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Estimating Incumbency Advantages in African Politics:
Regression discontinuity evidence from Zambian parliamentary and local government elections

Bobbie Macdonald

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Department of International Development

London School of Economics and Political Science

Houghton Street **Tel: +44 (020) 7955 7425/6252**

London **Email: destin@lse.ac.uk**

WC2A 2AE UK **Web site: www.lse.ac.uk/depts/ID**

Abstract

Are incumbents disproportionately advantaged at the polls relative to non-incumbents in Africa's emerging democracies? The prevailing wisdom characterises African politics as predominantly 'neopatrimonial' and 'semi-authoritarian' in which incumbents systematically manipulate the electoral process to their own advantage. In stark contrast to this perspective, this study finds significant incumbency *dis*-advantages in Zambia's local government elections using a regression discontinuity approach, as well as no discernible incumbency advantages at the parliamentary level over the period 1991-2011. Furthermore, the strength of these disadvantages appear to be closely associated with higher levels of voter information, poorer economic conditions, and a structural shift in party competition. These results effectively expand the incumbency effects literature into the African context and offer an important contrast to the conventional wisdom of African politics.

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1. Introduction

Do the many perks of holding public office translate into significant electoral advantages for incumbents in Africa's emerging democracies? The effects of holding office on electoral performance has been one of the most widely studied topics in American politics (Ansolabehere, Snyder, & Stewart, 2000; Gelman & King, 1990; Erikson, 1971) and has generated much interest in other mature democracies (Katz & King, 1999; Hainmueller & Kern, 2008; Ariga, 2010). Although these studies have largely documented the strong advantages of incumbency, an emerging body of research has also demonstrated strong incumbency *dis*-advantages in Brazil (Brambor & Ceneviva, 2011; Titiunik, 2011), India (Uppal, 2009; Linden, 2004), and a range of other low and middle income countries (for a review, see Klašnja, 2013). To date, however, these studies have not ventured onto the landscape of African politics, where much more is arguably at stake in multi-party elections.[1]

The study of incumbency effects is motivated by immediate concerns over democratic competitiveness, political accountability, and the general 'fairness' of elections. Yet incumbency effects also have important welfare consequences. For instance, the distribution of public spending by incumbents on the basis of electoral rather than developmental considerations can have strong distortionary effects (for a review, see Golden & Min, 2013). Similarly, the presence of persistent incumbency disadvantages may be part of a broader 'pessimistic politics trap' (Svolik, 2013; Myerson, 2006) in which voters throw incumbents out of office after just one term under perceptions of widespread political corruption. In turn, policy horizons remain short and 'honest' politicians have little incentive to enter politics, thereby undermining long-term development strategies.

In this study, I use a regression discontinuity (RD) design to estimate the effects of incumbency on electoral performance in Zambia across two local government elections and five parliamentary contests since 1991. Due to the discontinuous property and non-trivial random chance component of elections, candidates who narrowly win or lose by just a 'few' votes are arguably comparable on average across all observable and unobservable characteristics, thus differing only in their incumbency status. Specifically, I estimate the *party* – as opposed to *personal* – incumbency effect on electoral performance given the

[1] Miguel & Zaidi (2003) find no evidence of incumbency advantages in Ghana's 2000 parliamentary election, yet their dataset covers only 200 electoral races (even before restricting the analysis to 'bare' winners and losers) and is given only peripheral treatment in a broader study on politicised targeting of public spending.

primary salience of party over individual identities in Zambian politics since 1991 (see Posner, 2005). The dataset constructed for this study covers over 1,700 electoral contests and more than 5,600 candidate-level observations.

The predominant characterisation of African politics as 'neopatrimonial' and 'semi-authoritarian' implies that incumbents are in a strong position to systematically manipulate the political process to their own advantage (see Bratton & van de Walle, 1997; Bayart, 1993, 2000; Chabal & Daloz, 1999). However, in stark contrast to this prevailing wisdom, I find significant incumbency *dis*-advantages in Zambia's local government elections and no discernible incumbency advantages in parliamentary elections. Furthermore, the strength of these disadvantages appear to be closely associated with higher levels of voter information, poorer economic conditions, and a structural shift in the landscape of party competition.

This study makes three important contributions. First and foremost, it effectively brings the incumbency effects literature to the African context. Similarly, these results run against the common sentiment of 'exceptionalism' in the study of African politics, showing that general theories of voter behaviour and empirical findings from other regions are directly applicable in the Zambian context. Second, from a methodological standpoint, this study is the first to my knowledge to apply the heterogeneous local average treatment effects (HLATE) estimator for RD designs to the study of incumbency effects. Moreover, the non-parametric methods employed and wide range of robustness checks used in this context go well beyond most studies of incumbency effects in low and middle income countries. Third, since incumbency comes as a significant disadvantage in Zambia's local government elections, these results add to the growing literature suggesting a re-evaluation of the conventional wisdom on the nature of electoral politics in Africa's emerging democracies.

I proceed in the following fashion. First, I summarise the primary mechanisms of incumbency advantage and disadvantage. Second, I describe the prevailing wisdom on African politics and introduce Zambia's democratic transition. Third, I describe the dataset and my methodological approach. Fourth, I present the core RD results. Fifth, I investigate the drivers of incumbency disadvantages in Zambia's local government elections.

2. Sources of incumbency advantage and disadvantage

Incumbency effects have been one of the most widely studied features of US elections, with numerous studies documenting persistent incumbency advantages in various levels of government (see Lee, 2008; Gelman & King, 1990; Erikson, 1971). Similarly, consistent evidence of incumbency advantages have been found across a range of other mature democracies, such as the United Kingdom (Katz & King, 1999), Canada (Kendall & Rekkas, 2012), Australia (Horiuchi & Leigh, 2009), and Germany (Hainmueller & Kern, 2008).[2]

However, as this literature has expanded to many low and middle income countries, strong evidence of persistent incumbency disadvantages has emerged in recent years. Linden (2004) and Uppal (2009) find strong evidence of incumbency disadvantages in Indian state and national elections (see also, Aidt, Golden, & Tiwari, 2011; Fisman, Schulz, & Vig, 2012). In the Brazilian context, Titiunik (2011) and Brambor & Ceneviva (2011) find that incumbents are significantly disadvantaged in municipal mayoral elections. The frequent turnover in presidential elections across many other Latin American countries has also been well-documented (see Molina, 2001; Dix, 1984), along with the low re-election rates of political parties in much of Eastern Europe (see Pop-Eleches, 2010; Roberts, 2008). Finally, incumbents have also widely failed to seal re-election in various Pacific Island countries – such as Papua New Guinea, the Solomon Islands, and Vanuatu (Fraenkel, 2004, 2006; Trease, 2005). However, to date this literature has not meaningfully ventured onto the African political landscape, where the stakes of elections are exceptionally high.[3]

To date, most scholarly attention has focused on explaining incumbency advantages rather than disadvantages, given that the literature originated in the study of incumbency advantages in US politics. Nevertheless, the main sources of incumbency advantage and disadvantage relate closely to one another and touch on many shared concerns. The eight general classes of explanations I describe below offer important hints as to why incumbency effects vary across contexts, although no consensus exists on the relative centrality of any one mechanism – even in US elections.

S*ignalling and information manipulation:* One leading class of explanations for incumbency advantages focus on incumbent control over voter information and individual

[2] See Ariga (2010) for an in-depth review and comparative analysis.

[3] See note 1 above regarding Miguel & Zaidi's (2003) peripheral treatment of incumbency effects in Ghana with a sample of only 200 observations, even before restricting the analysis to very 'close' elections.

effort. Essentially, the perks of public office may allow incumbents to strategically manipulate voter information and individual effort in order to signal their desirability to voters (Besley, 2006; Ashworth, 2006; Serra & Moon, 1994). For instance, Boas & Hidalgo (2011) find that incumbent control of local radio stations is closely associated with subsequent electoral success in Brazil (see also, Besley & Burgess, 2002). This notion of incumbent control over voter information also relates closely to Downsian persuasive advertising models, where the perks of public office provide incumbents with more effective persuasive advertising 'technologies' (see Mueller, 2003: Ch. 20).

Political targeting and clientelism: A second and closely related class of explanations suggest that incumbents attract voter support by channelling national public spending – or redistributive 'pork' – to their constituents in exchange for political loyalty.[4] This mechanism may manifest itself in various ways, such as where senior legislators can secure more clientelistic goods for constituents through increased bargaining power in legislative decision-making (see McKelvey & Reitzman, 1992; Owens & Wade, 1984), or where institutional learning and the development of stronger political networks over time allow incumbents to more effectively deliver pork to their constituents (Baldwin, 2013; Fisman, et al., 2012). Moreover, in contexts where opposition parties are weak and fragmented, voters may overwhelmingly vote for the incumbent party in order to gain access to patronage and avoid retribution (Bratton, Bhavnani, Chen, 2013; Wantchekon, 2003).

Pre-electoral resource mobilisation: In the pre-electoral stage, incumbents may also have advantages in the mobilisation of campaign funds and political endorsements through stronger political networks and the incentives of potential contributors to align themselves with the expected winner (see Gordon & Landa, 2009). Similarly, the existence of a political business cycle – where levels of public spending fluctuates in accordance with electoral cycles – has been documented around the world, including in many African contexts (Block, Ferree, & Singh 2003; Nordhaus, 1975).

