Incumbency advantage in multi-member districts: Evidence from congressional elections in Chile☆

Christian Salas

University of Chicago, Harris School of Public Policy Studies, 1155 East 60th Street, Chicago, IL 60637, USA

A B S T R A C T

Do parties enjoy an advantage to incumbency in multi-member districts? In this paper we answer this question by adapting a regression-discontinuity design to multi-member districts in congressional elections in Chile. The electoral system in place generates discontinuities in the number of elected representatives from each coalition at the 1/3 and 2/3 thresholds of the *two-party* vote share. Regression-discontinuity estimates indicate that, by holding two seats as opposed to holding only one, the left-leaning coalition obtains an extra 4.5% vote share in the next election and increases by 28 percentage points the probability of electing two candidates again. These results are in line with those obtained in previous studies in the U.S. but contrast with results obtained in developing countries which find a negative advantage to incumbency.

1. Introduction

Following the idea that the uncertainty involving the final vote count in a narrow election generates a quasi-random assignment of *incumbency*, Lee (2008) established the conditions under which causal inference from a regression-discontinuity (RD) design could provide incumbency advantage estimates that are as credible as those from a randomized experiment. Applying this to U.S. House elections between 1946 and 1998, Lee estimated that party incumbency granted nearly 8% higher vote share in the next election.

Following his lead, recent studies have used RD designs to document the existence of incumbency advantage in both industrialized and developing contexts. Ferreira and Gyourko (2009) study mayoral elections in 413 U.S. cities between 1950 and 2005 finding that barely winning an election grants the incumbent an additional 32% probability of winning the next election. Trounstine (2011) performs the exercise in City Councils of Austin, Dallas, San Antonio and San Jose between 1915 and 1985 at the candidate level finding that the incumbent has a 32% greater winning probability and a 20% greater vote share in the next election. Uppal (2009) studies state legislative elections in India between 1975 and 2003 and finds a negative advantage to incumbency of 15% in the winning probability and 2.2% in vote share. Klasnja and Titiunik (2016) estimate the advantage to incumbency for municipality mayors at the party level in Brazil between 1996 and 2012 finding that the incumbent is 15 percentage points less likely to win the following election. Fowler and Hall (2014) and Erikson and Titiunik (2015) recognize that Lee's approach produces estimates that combine personal and partisan incumbency advantages and propose different methodologies to disentangle these two effects. Fowler and Hall (2014) exploit a RD design in conjunction with term limits in U.S. state legislatures between 1996 and 2008 to find that the personal advantage amounts to an extra 9 percentage points in vote share while partisan advantage alone does not contribute to the success in the next election. Erikson and Titiunik (2015) revise Lee's estimates using only open-seat U.S. House elections between 1968 and 2008 to find that the personal incumbency advantage is of about 7% of the vote share, almost the exact estimate found by Lee. Table 1 summarizes these results.

The above papers study elections in single-member electoral

Table 1
Literature on advantage to Incumbency using a regression-discontinuity design.

Year	Author(s)	Paper name (and link)	Journal	Election	Unit	Country	Period	Effect of incumbency on next election
2008	Lee	Randomized experiments from non-random selection in U.S. House elections	Journal of Econometrics	U.S. House	Party	U.S.	1946—1998	Average increase of 8% in vote share and 39% in win prob.
2009	Ferreira, Gyourko	Do political parties matter? Evidence from U.S. Cities	Quarterly Journal of Economics	Municipal	Party	U.S.	1950—2005	Average increase of 32% on win prob.
2009	Uppal	The disadvantaged incumbents: estimating incumbency effects in Indian state legislatures	Public Choice	Legislative	Candidate	India	1975—2003	Average decrease of 15% on win prob. and 2.2% on vote share
2011	Trounstine	Evidence of a local incumbency advantage	Legislative Studies Quarterly	City Council	Candidate	U.S.	1915—1985	Average increase of 32% on win prob. and 22% on vote share
2014	Fowler, Hall	Disentangling the Personal and Partisan Incumbency Advantages: Evidence from Close Elections and Term Limits	Quarterly Journal of Political Science	State Legislature	Candidate, Party	U.S.	1996—2008	Candidate effect of 9% increase in vote share. No effect of party.
2014	Golden, Picci	Redistribution and re-election under proportional representation: The postwar Italian Chamber of Deputies		Legislative	Candidate, Party	Italy	1948—1992	No effect of incumbency
2015	Erikson, Titiunik	Using Regression Discontinuity to Uncover the Personal Incumbency Advantage	Quarterly Journal of Political Science	U.S. House	Candidate	U.S.	1968—2008	Average increase of 7% on vote share
2016	Klasnja, Titiunik	The Incumbency Curse: Weak Parties, Term Limits, and Unfulfilled Accountability	American Political Science Review	Municipal	Party	Brazil	1996—2012	Average decrease of 15% on win prob.

