

Runoff Elections and the Number of Presidential Candidates

***A Regression Discontinuity Design
Using Brazilian Municipalities***

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A Familiar Debate: Duverger 1951 / 1954

- **Duverger's Law was that 'the simple majority, single ballot system favours the two-party system'**
- **Duverger's Hypothesis was that 'both the simple-majority system with second ballot and proportional representation favour multipartism'.**
- **Excellent recent reviews: Benoit (2006), Grofman et al. (2009), Singer (2012)**

Why would ballottage inflate the number of candidacies?

- The strategic objective of smaller parties / weaker candidates may not necessarily be victory. They may want to:
- Flex their muscles / demonstrate strength
- Inflate price of their 2nd round endorsement
- Enter into coalition government / cabinet
- Promote an ideological position / pet issue
- Groom themselves for a future run
- Increase name recognition for other purposes

Taking the arguments to the presidential world

- **Duverger was mainly interested in parliamentary distributions of seats and the resulting party systems**
- **Democratization of the presidential world in the Third Wave led to the testing of Duverger's Hypothesis for unipersonal executive elections under the separation of powers**
- **Empirical studies (Taagepera and Shugart 1989, Jones 1999, Singer 2012) largely confirmatory**
- **Yet sample heterogeneity in these studies is high, and the DV is usually ENPC**

How do we count the number of presidential candidates?

- The ENPC has become the industry standard, but may not be the best way of testing for Duvergerian equilibria (Grofman et al. 2009)
- ENPC may bias the results, depending on sample composition
- If we want to understand elite behaviour (parties and candidates), we should use the raw number of candidates
- If we want to understand voter behaviour, we could use the effective number....

A cleaner test using a quasi-experimental design

- Brazilian municipalities with $<200K$ voters use SMDP rules for mayor, while those with $>200K$ must hold runoff elections**
- This allows for an RDD design with the 200K cutoff as the forcing variable**
- The rule came into effect in 1988. From 1998, consecutive reelection possible. So we use elections from 2000-2016 (5 cycles).**
- Number of runoff cities has risen from 44 to 92 over this period. In 2016, these 92 were 1.6% of municipalities, but had 38% of voters.**

Two Alternative DVs

- The raw number of mayoral candidates (a simple count)
- The effective number of mayoral candidates (using the Laakso-Taagepera formula)

Two Alternative Bandwidths

Table 2. Characteristics of Mid-Sized Cities (compared to all municipalities).

Variable	All Municipalities	150K-250K Bandwidth	180K-220K Bandwidth
Mean Population	35,063	269,212	293,229
Mean HDI	0.740	0.810	0.797
Mean GDP p/c USD	\$7,700	\$13,641	\$14,756
Mean % Poverty	18.6	3.4	5.4
Mean Turnout	85.7	82.8	82.7
Mean ENP _v Legislature	7.6	13.3	13.3
State Capital	26	4	1
N in 2016	5564	76	19

Sources: IBGE (2010), Demographic Census, for the population, IDH-M, and GDP p/c. IBGE (2014), Municipal GDP, for the GDP p/c. TSE (2017), Electoral Data Repository, for all proportions and indexes based on electoral coalitions and results.

IVs and Controls: Again, why would ballotage inflate the N of candidacies?

- **The real objective of smaller parties / weaker candidates may not be victory. They may want to:**
- **Flex their muscles / demonstrate strength**
- **Inflate price of their 2nd round endorsement**
- **Enter into coalition government / cabinet**
- **Promote an ideological position / pet issue**
- **Groom themselves for future run**
- **Increase name recognition for other bids**

Independent Variables

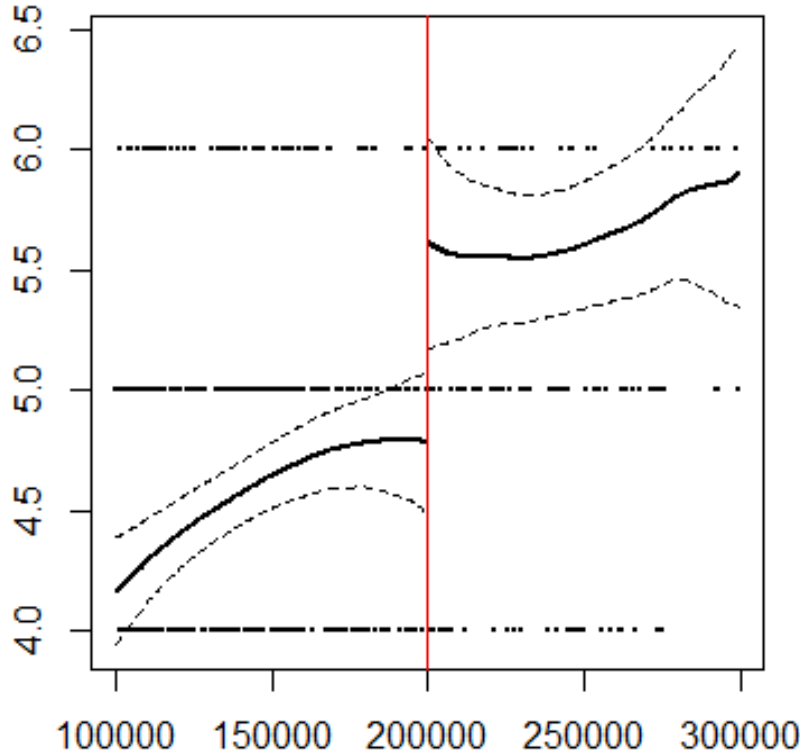
Table 3. Expected impact of independent variables on the two DVs.