Economic conditions: Poor economic conditions and weak management of the economy by incumbents has been suggested as a core explanation for the persistent incumbency disadvantages in many low and middle income countries (see Uppal, 2009; Lewis-Beck & Stegmaier, 2008; Molina, 2001). However, this source of incumbency

[4] For a comprehensive review of the expansive literature on distributive politics see Golden & Min (2013). For several recent contributions, see Larcinese, Snyder, & Testa (2013), Posner & Kramon (2013), and Solé-Ollé (2013).

disadvantage is likely to be much weaker where social identities and ideology form the basis of partisan attachments, such as in many African democracies where 'ethnic voting' is a widespread phenomenon (see Horowitz, 1985; Posner, 2005). Making matters worse, poorer segments of the population are often more likely to be 'captured' by political elites through manipulation and intimidation (Crook & Manor, 1998; Bardhan & Mookherjee, 2006).

Rent-seeking and the 'pessimistic politics trap': A closely related class of explanations suggest that the high levels of political corruption and rent-seeking in many low and middle income countries are responsible for persistent incumbency disadvantages, leading to a 'pessimistic politics trap' in which voters come to expect little from incumbents who in turn perform poorly (Svolik, 2013; Myerson, 2006; Ashworth et al., 2013). Similarly, Klašnja (2013) models incumbency disadvantages as resulting from the potential of incumbents to extract *increasing* rents over time as they learn how to manipulate political rules and circumvent institutional constraints, thus leading voters to prefer inexperienced challengers over well-adapted rent-seeking incumbents.

Deterrence effects: Incumbency advantages may also arise through a deterrence effect in which high-quality challengers strategically choose to run in districts where an incumbent candidate is not running for re-election (see Butler, 2009; Levitt & Wolfram, 1997; Cox & Katz, 1996). At the level of party politics, however, opposition parties may instead strategically nominate their strongest candidates to run against incumbents in competitive districts, leading to the possibility of incumbency disadvantages (see Aidt, Golden, & Tiwari, 2011).

Weak party systems and opposition coordination: Similarly, weak party systems can drive incumbency disadvantages where parties are unable to deter legislators from corrosive rent-seeking behaviour (Titiunik, 2011).[5] Moreover, structural shifts in the party system – such as frequent party entry and exit – can manifest themselves as incumbency disadvantages, as Linden (2004) argues in the case of India. On the other hand, dominant ruling parties in an environment of weak and fragmented opposition parties may conversely enjoy substantial incumbency advantages (see Ziegfeld & Tudor, 2013).

Political institutions: Finally, formal and informal institutional structures – such as electoral rules and political cultures – interact closely with many of the mechanisms

[5] For various models of party reputation as a public good, see Shepsle & Weingast (1994).

described above.[6] Of course, phenomena such as the nature of party competition, government control over the media, and political corruption are all deeply embedded in institutional structures. Overall, empirical investigation on the complexities and nuances of these various sources of incumbency advantage and disadvantage is growing rapidly as the study incumbency effects continues to expand across the globe, yet this literature has not yet meaningfully expanded to the study of Africa's many young democracies. Before turning to the analysis of incumbency effects in Zambia, I briefly review the prevailing wisdom in the study of African politics and introduce the Zambia's democratic transition.

3. African politics and Zambia's democratic transition

3.1. The Prevailing wisdom on African politics

Spanning a wide range of scholarly traditions, the conventional wisdom on African politics characterises it as driven primarily by neopatrimonial patterns of exchange in which a narrow set of rulers selectively distribute resources and privileges among elite groups in order to maintain political order – variously labelled as 'big man politics', 'politics of the belly', or 'personal rule' (see Erdmann & Engel, 2007 for a review; see also, Hyden, 2005; Bates, 2008, 1983; Medard, 1982). As Bratton & van de Walle (1997: 62) put it: "whereas personal relationships occur on the margins of all bureaucratic systems, they constitute the foundation and superstructure of political institutions in Africa."

This neopatrimonial logic often manifests itself in the form of political clientelism, which can best be understood as 'exchange among unequals' where a powerful agent provides material goods to a less powerful agent in exchange for political loyalty (van de Walle, 2012). Clientelism exists in all modern states, yet in most African contexts it has tended more towards *elite clientelism* – in which key elites are granted personal control over state offices to be used for their personal enrichment – as opposed to the *mass clientelism* associated with the political machines of 20th century US and European politics where political parties delivered wide-ranging public services to constituents in exchange for political support (see van de Walle, 2012, 2007).

Alongside this neopatrimonialism literature, the study of the 'Third Wave' of democratisation (Huntington, 1991) has raised additional concerns that authoritarian

[6] See Ariga (2010) for a review.

practices in many nominally democratic African countries effectively prevent elections from taking place on a level playing field (see Levitsky & Way, 2010; Carothers, 2002; Diamond & Plattner, 2001). For instance, a total of 344 competitive presidential or legislative elections have been held across 48 African countries between 1990 and 2011, yet an alternation of power has taken place only 64 times (Bratton, 2013). Although this rate of turnover is much higher than in preceding decades, the common sentiment is that political elites remain able to significantly 'bias' the operation of democratic institutions to their own advantage (Albertus & Menaldo, 2013; Collier & Vicente, 2012). Making matters worse, patterns of ethno-linguistic cleavages and narrow patronage considerations have long been understood to form the basis for political mobilisation and voter behaviour across much of Africa (Posner, 2005; Horowitz, 1985; Young, 1976).

Nevertheless, criticisms made 30 years ago relating to the dearth of empirical research on the nature of clientelism in African countries remain far too relevant today (Lande, 1983; see also, Herbst, 2001; Bach & Gazibo, 2012). Fortunately, however, a rapidly growing line of inquiry is offering many new insights into the increasing sophistication of African voters and the deepening of democratic institutions and values (see Bratton, 2013; Lindberg, 2006). For instance, Bratton, Bhavnani, & Chen (2013) find that voter perceptions of incumbent economic performance have more than double the effect on partisan attachment than does ethnic identity across 16 African democracies (see also, Norris & Mattes, 2013). Similarly, economic conditions and the provision of public goods have been shown to play an important role in Ghana's recent elections (see Weghorst & Lindberg, 2013, 2011). Moreover, Conroy-Krutz & Logan (2013) argue that the conventional account of Museveni effectively 'buying' victory in Uganda's 2011 elections is mis-guided, since voters who benefited from this patronage were only marginally more likely to vote for him. In sum, the conventional wisdom of African politics as predominantly 'neopatrimonial' and 'semi-authoritarian' suggests that incumbents are significantly advantaged at the polls relative to non-incumbents. However, this perspective may be overlooking important shifts in the landscape of voter and elite behaviour currently underway, which may manifest themselves in incumbency disadvantages where voters learn to systematically punish incumbents for poor performance.

3.2. Zambia's democratic transition

Starting with the decisive victory of Frederick Chiluba's Movement for Multiparty Democracy (MMD) in the 1991 presidential and parliamentary elections that marked the return to multi-party politics, Zambia has now held five contiguous legislative elections, six presidential elections, and three local government elections. Although initially heralded as one of the most peaceful and complete transitions, throughout the 1990s the MMD employed a wide variety of authoritarian tactics to alienate civil society and re-create long-standing patterns of elite clientelism (see Rakner, 2003; von Soest, 2007; Di John, 2010; Lindemann, 2010; Baylies & Szeftel, 1997). Since the early 2000s, however, Zambia's political landscape has become increasingly competitive due to growing public discontent with the MMD's economic performance and the re-emergence of civil society (see Larmer & Fraser, 2007; Young, 2009; Posner & Simon, 2002).[7] The 2006 elections in particular represent an important turning point in Zambian politics, where Michael Sata's Patriotic Front (PF) stormed onto the political landscape. Today, Zambia is ranked as 'partly free' with an average freedom rating of 3.5 in Freedom House's 2013 Freedom in the World index, just ahead of Kenya and slightly behind Tanzania.[8]

Still, over the course of Zambia's entire democratic transition, it is widely accepted that the MMD has extensively manipulated the political system, such as using state vehicles in electoral campaigning, employing vote-buying tactics, and detaining opposition candidates (see Larmer, 2009; Rakner, 2003; Bartlett, 2000). Moreover, Zambia's high levels of ethnic fractionalisation have been heavily exploited by political elites to mobilise voters around ethnic cleavages (Posner, 2005). At the same time, however, public opinion indicates a strong and growing acceptance of democracy and the efforts of civil society are placing stronger pressures on politicians to meet the demands of ordinary citizens (see Chipenzi et al., 2011; Larmer, 2009; Larmer & Fraser, 2007). Consequently, on the one hand, there are strong reasons to expect persistent incumbency advantages in Zambian elections given the long history of elite clientelism and electoral manipulation. Yet, on the other hand, the resurgence of civil society, growing public discontent over economic conditions, and newfound strength of opposition parties could be generating patterns of systematic punishment of incumbents at the polls.

