**Intraparty Negotiation Reduces Level of Interregional Redistribution**

If parties are national

**Expected marginal change in the number of legislative seats of the party** due to redistribution is expected to affect legislative power.

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**Introduction**

Almost every democratic federation has some system of interregional redistribution. Redistribution of income between regions can occur as a side-effect of individual-based programs of redistribution or it can be part of a program that targets reduction of regional inequality. There is an extensive literature in the Political Economy of interregional redistribution that emphasizes the effect of the median voter preference (Alesina and Perotti, 1998; Alesina and Spolaore, 2003; Bolton and Roland, 1997; Drazen, 2004; Beramendi, 2012). In another direction, some authors have emphasized the role of the legislative bargain in defining the amount of redistribution (Austen-Smith, 1998; Roiden, 2009).

I discuss two models (and extend one) of interregional redistributive politics. The first model based on median voter theory is

$$ U_i = E[U_i] = E[U_i]_{\theta} = \frac{1}{2} \left( 1 - \beta \right) \left( 2(w_i - \lambda g_i - \theta) + \theta \right) $$

Variables measured at the regional level:

- **E[U(c)]**: Average utility median voter under interregional redistribution in a decentralized (or centralized) scenario.
- **$\beta$**: proportion of employed population ($\lambda = 1 - \beta$).
- **$\gamma$**: GDP.
- **$w_i$**: median voter income.
- **$\theta$**: $2(\lambda(w_i-1 + \sigma_j^2)$: risk of income loss for median voter.
- **$\sigma_j$**: economic risk of unemployment.

Representatives choice problem:

$$ \max_{e \in \{c,d\}} U_e $$

The alternative model that considers electoral and legislative incentives is given by

$$ W_{ij} = y_i - r_i + H(g_j, y_i, \tilde{y}_j) $$

Where $j$ stands for region, $i$ for individual and

- **$W_{ij}$**: utility of individual
- **$y_i$**: income.
- **$r_i$**: tax redistribution.
- **$H(g_j, y_i, \tilde{y}_j)$**: value of public good $g_j$ for the individual, provided in regional basis (transfers), where $dH/dg > 0$, $d^2H/dg^2 < 0$, $dH/dy < 0$, $dH/dy < 0$.

$$ U_{kj} = \sum_{i \in I_j} \pi_i(W_{ij}) + \phi_{kj}(W_{ij}) $$

Where $K$ stands for the representative and $j$ for region

- **$U_{kj}$**: utility
- **$\pi_i(W_{ij})$**: probability $i$ in region $j$ will vote for $k$ as an indirect function of $g_j$.
- **$\phi_{kj}$**: utility of $k$ from increasing his party size in the legislative in period $t+1$ given more votes for his party in other regions $j$ as an indirect function of the transfer for those regions.

Representatives choice problem:

$$ \max_{g} U \text{ s.t. } \sum_{j \in J} g_j = 1 $$

**Empirical Models**

I estimate the following empirical models to test the predictive capacity of the formal models

$$ (1) \quad y = \alpha_1 + \beta y_i + \epsilon $$

$$ (2) \quad y = \alpha_2 + \beta y_i + X \beta + \epsilon $$

$$ (3) \quad y = \alpha_3 + \beta y_i + \epsilon $$

$$ (4) \quad y = \alpha_4 + \beta y_i + X \beta + \epsilon $$

$$ (5) \quad y = \alpha_5 + \beta y_i + \beta y_i \epsilon + X \beta + \epsilon $$

where

- **$y$**: % transfer with respect to status quo; $U_i$. Theoretical prediction of preference of representative state $j$ for median voter model; $U_{kj}$. Theoretical prediction of preference of representative state state $j$ for alternative model; $X$ controls

**Case Study: Brazilian Constitutional Convention**

In the Brazilian Constitutional Convention, the poor regions with low capacity to generate revenue from local taxation (NO, NE, and CO) formed a coalition, as predicted by the median voter model. They demanded centralization and increase of interregional transfers. The majority rule guaranteed advantage in the three committees (STDF, CSTOF, Main Committee) and in Plenary. The figure 1 shows the fitted line of the regression using preferences as predicted by the median voter model and the change in the percentage received by each state with respect to the status quo. The table 1 shows the result of the empirical model. The median voter model is a robust predictor of the outcome.

However, the median voter model is insufficient for understanding the decision. The coalition of the poor regions, although majoritarian, did not extract as much transfer as they could. The majority maximized the transfer to their region subject to not imposing reduction of government revenue to the regions where their party elects many members (captured by $\phi$ in the alternative model). The solution was to increase the transfer to rich regions using a new regulated fund called FE (increase in $y$ such that $\sum_j g_j > 1$ to match their revenue in the status quo). SP and RJ, the two largest and among richest states, were the only regions that would lose with the reform. As figure 2 shows, the majoritarian coalition approved FE that, after summed to the revenue, exactly matched the amount of transfer they have received before the reform.