in Mexico (Larreguy et al (2015)).
Summary

- Focused on comparison of two kinds of political institutions: clientelistic and programmatic
- Large comparative politics literature on clientelistic politics in developing and middle income countries, primarily descriptive; formal models/econometric analyses have just begun to emerge
- Theoretical predictions: clientelism enhances over-allocation towards directed private transfers at expense of public goods; public sector employment and short-term recurring benefits; selective law enforcement, insecure property rights and large informal sector
- Welfare consequences: likely to generate static redistribution in favor of the poor, at the expense of growth and long-term poverty reduction; effects on political competition are ambiguous (Vicente (2014) RCT for Sao Tome-Principe)
Summary, contd.

- Difficulties in empirical measurement and identification (as in most research on corruption) esp. of conditional delivery of directed transfers to political supporters
- Mostly indirect evidence, seems to confirm predictions concerning resource allocation biases
- Institutional dynamics: evidence confirms expectations that rise in programmatic politics (at the federal level) in the form of nationwide entitlement programs and property right reforms will cause clientelistic practices (at the local level) to erode