[7] A summary of all election results is provided in Appendix A

[8] See: http://www.freedomhouse.org/report-types/freedom-world

4. Methods and Data

The ideal experiment for estimating incumbency effects would be to randomise who gets appointed to public office and simply measure the resulting differences in electoral performance between incumbents and non-incumbents. Yet, in reality, incumbency is assigned non-randomly through elections, implying that much of the difference in outcomes between incumbents and non-incumbents will likely be due to a simple selection effect. Past scholars have attempted to account for this selection bias in various ways (see Gelman & King, 1990; Levitt & Wolfram, 1997; Cox & Katz, 2002), yet these approaches have generally continued to suffer from important identification problems.

Recently, there has been a surge of interest in the application of the regression discontinuity (RD) design to electoral settings to estimate the effects of public office on various political and economic outcomes (see, for instance, Eggers & Hainmueller, 2009; Broockman, 2009; Lee et al., 2004). Specifically, the RD design exploits the discontinuous property of elections by comparing candidates who win or lose by just a 'few' votes in order to generate causal inferences under a minimal identification assumption. Given random shocks that affect final election results irrespective of the qualities of candidates (e.g. weather conditions, traffic jams), such candidates in a narrow window around the threshold of winning are arguably identical (on average) across all observable and unobservable characteristics as in a randomised experiment, thus differing only in their incumbency status.

4.1. Identification in the RD framework

Lee (2008) provides a formal treatment of the conditions under which RD designs generate valid causal inferences in the context of electoral settings (see also, Angrist & Pischke, 2009; Hahn et al., 2001). In this basic formulation, each unit is assigned a score on some running variable V that has a continuous probability density function (pdf), and treatment is given only if v is greater than some known threshold v_0. In an electoral setting, V represents the share of votes accrued to candidate i in constituency j, where all candidates with $v > v_0$ win the election and are assigned to the 'treatment' group.

For simplicity, take V to be comprised of two main components:

$V = Z + e$,

where Z reflects individual characteristics and actions and e is an exogenous random chance variable with a continuous density function. This formulation generates the 'local randomisation' result, which states that assignment to treatment will be 'as if' randomly assigned within some neighbourhood of 'closeness' to the threshold $V = v_0$ due to the non-trivial random chance element of V. More formally, identification of the causal effect of incumbency on some outcome of interest relies on the assumption that

$E[Y_0 \mid V=v]$ and $E[Y_1 \mid V=v]$ are continuous in v at the threshold v_0,

where Y_1 and Y_0 are the potential outcomes under the treatment and control states.[9] In other words, identification relies on the core assumption that *only* treatment status changes discontinuously at the threshold. Intuitively, this assumption simply states that the average outcome for observations just below the threshold must represent a valid counterfactual for the treated group just above the threshold (Lee, 2008). When this continuity assumption holds, the discontinuity in the average expectation function of the outcome at the threshold identifies the 'local' average treatment effect (LATE) – where 'localness' refers to observations *in the neighbourhood of the threshold*. By implication, the pdf of V must be continuous around the threshold v_0 for each observation. In other words, individuals and parties must not be able to strategically alter their probability of receiving the treatment by *precisely* manipulating their vote share V in the neighbourhood of the threshold.

On this note, several recent studies have raised skepticism about the validity of RD studies in electoral settings, finding that – *even in very close elections* – winning candidates in the US House of Representatives since 1946 have significantly more political experience and spend more on election campaigns than losing candidates (Snyder, 2005; Caughey and Sekhon, 2011; Grimmer et al., 2012). Essentially, these studies suggest that strategic sorting in the neighbourhood of the threshold may be a persistent feature of elections, thus violating the local randomisation result. In response, Eggers et al. (2013) study over 40,000 electoral contests around the world, finding no other case of strategic sorting outside of US House elections in the post-War era (see also, Erikson & Rader, 2013). The authors conclude that these criticisms of the RD design in the context of US

[9] See Angrist & Pischke (2009) for more detail on the potential outcomes framework and notation.

House elections thus do not pose a *general* threat to the validity of RD estimates in electoral studies, yet the burden remains on the researcher to justify the validity of the RD design in any given context.

4.2. Estimation approach

In this study, I estimate the *party* – as opposed to *personal* – incumbency effect on electoral performance using a RD design for five parliamentary elections (1991-2011) and two local government elections (2006-2011) in Zambia.[10] In other words, I estimate the electoral gain of being the incumbent party in a given constituency relative to being a non-incumbent party, disregarding the identity of the individual candidate. This focus on party incumbency effects is justified on two main grounds. First, in terms of substantive interest, there is strong evidence that party labels have played a more important role in voter behaviour than the identities of individual candidates in the Zambian context (see Posner, 2005). Second, from a methodological standpoint, the estimation of party incumbency effects is less prone to selection bias induced by the strategic decision of candidates on whether or not to run in the next election (see Magalhaes, 2013).

In Zambian elections, ward councillor and parliamentary candidates compete in 1,421 and 150 single-member constituencies under plurality rule at the local and parliamentary levels, respectively.[11] The importance of parliamentary elections is in some ways diluted by the concentration of fiscal discretionary power in the executive, which severely limits the capacity of MPs to channel public spending to their constituents (see Larmer, 2009). At the local level, however, ward councillors enjoy substantial discretion over the provision of local public services and have more immediate effects on the welfare of citizens, thus making these local elections of significant practical importance to voters (Enemark et al., 2013).

Data for the outcome and explanatory variables comes from election results provided by the Electoral Commission of Zambia (ECZ). Two measures are used to capture next period electoral performance: (1) a binary indicator for whether for party i in constituency j wins in period $t+1$; and (2) the proportion of votes received by party i in constituency j for period $t+1$ of all votes cast. To evaluate the party incumbency effect

[10] Local government elections also took place in 2001, yet these results have not been published by the ECZ.
[11] Only minor redistricting has occurred over the period under consideration. Nevertheless, I exclude any observations where the constituency names change between t and $t+1$.

unconditional on the decision to re-run, a party in a given constituency that does not field a candidate in the next election receives a value of 0 for both outcome variables. The running variable *V* is the margin of victory (MOV) for party *i* in constituency *j* and period *t*, constructed as the difference between party *i*'s vote share and the vote share of the strongest opponent in the constituency. Treatment status is then a deterministic function of MOV, such that observations with MOV > 0 are elected and form the treatment group and observations with MOV < 0 form the control group.

Table 4.1. Description of key variables

	Variable	**Description**
Outcome	Electoral victory, *t+1*	Takes a value of 1 party *i* wins in constituency *j* in period *t+1*
	Vote share, *t+1*	Proportion of total votes cast that party *i* receives in constituency *j* in period *t+1*
Treatment	Electoral victory, *t*	Takes a value of 1 party *I* wins in constituency *j* in period *t*
Running variable	Margin of victory, *t*	Difference between party *i*'s vote share in constituency *j* and the vote share of the strongest opponent.

The United Democratic Alliance (UDA) coalition that brought together UNIP, UPND, and FDD just for the 2006 elections is coded as follows. First, the electoral performance of UDA candidates in 2006 is used to generate the outcome data for all UNIP, UPND, and FDD observations in the 2001 elections. Second, the electoral performance of the best-performing UNIP, UPND, or FDD candidate in the 2011 elections is used to generate the outcome data for all UDA candidates in 2006 for a given constituency. This coding procedure creates an upward bias, suggesting that the strong incumbency disadvantages found below may be even stronger in reality.

Finally, a number of observations are excluded from the analysis, including all independents and unopposed/postponed races. Moreover, all races where a by-election took place between *t* and *t+1* are excluded as detailed by-election results are not available

for all years between 1991 and 2011. Following these exclusions, the dataset used for the analyses contains 1183 electoral races and 3278 candidate-level observations for the 2006 local government elections, in addition to 558 electoral races and 2350 candidate-level observations over four parliamentary elections. As shown in Appendix B, even the number of 'close' electoral races used in this study is much larger than the entire range of observations used by Miguel & Zaidi (2003) in their peripheral treatment of incumbency effects in Ghana (N=200).

5. Results

Looking at the entire range of observations, incumbents have clearly outperformed non-incumbents, as would be expected by non-random self-selection (see Appendix B). At the local level, incumbent parties won 64.8% of attempts, compared to only a 16.7% success rate among non-incumbents. Similarly, at the parliamentary level, incumbents won 57.2% of attempts, compared to a 10.5% success rate among non-incumbents.

Tables 5.1 and 5.2 present the main RD results for ward and parliamentary elections, respectively. 'GLM' specifications are estimated by a logistic regression fit for the probability of winning in *t+1* and a linear regression fit for vote share in *t+1* regressed on a binary indicator for incumbency status, MOV, and a multiplicative interaction term between the two to allow for differences in slopes between incumbents and non-incumbents. 'Polynomial' specifications are estimated from the same generalised linear models (GLM), but with polynomial terms for MOV added up to the 4^{th} order along with corresponding interaction terms. Finally, as recommended by Hahn et al. (2001) and Imbens & Lemieux (2007), the 'non-parametric' specifications fit a locally weighted linear regression of next period electoral performance on incumbency status, MOV, and an interaction term. The window of inclusion for all specifications is determined using the cross-validated optimal bandwidth determination procedure recommended by Imbens & Kalyanaraman (2009).[12] Emphasis is placed mostly on the non-parametric estimates, yet I nevertheless include the GLM and polynomial specifications to illustrate sensitivity to alternative estimators.[13]

[12] The sensitivity of results was also assessed by re-estimating all specifications at double and half the optimal bandwidths, with the core results remaining substantively unchanged (results not shown).