	Raw	Effective
Runoff rule	+	N.S.
Incumbency (Party and Nominal)	N.S.	-
Magnitude Corrected Fragmentation (t-1)	+	+
Avg. Abs. Ideological Heterogeneity (t-1)	+	+
Prop. Vote in the Winning Coalition (t-1)	-	-
Avg. Size of coalitions (log)	-	-

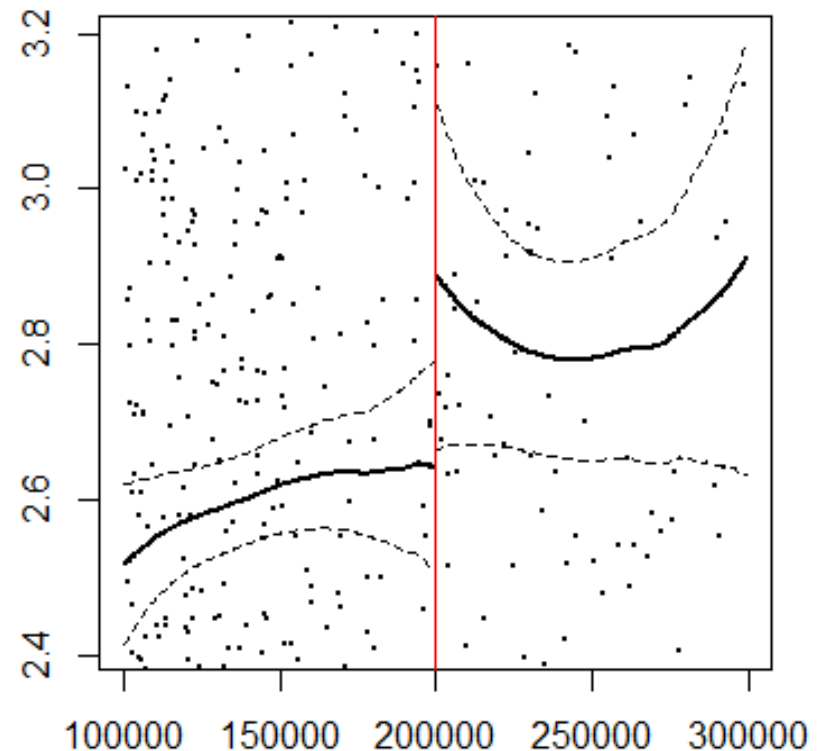
***(The Context: Robust Multipartism and
Coalitional Presidentialism)***

Raw and Effective N of Candidates

Raw



Effective



Source: TSE data. Notes: simple regression in which the raw or effective number of candidates is the dependent variable and the number of municipal voters is the sole explanatory variable. The cutpoint was 200 thousand voters, corresponding to the runoff rule in Brazil. We employed the Imbens-Kalyanaraman (2012) optimal bandwidth algorithm for estimating the best bandwidth for local regressions in the RDD according to each dependent variable (raw or effective number of candidates).

Table 4. GLS model coefficients at different bandwidths for Raw and Effective number of candidates, alternative bandwidths.

	Raw Number		Effective Number	
	150-250k	180-220k	150-250k	180-220k
Runoff	0.744 *** (0.181)	1.034 ** (0.295)	0.124 (0.091)	0.242 (0.164)
Incumbency (Party and Nominal)	-0.150 (0.188)	-0.294 (0.332)	-0.454 *** (0.093)	-0.414 * (0.184)
Magnitude Corrected Fragmentation (t-1)	0.632 (0.540)	-0.897 (0.911)	0.208 (0.261)	-0.393 (0.506)
Avg. Abs. Ideological Heterogeneity (t-1)	0.436 (0.283)	1.041 * (0.476)	0.125 (0.138)	0.408 (0.266)
Prop. Vote in the Winning Coalition (t-1)	-0.549 (0.513)	-1.307 (0.926)	-0.108 (0.255)	-0.532 (0.514)
Avg. Size of coalitions (log)	-1.029 *** (0.233)	-0.795 * (0.354)	-0.353 ** (0.109)	-0.147 (0.194)
Constant	5.993 *** (0.465)	6.517 *** (0.742)	3.208 *** (0.213)	3.232 *** (0.406)
Phi	0.267 ***	0.096	0.137	0.043
N	278	93	278	93
Pseudo R2	0.110	0.217	0.064	0.157
AIC	1022.6	338.6	638.4	238.3
LogLikelihood	-502.3	-160.3	-310.2	-110.2

Significance thresholds: . p<.10; * p<.05; ** p<.01; *** p<.001.

Some Takeaway Messages

- **Under conditions of robust multipartism, minority executives and coalitions, runoff elections inflate the raw N of candidates. They do not inflate the effective N .**
- **The presence of an incumbent affects voter behaviour but not elite behaviour. Elites and parties want to play the game no matter what.**
- **Findings are highly sensitive to the method of counting candidacies.**

Alternative Measures of Counting Candidates: The Raw and the “Cooked”

- **While both measures aim to measure the “supply” of candidates, the raw number of candidates better captures elite preferences, while the effective number of candidates better captures voter preferences.**
- **Therefore, diagnosis of a Duvergerian equilibrium is highly sensitive to the method of counting candidacies.**

Thank You



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