units, that is, where each election is held to choose a single public official. This is a natural setting for Lee's design since this allows for the running variable to be the vote share of the two most voted parties (or candidates) and the threshold to be exactly at 50%. The key challenge in a multi-member setting - where in each election two or more candidates are chosen for office-is to find a running variable with a sharp threshold which produces a discontinuity in the number of elected representatives. The only paper found adapting Lee's design to a multi-member setting to study incumbency advantage is a working paper by Golden and Picci (2014), which studies the open list proportional parliamentary system in Italy. The authors approximate such a running variable with the ratio between the number of preference votes received by each candidate and the minimum number of votes required to be elected (using for the latter either the number of votes of the most voted unsuccessful candidate or those of the party's least voted elected candidate). The denominator of this ratio varies between districts and elections, and the corresponding threshold is 1. The study finds no incumbency advantage at the candidate level. As discussed by the authors, this approach suffers mainly from two issues. First, the running variable and threshold are only approximations and cannot be anticipated exactly. Second, the main analysis considers only candidates who are observed in two consecutive elections, analysis which may suffer from selection into candidacy.

Related studies have adapted a RD design to proportional multi-party systems in order to study the effect of parties on policy.[1] Pettersson-Lidbom (2008) uses the fact that, even though Swedish political map is composed of several parties, these parties divide in two blocs for all policy-relevant purposes. He then uses a RD design in local elections to find that the left-wing bloc spends and taxes 2—3% more than the right-wing bloc. Folke (2014) recognizes that individual parties inside a bloc may on their own have effects on policy. In order to test this in Swedish's proportional multi-party system, he adapts a RD design to measure how changes in the

legislative representation of small parties affect policy outcomes, finding that changes in the representation of anti-imigration and green parties have a causal effect on immigration and environmental policy, but not on tax policy.

This paper proposes a novel adaptation of Lee's design in order to estimate the incumbency advantage in multi-member districts. We use parliamentary elections in Chile where congressional districts are of magnitude two and where there is a multi-party system organized around two strong blocs. The election rule follows an open list proportional representation system using the D'Hondt formula: the first two most-voted lists in each district elect one representative each, unless the most voted list receives more than double the number of votes than the votes received by the second list, in which case the first list elects two candidates. As explained in detail below, this system generates discontinuities at the 1/3 and 2/3 thresholds of the two-party vote share. Using a RD design, this paper estimates that holding both two congress seats in a district (as opposed to holding only one) grants the incumbent coalition an extra 4.5% vote share and increases the probability of electing two candidates again by 28 percentage points in the next election. These findings are comparable to those reported in similar studies in the US but contrast with results obtained in developing countries which find a negative advantage to incumbency.

The paper is organized as follows. Section 2 briefly explains how congressional elections in Chile work and describes the data. Section 3 explains the appropriateness of the regression-discontinuity design in this setting and thoroughly discusses its potential pitfalls. Section 4 presents the main results. Section 5 discusses the results in light of the literature and concludes.

2. Congressional elections in Chile and data

2.1. Congressional elections in Chile

During the last years of Pinochet's dictatorship at the end of the 80 s, two coalitions were created: a left-leaning coalition and a right-leaning coalition. Both coalitions were composed by more than one party and such composition has remained practically

---

[1] See also the following working papers: Curto-Grau et al. (2012), Freier and Odendahl (2012), and Fiva et al. (2014).