[13] I do not present coefficients for the running variable or goodness of fit measures such as adjusted R-squared or AIC in any specifications throughout the analyses below in order to rightly focus the attention of readers on the quantities of substantive interest in this study.

Turning to the results, incumbent parties in ward elections appear to be significantly *dis*-advantaged relative to non-incumbents in the neighbourhood of the threshold. In particular, the LATE of incumbency in the non-parametric specifications is an estimated 19.6% *decrease* in the probability of winning the next election relative to non-incumbents (p=0.032), alongside an estimated *decrease* in vote share of 7.5 percentage points (p=0.064). At the parliamentary level, on the other hand, the coefficient on incumbency is negative in three of the six specifications, yet the null hypothesis of no effect cannot be rejected for any specification at the 90% level of significance.

Table 5.1. Incumbency effect on electoral performance in *t+1*, Ward candidates

	Dependent variable: Probability of victory, *t+1*			**Dependent variable: Vote share, *t+1***		
	GLM (1)	Poly. (2)	Non-par. (3)	GLM (4)	Poly. (5)	Non-par. (6)
Bandwidth =	0.077	0.077	0.077	0.080	0.080	0.080
Incumbency effect	**-0.776***	**-1.842**	**-0.196****	**-0.057**	**-0.275****	**-0.075***
Standard error	0.441	1.177	0.091	0.047	0.121	0.040
Observations	354	354	354	366	366	366

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Notes: Imbens-Kalyanamaran optimal bandwidths and Huber-White standard errors are used.

Table 5.2. Incumbency effect on electoral performance in *t+1*, Parliamentary candidates

	Dependent variable: Probability of victory, *t+1*			**Dependent variable: Vote share, *t+1***		
	GLM (1)	Poly. (2)	Non-par. (3)	GLM (4)	Poly. (5)	Non-par. (6)
Bandwidth =	0.112	0.112	0.112	0.088	0.088	0.088
Incumbency effect	**-0.132**	**-2.010**	**0.083**	**0.047**	**-0.2493**	**0.029**
Standard error	0.653	1.869	0.118	0.077	0.2126	0.070
Observations	198	198	198	143	143	143

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Notes: Imbens-Kalyanamaran optimal bandwidths and Huber-White standard errors are used.

Figures 5.1 and 5.2 below plot the predicted electoral performance in *t+1* against MOV in *t* from the estimated non-parametric specifications. The discontinuity at MOV=0 captures the estimated LATE of incumbency on electoral performance at the threshold. As the large discontinuity at the threshold in Figure 6.1 indicates, incumbents in ward elections are significantly disadvantaged relative to non-incumbents. At the parliamentary level, a small positive discontinuity at the threshold is apparent, yet the average expectation functions on each side of the threshold fall well within one another's point-wise 95% confidence intervals.

Figure 5.1. Incumbency effect on electoral performance in *t+1*, Ward candidates

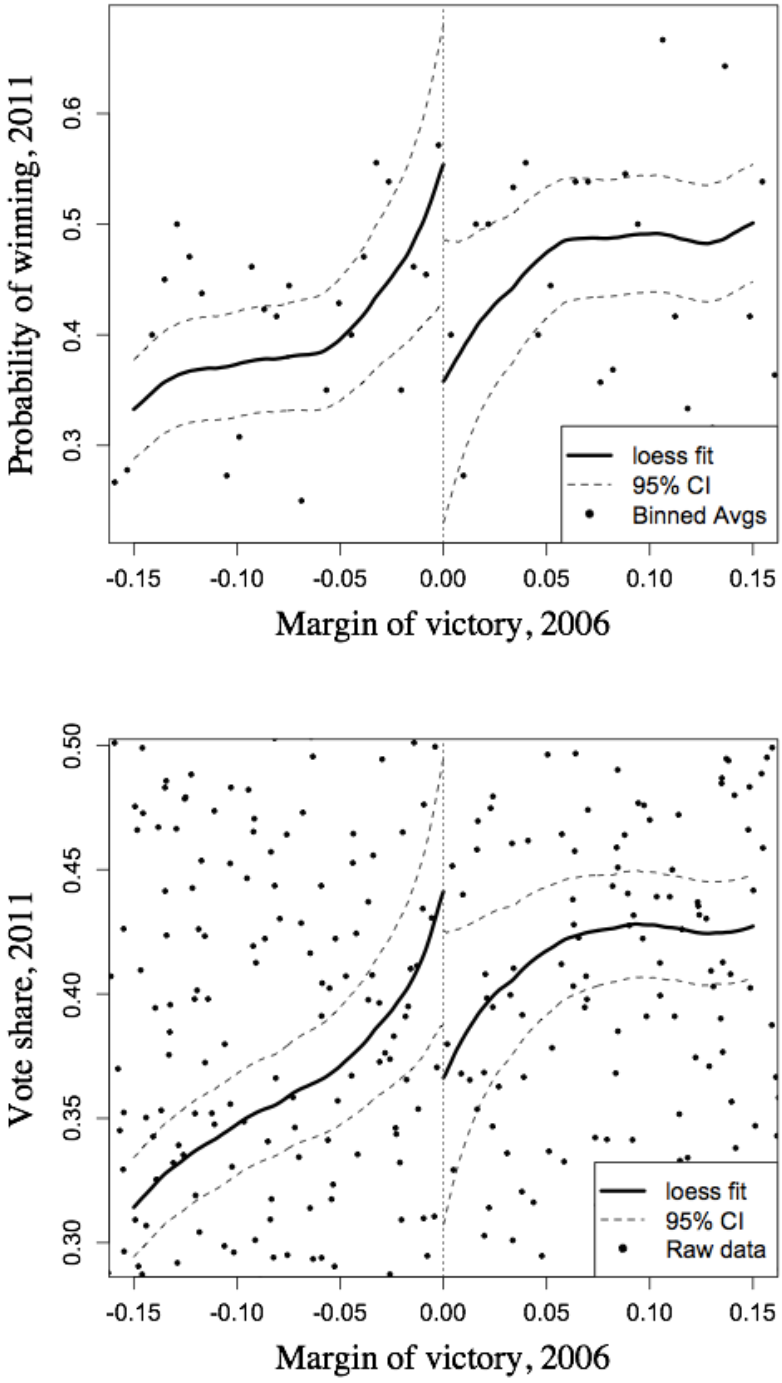

Fig. 5.1. The above plots show the estimated LATE of incumbency on electoral performance in ward elections at the threshold MOV=0. The plotted curves are from non-parametric locally weighted linear regressions with triangular kernel estimated separately for incumbents and non-incumbents.

Figure 5.2. Incumbency effect on electoral performance in *t+1*, Parliamentary candidates

