

Theory

In this section, I adapt the canonical vote-buying model proposed by Groseclose and Snyder (1996) and Banks (2000) to model how executive control over the city council determines patronage. The theoretical framework centers on two main actors, a government (*governo*) and opposition (*oposição*) who compete for votes in the city council.¹ The mayor seeks to enact her preferred policy, but can only do so by passing a simple majority vote in the council. The opposition, on the other hand, wants to block her efforts and maintain the status quo. In order to build a winning coalition, the mayor must spend a key political resource: patronage appointments into the municipal bureaucracy.

Ultimately, two forces shape the mayor's strategy: the amount of resources controlled by the opposition and the underlying preferences of the legislators. The key parameter of interest is the underlying preferences – i.e. support for the mayor – of city councilors. In some municipalities a mayor has widespread political support ("base política"), while in others, the opposition ("oposição") garners more seats. In the actual empirical estimation, we approximate these preferences by looking into the councilor's partisan alignments in the mayoral election. For the second determinant, the opposition's resource, it is clear that an opposition with more resources can better compete with the mayor, forcing the latter to spend more to deter them.

I show that, in equilibrium, the cost of passing the mayor's preferred policy decreases monotonically as the legislative support for the mayor increases. Substantively, the model predicts that municipalities in which the mayor has more (less) councilors favorable to her, we should observe less (more) patronage. In the remainder of this section, I outline the setting of the model and derive key comparative statics that guide the empirical estimation of this paper. I conclude with a discussion of the model and how it applies to the Brazilian municipal context.

The Setting

The government G and opposition O compete over legislative votes to enact their preferred policies. There are two possible outcomes: a policy x favored by the government, and the status quo, denote as y , preferred by the opposition. In order to implement her policy the mayor must gain the approval of the city council, comprised of an odd N number of voters, through a simple majority rule. The

¹I use the terms mayor and government interchangeably for the rest of this section.

mayor and opposition spend political resources W_M and W_O to win over votes, which for the mayor includes patronage appointments into the public sector.

Each city councilor is characterized by a publicly observed policy preference v_i for all $i \in N$, where $v_i > 0$ entails that the mayor's proposal x is preferred. Let $\mathbf{v} = (v_1, \dots, v_n)$ denote a preference profile for the city council. Let v_i measure the degree to which an individual city councilor supports the mayor, with higher values denoting stronger support for the mayor and vice versa. Payoff gets realized when city councilor i votes, independent of the outcome of the voting procedure.

We solve the game through backward induction. The timing of the game is as follows:

1. Mayor M offers a bribe schedule $m \in (m_1, \dots, m_n) \in \mathbb{R}_+^n$.
2. Opposition O observes the bribe schedule m and makes a counter-offer $o \in (o_1, \dots, o_n) \in \mathbb{R}_+^n$.
3. City councilors cast their votes and payoffs are realized.

Given a bribe schedule (a, b) , councilor i prefers to vote for the mayor's proposal x if $a_i + v_i > b_i$ and the status quo y otherwise. Since indifferent councilors vote for the status quo, the opposition needs to only match bribes from M , adjusting for individual preferences, i.e. $o_i = m_i + v_i$. For the mayor, she needs to construct the cheapest winning coalition in order to beat the opposition.

Following Groseclose and Snyder (1996) and Banks we focus our analysis on the set of equilibria in which the mayor wins. In this context, the amount of patronage resources W_M is sufficiently large relative to W_O and \mathbf{v} that the mayor's preferred policy x is implemented over y . Let $U(\mathbf{v}, W_O)$ denote the set of unbeatable patronage schedules for the mayor, and for any patronage schedule let $S(m) = \sum_{i=1}^n m_i$ be the total amount of patronage disbursed. The mayor then solves

$$\min_a \{S(a) : a \in U(\mathbf{v}, W_B)\} \quad (1)$$

Note that for any equilibrium strategy, it must be the case that mayor M uses a leveling schedule: every city councilor in her coalition C is equally expensive for the opposition O to bribe.