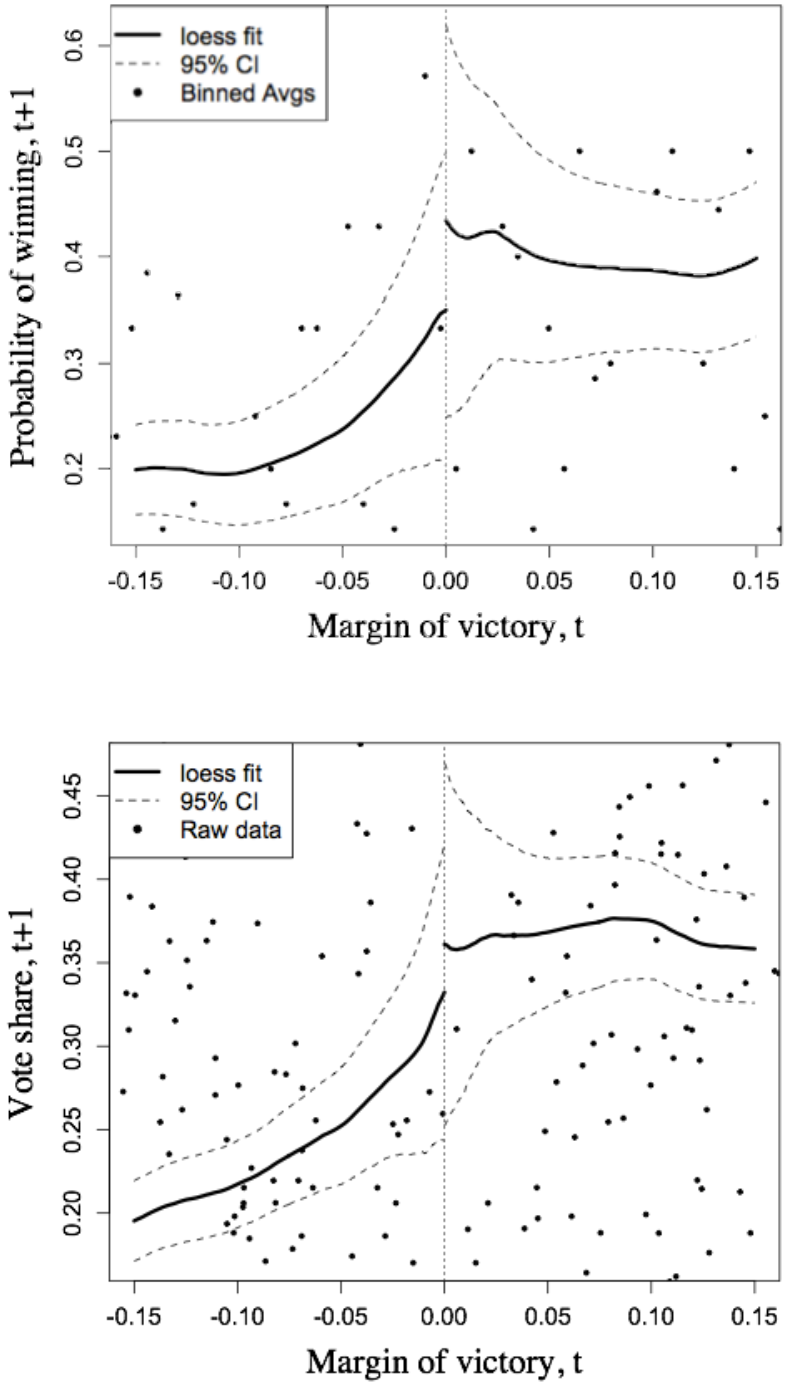

Fig. 5.2. The above plots show the estimated LATE of incumbency on electoral performance in parliamentary elections at the threshold MOV=0. The plotted curves are from non-parametric locally weighted linear regressions with triangular kernel estimated separately for incumbents and non-incumbents.

To demonstrate that these results are not biased by the possibility of strategic decisions among parties regarding whether or not to field a candidate in the next election, Figure 5.3 below shows the effect of incumbency on the probability of fielding a candidate in *t+1*. As the resulting plots clearly illustrate, bare winners are no more or less likely to field a candidate again in the next election relative to bare losers, suggesting that selective attrition is not a major concern for the RD estimates. To be sure, the main non-parametric specifications from Tables 5.1 and 5.2 above are re-estimated conditional on a party's decision to field a candidate again in the next election, with both sets of non-parametric estimates remaining effectively unchanged (see Appendix C).

Figure 5.3. Probability of re-running in *t+1* by margin of victory in *t*

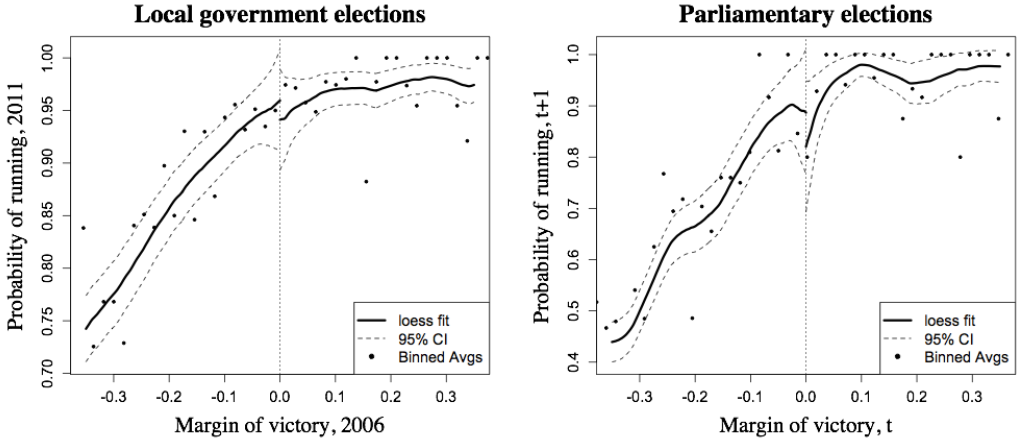

Fig. 5.3. The above plots are estimated using non-parametric specifications as in Figures 5.1 and 5.2, but using a party's decision to field a candidate again in the next election as the outcome variable. Imbens-Kalyanamaran optimal bandwidths are 0.101 and 0.088 for local and parliamentary elections, respectively.

A clear advantage of the RD design is that it bypasses important questions about what variables to include, since bare winners and bare losers are *ex ante* comparable across all observed and unobserved characteristics as in a randomised experiment (Hahn et al., 2001; Lee, 2008). However, this advantage hinges on the validity of the key identification assumption for the RD design, which cannot be directly proven. Nevertheless, this assumption gives rise to a number of testable implications that researchers can employ to assess the validity of the RD design in a given context. I employ three groups of these tests below: (1) 'placebo outcome' tests; (2) 'placebo treatment' tests; and (3) density tests for strategic sorting.

Placebo outcomes

As in Lee et al. (2004) and Eggers & Hainmueller (2009), I begin by checking that there is no discontinuity at the threshold for a range of race-level and candidate characteristics by regressing each on incumbency status, MOV, and an interaction term using the same non-parametric estimation procedure from above. These 'placebo outcomes' should be continuous in *V* and thus the coefficients on incumbency in these specifications should not be significantly different from what would be expected by chance. Appendix D presents the results of these balance checks separately for: (1) observations with an absolute MOV of less than 7.5%; (2) observations with an absolute MOV of less than 25%; and (3) all available observations. As would be expected due to non-random selection, winners and losers are unbalanced on a number of covariates for the entire range of observations. But for observations with an absolute MOV of less than 7.5%, none of the 23 tests find a significant discontinuity in ward elections and only one test – vote share in *t-1* – contains a significant discontinuity in parliamentary elections (see Figure 5.4). As every 1 out of 20 tests is expected to find a significant difference when evaluated against the 95% level of statistical significance even when the null hypothesis is true, the presence of this single imbalance in 46 tests is well under what would be expected by chance.

As a strong boost of added confidence, Enemark et al. (2013) recently collected detailed individual data for 143 ward-level candidates that barely won or lost in the 2006 local government elections for an experimental study on reciprocity and sharing. Enemark et al.'s sample does not overlap perfectly with the sample of ward-level candidates under consideration here, yet their demonstration of strong covariate balance between incumbents and non-incumbents across a wide range of socio-economic and demographic characteristics provides us with much added confidence that non-incumbents represent a valid counterfactual for incumbents in this context.

Figure 5.4. Incumbency effect on electoral performance in *t-1*

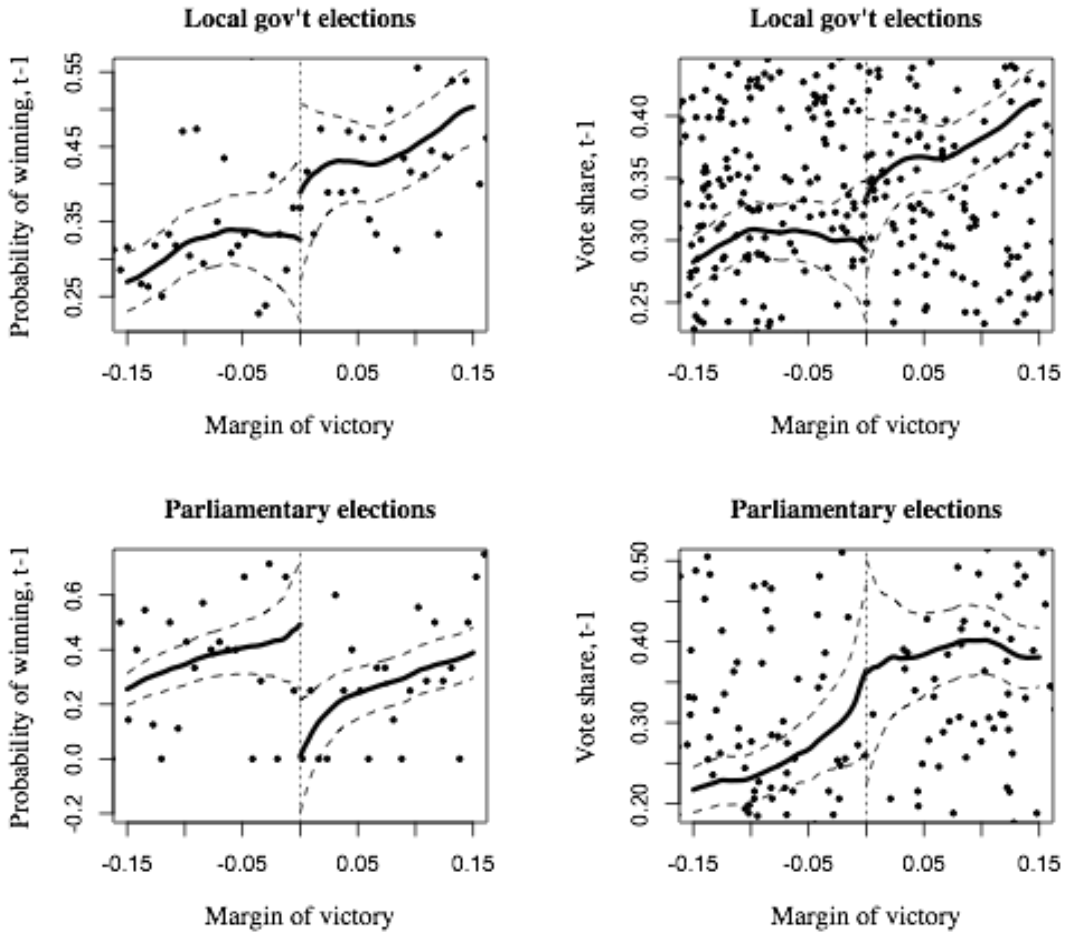

Fig. 5.4. The above plots are estimated using non-parametric specifications as in Figures 5.1 and 5.2 (maintaining the same bandwidths), but using electoral performance in *t-1* as outcomes.

Placebo treatments

Next, as recommended by Imbens & Lemieux (2007), I check for discontinuous jumps in the running variable at points other than the known threshold. Specifically, I replicate the main non-parametric specifications from Tables 5.1 and 5.2 above, but using alternative 'fake' thresholds for treatment assignment. Following Eggers & Hainmueller (2009), I limit analysis to either the winning or losing candidates in each case to avoid assuming continuity where a break is known to exist. The results of this exercise are presented in Table 5.3 below, showing no evidence of significant jumps in electoral performance other than at the true threshold of treatment assignment.

Table 5.3. Placebo treatments

Threshold	-0.15	-0.1	-0.05	**0**	0.05	0.1	0.15
Ward elections							
Dependent variable: Probability of victory, t+1							
Incumbency effect	-0.038	0.076	0.163	**-0.196****	0.066	-0.020	-0.019
Standard error	0.078	0.089	0.105	**0.091**	0.112	0.095	0.096
Dependent variable: Vote Share, t+1							
Incumbency effect	0.015	-0.013	0.040	**-0.075***	-0.018	0.015	0.044
Standard error	0.035	0.038	0.045	**0.040**	0.049	0.039	0.037
Parliamentary elections							
Dependent variable: Probability of victory, t+1							
Incumbency effect	0.053	0.021	0.026	**0.083**	0.044	-0.022	0.005
Standard error	0.076	0.082	0.120	**0.118**	0.165	0.117	0.132
Dependent variable: Vote Share, t+1							
Incumbency effect	0.051	0.054	-0.075	**0.029**	-0.010	0.022	0.039
Standard error	0.043	0.044	0.064	**0.070**	0.080	0.057	0.062

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Notes: the discontinuity in next period electoral performance is estimated at 'fake' vote share thresholds from -0.15 to 0.15. All estimates are obtained from the same non-parametric estimation procedure and bandwidths presented in Tables 5.1 and 5.2. Estimates at MOV=0 reflect the 'true' LATE of incumbency.

Strategic Sorting

Appendix E shows the marginal distribution of V for observations around the threshold separately for incumbents, non-incumbents, and specific parties in ward and parliamentary elections using McCrary's (2008) density test. In these tests, none of the sub-groups under consideration are significantly more likely to win very close elections, suggesting that strategic sorting in the neighbourhood of the threshold is not a major concern in the period under consideration.

Although the MMD has been widely accused of electoral fraud and manipulation, it thus appears unlikely that these tactics have allowed incumbents to *precisely* sort themselves into barely winning an election. For instance, Enemark et al. (2013) claim that electoral fraud in Zambia has in fact been most likely where margins of victory are large.

Similarly, the high levels of uncertainty regarding expected vote share in Zambian elections makes it unlikely that such precise manipulation would be possible. Indeed, even in the US context where electoral polling is far more sophisticated, Enos & Hersh (2013) find that campaign workers mis-predicted their vote share by an average of 8 percentage points leading up to the 2012 general election.

In sum, these tests provide us with much added confidence in the internal validity of the RD design in the Zambian context. In other words, the significant incumbency disadvantages in ward elections – as well as the absence of any significant incumbency advantages in parliamentary elections – do not appear to be merely random artefacts of the data. Consequently, these results stand in stark contrast to the prevailing wisdom on African politics, where incumbents are assumed to hold substantial advantages over non-incumbents through the many perks of public office. Instead, these findings are consistent with the persistent incumbency disadvantages found in many other low and middle income countries outside of the African context. But, to take the next logical step, what explains these incumbency disadvantages in Zambia's ward elections? Although in-depth analysis must await further inquiry, I devote the remaining space to an investigation of this question.

6. Explaining Zambia's incumbency disadvantages

In the analysis that follows, I consider four mechanisms that may drive incumbency disadvantages at the local level: (1) voter information; (2) economic conditions; (3) political competitiveness; and (4) structural shifts in party competition. To allow for sufficient analytical depth, I focus only on the ward-level results given the significant incumbency disadvantages found above. Similar analyses have been conducted on the parliamentary elections – reaching many of the same core conclusions – although I leave detailed analysis of these parliamentary results for future work.

6.1. The Role of voter information and economic conditions

The emergent literature on the growing sophistication of voters in many African countries provides the basis for several straightforward hypotheses for explaining incumbency disadvantages. First, the growing strength of civil society and the independent media may be hindering the ability of incumbents to manipulate voter information. Hence,

we might expect incumbency disadvantages to be stronger where voters have more access to independent information on political issues (H1). Second, public discontent with poor economic conditions should lead us to expect incumbency disadvantages to be stronger where economic conditions are poorest (H2). Third, the extent to which voters punish incumbents for poor economic conditions should depend on levels of voter information and vice versa (H3).

I examine these three hypotheses using data collected from the 2000 Zambian household census, which contains representative constituency-level data on a variety of household characteristics.[14] I use the proportion of households with a radio as a measure of voter access to information on political issues, given that radio is the dominant mass-medium in Zambia and is used widely by civil society to offer independent political information (see Chipenzi et al., 2011). For economic conditions, I use the proportion of households with access to electricity. Although this is of course only one of many possible measures relating to this construct, the results remain substantively unchanged when it is replaced with the proportion of households with access to sanitary means of excreta disposal, access to safe drinking water, or proper garbage disposal.

To estimate the moderating role of voter information and economic conditions in incumbency disadvantages, I adopt the heterogeneous LATE (HLATE) estimator for RD designs proposed and used by Becker, Egger, & Ehrlich (in press). Essentially, HLATE allows for the investigation of heterogeneous treatment effects – such that marginal treatment effects vary strength along some covariate(s) of interest – in an RD framework. In this set-up, I adapt the main non-parametric RD specifications from Table 5.1 above and add an additional term on the right-hand side for the moderator of interest (i.e. voter information/economic conditions) as well as an interaction term in order to allow the LATE of incumbency to vary along different values of the moderating variable. In all specifications, radio ownership and access to electricity are mean-centred so that the coefficient on incumbency can be interpreted as the LATE of incumbency on electoral performance when voter information and/or economic conditions are held constant at their average value. Finally, as shown in the placebo outcome tests in Appendix D, all moderators used in this section are balanced across incumbents and non-incumbents in the neighbourhood of the threshold.

[14] Summary figures and tables are available for the 2010 census, however the corresponding microdata has not been released as of August 2013.

Table 6.1 presents the results of the analyses for H1-H3. In the specifications that test only H1 or H2, the two-way interactions are close to zero in magnitude and are not significant at conventional levels. On the other hand, the specifications that simultaneously test H1-H3 tell a very different story. Here, the null hypothesis of no effect for the two-way interaction between radio ownership and incumbency can be safely rejected at the 99% level when access to electricity is held constant at its average value, and the same holds true for the two-way interaction between access to electricity and incumbency. Moreover, the three-way interaction between radio ownership, access to electricity, and incumbency is non-zero and significant at the 99% level. As the coefficients on interaction terms tell us relatively little on their own (see Brambor, Clark, & Golder, 2005; Braumoeller, 2004), I plot the marginal effect of incumbency on next period vote share at all values of these two moderators in Figure 6.1.

Table 6.1. Drivers of ward-level incumbency disadvantages: voter information and economic conditions

	Dependent Variable: Probability of victory, *t+1*				**Dependent variable: Vote share, *t+1***			
	Main	H1	H2	H1-H3	Main	H1	H2	H1-H3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bandwidth =	0.077	0.077	0.077	0.077	0.080	0.080	0.080	0.080
Incumbency	-0.196** (0.091)	-0.199** (0.091)	-0.196** (0.091)	0.111 (0.130)	-0.075* (0.040)	-0.075* (0.040)	-0.075* (0.040	0.024 (0.058)
Radio ownership		0.004* (0.002)		0.018*** (0.006)		0.001 (0.001)		0.007** (0.003)
Radio * Incumbency		-0.004 (0.003)		-0.027*** (0.009)		-0.001 (0.001)		-0.012*** (0.004)
Access to electricity			0.002 (0.002)	-0.020*** (0.007)			0.001 (0.001)	-0.007** (0.003)
Electricity * Incumbency			-0.002 (0.002)	0.034*** (0.011)			-0.00001 (0.001)	0.035*** (0.005)
Electricity * Radio				0.053*** (0.019)				0.017** (0.008)
Electricity * Radio * Incumbency				-0.090*** (0.027)				-0.030** (0.012)
Observations	352	352	352	352	366	366	366	366

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Notes: All specifications are estimated using non-parametric locally weighted linear regressions with triangular kernel, Imbens-Kalyanamaran optimal bandwidths, and Huber-White standard errors.

Figure 6.1. Drivers of ward-level incumbency disadvantages: voter information and economic conditions

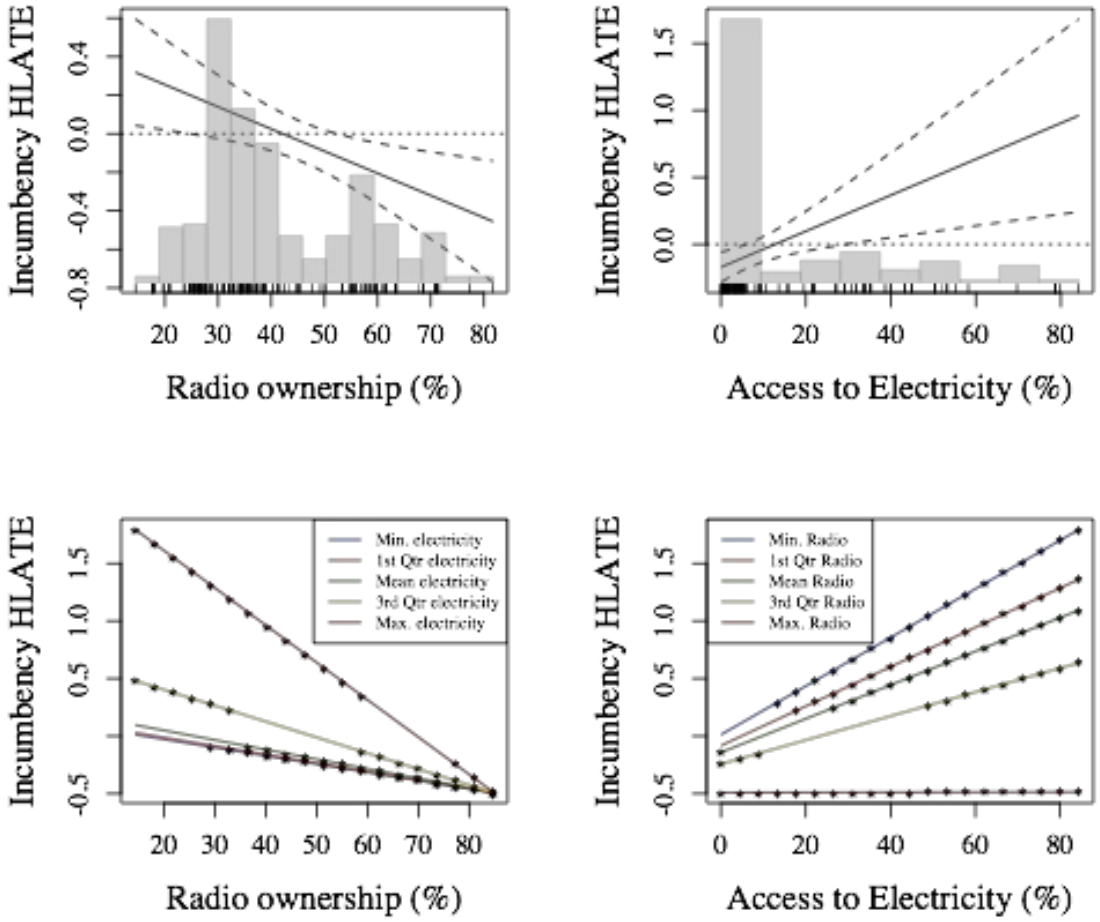

Fig. 6.1. The above plots show the estimated HLATE of incumbency at difference values of radio ownership and access to electricity. The corresponding two-way interactions are shown in the top panel along with 95% confidence intervals and the three-way interaction is shown in the lower panel. Asterisks in the three-way plots indicate incumbency HLATEs different from 0 at the 95% significance level.

Three main observations from these plots are worth noting. First, incumbency effects vary significantly with both access to radio and electricity. In other words, holding access to electricity constant at its average value, incumbency disadvantages are stronger in wards with more radio ownership. Conversely, holding radio ownership constant at its average value, incumbency disadvantages are stronger where fewer households have electricity access. Second, we can see that at values of radio ownership below approximately 20% or for values of access to electricity above approximately 40%, incumbents actually become significantly advantaged relative to non-incumbents. Third,

the co-variation of radio ownership and access to electricity with incumbency disadvantages depend substantially on the value of one another, such that the disadvantaging role of radio ownership is strongest when access to electricity is below average (i.e. less than 40% access) and access to electricity is most likely to translate into significant incumbency advantages when access to radio is below average (i.e. less than 14.55% ownership).

6.2. Political competitiveness and a shifting party system

Beyond these patterns of voter behaviour, incumbency disadvantages may also vary with levels of political competitiveness. For instance, electoral races with more parties competing against one another may be systematically more competitive, thus making it more unlikely for an incumbent party to retain its seat over time. On the other hand, a large number of candidates may split the opposition vote, thereby making it easier for incumbents to retain their seat (see Ziegfeld & Tudor, 2013; Chhibber & Nooruddin, 2004). Either way, we may thus expect the competitiveness of electoral races to co-vary with incumbency disadvantages (H4).

More broadly, shifts in the landscape of party competition – such as the entry and exit of new parties and coalitions – may also play an important role in explaining incumbency disadvantages. For instance, the break-up of the UDA coalition after 2006 may have created strong disadvantages for its former members going into the 2011 elections. Hence, simply formulated, we should expect incumbency disadvantages to be driven in part by the poor performance of the UDA coalition (H5).

In Table 6.2, I estimate the moderating effects of the number of parties competing in each race, as well as the effective number of parties (ENP), on incumbency disadvantages.[15] The coefficients on the interaction terms for either of these measures of political competitiveness are insignificant across all specifications. Similarly, the plots in Figure 6.2 show that incumbency effects do not vary significantly with either moderator. Hence, political competitiveness appears to play little role in explaining incumbency disadvantages in Zambia's ward-level elections.

[15] The effective number of parties is calculated using the Laakso-Taagepara (1979) index: $N = 1/\sum p_i^2$, in which p is the vote share for party *i*.

Table 6.2. Drivers of ward-level incumbency disadvantages: electoral competitiveness

	Dependent Variable: Probability of victory, *t+1*				**Dependent variable: Vote share, *t+1***			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bandwidth =	0.077	0.077	0.077	0.077	0.080	0.080	0.080	0.080
Incumbency	-0.196** (0.091)	-0.194** (0.092)	-0.234** (0.010)	-0.274** (0.113)	-0.075* (0.040)	-0.073* (0.041)	-0.094** (0.043)	-0.102** (0.050)
# of Parties		-0.002 (0.042)		0.006 (0.059)		-0.019 (0.019)		-0.012 (0.026)
# of Parties * Incumbency		0.012 (0.062)		-0.065 (0.088)		0.016 (0.027)		-0.011 (0.039)
ENP			-0.010 (0.061)	-0.017 (0.085)			-0.027 (0.027)	-0.015 (0.037)
ENP * Incumbency			0.081 (0.086)	0.144 (0.122)			0.042 (0.038)	0.053 (0.054)
Observations	352	352	352	352	366	366	366	366

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Notes: All specifications are estimated using non-parametric locally weighted linear regressions with triangular kernel, Imbens-Kalyanamaran optimal bandwidths, and Huber-White standard errors.

Figure 6.2. Drivers of ward-level incumbency disadvantages: electoral competitiveness

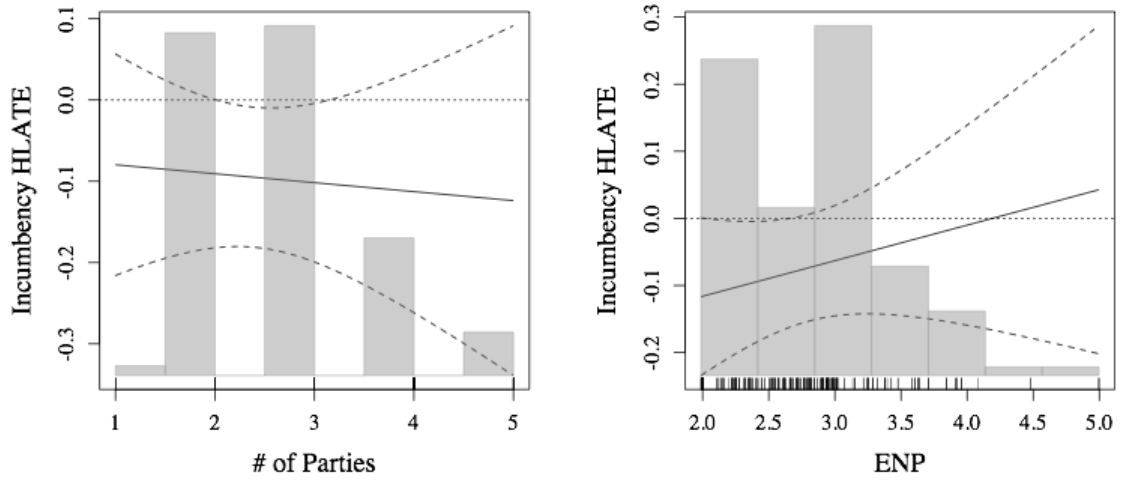

Fig. 6.2. The above plots show the estimated HLATE of incumbency at difference values of the number of parties and ENP along with corresponding 95% confidence intervals.

Next, I re-estimate incumbency disadvantages in ward elections by removing one of the three major parties at a time in order to assess how incumbency disadvantages vary by party. As Table 6.3 illustrates, the LATE of incumbency on electoral performance changes little in magnitude or significance when either MMD or PF candidates are removed from the analysis. However, when members of the UDA coalition are excluded, the estimated incumbency disadvantage drops to roughly half the size of the original estimates for both outcome variables. In other words, although incumbents from all three major parties are on average disadvantaged relative to non-incumbents, these disadvantages are concentrated most heavily among the former UDA coalition members.

Table 6.3. Drivers of ward-level incumbency disadvantages: Party identity

	Dependent Variable: Probability of victory, *t+1*				**Dependent variable: Vote share, *t+1***			
	All	Non-MMD	Non-PF	Non-UDA	All	Non-MMD	Non-PF	Non-UDA
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bandwidth =	0.077	0.077	0.077	0.077	0.080	0.080	0.080	0.080
Incumbency effect	-0.196**	-0.268**	-0.226**	-0.115	-0.075*	-0.114*	-0.085*	-0.046
Standard error	0.091	0.128	0.097	0.103	0.040	0.064	0.043	0.044
Observations	352	179	258	281	366	186	269	291

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

Notes: All specifications are estimated using non-parametric locally weighted linear regressions with triangular kernel, Imbens-Kalyanamaran optimal bandwidths, and Huber-White standard errors.

As a final analysis, I re-estimate the moderating role of voter information and economic conditions separately for MMD and non-MMD candidates.[16] The corresponding two-way interaction plots are shown in Figure 6.3 below. For non-MMD candidates, the moderating effects of radio ownership and access to electricity are not discernible from 0 at the 95% significance level across any value (when the other moderator is held constant at its average). For MMD candidates, on the other hand, radio ownership is significantly

[16] Sub-setting by MMD and non-MMD candidates splits the samples into roughly equal sizes of around 180 observations, while sub-setting individually by all three major parties leads to sample sizes below 100 observations and highly imprecise estimates.

associated with incumbency disadvantages at values higher than approximately 55% ownership and the effect of access to electricity crosses the threshold of 95% significance at values very close to 0% ownership. Nevertheless, despite these small differences in the precision of estimates, the plots show that the substantive moderating roles of radio ownership and access to electricity appear to be broadly similar across MMD and non-MMD candidates.

Figure 6.3. Drivers of ward-level incumbency disadvantages: Voter information and economic conditions by MMD and Non-MMD candidates

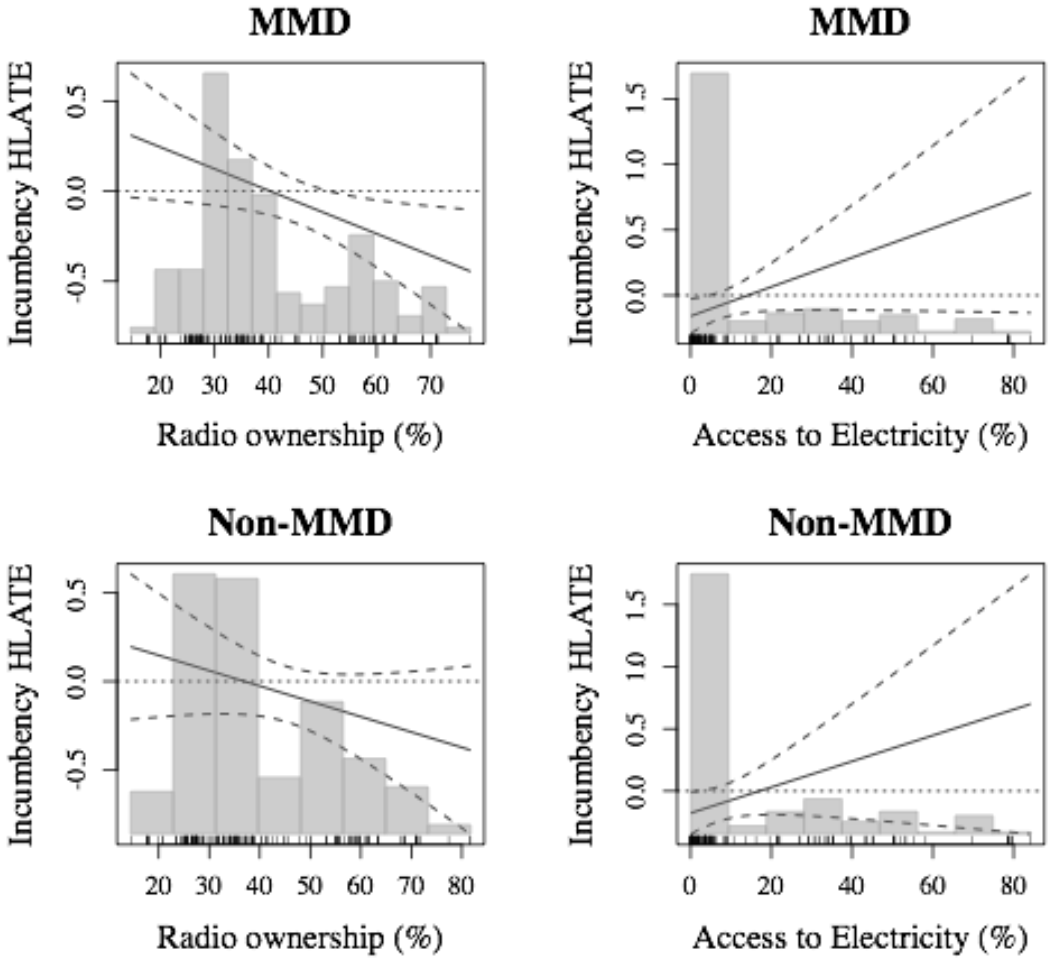

Fig. 6.3. The above plots show the estimated HLATE of incumbency for MMD and non-MMD candidates at difference values of radio ownership and access to electricity along with corresponding 95% confidence intervals. All specifications estimated from non-parametric locally weighted linear regressions with triangular kernel, Imbens-Kalyanamaran optimal bandwidths, and Huber-White standard errors.

In sum, three core lessons emerge from these results. First, incumbency effects in Zambia's local government elections do not appear to vary with the competitiveness of electoral races – as measured by the number of competing parties or ENP. Second, changes in the landscape of political competition – namely, the break-up of the UDA coalition – are closely related with the strong incumbency disadvantages found in local government elections. Third, incumbency disadvantages appear to be significantly associated with levels of voter information and economic conditions – as measured by radio ownership and access to electricity, respectively.

These results align closely with an emerging perspective on voter behaviour in the Zambian context pointing to the importance voters place on economic conditions and the provision of local public goods over private clientelistic goods, in addition to the growing influence of civil society on political participation (Norris & Mattes, 2013; Young, 2009; Larmer, 2009; Chipenzi et al., 2011). Similarly, these findings support the burgeoning literature introduced in Section 3.1 suggesting that African voters are becoming more sophisticated and are increasingly using elections to punish incumbents for poor performance rather than being passive 'subjects' (Mamdani, 1996) in an elite-dominated political landscape.

Finally, these findings are broadly consistent with the explanations for incumbency disadvantages proposed in a range of other low and middle income countries. For instance, Uppal (2009) finds that incumbency disadvantages are significantly higher in regions of India with lower provision of public goods, while Molina (2001) contends that strong popular discontent with economic conditions is responsible for the high levels of incumbent turnover in Latin America and Fraenkel (2004, 2006) and Trease (2005) suggest that a lack of responsiveness among incumbents play an important role in the high levels of incumbent turnover in many Pacific island countries. Similarly, the importance of voter information in the extent to which incumbents are punished for corruption and poor economic performance has been widely documented (Ferraz & Finan, 2011; Winters & Weitz-Shapiro, 2013; Banarjee et al., 2012).

6.3. Limitations

The analyses conducted above naturally raise a number of concerns. First and foremost, a causal interpretation of the main RD results presented in Section 5 and the various (non-causal) inferences made in this section hinge on the internal validity of the

RD design in this context. The various robustness checks employed above and the strong covariate balance among 2006 ward-level candidates found by Enemark et al. (2013) give us much confidence that the key RD identification assumption is plausible in the Zambian context, yet the ongoing debate about the general validity of RD designs in electoral contexts nevertheless makes this concern worth re-iterating.

Second, the main RD results do not capture the extent to which *personal* incumbency influences the estimates of *party* incumbency effects. In other words, wherever the same individual runs for a given party in period *t* and *t+1*, the resulting incumbency effect estimates capture both the personal and party effect (see Lee, 2008).

Third, the analyses presented in this section on the moderators of incumbency disadvantage do not warrant causal interpretations. For instance, there is strong reason to believe that indicators such as radio ownership and access to electricity co-vary with other drivers of incumbency disadvantages – such as rent-seeking or pre-electoral resource mobilisation. Similarly, measurement validity is an important concern, since variables like radio ownership and access to electricity are merely rough measures of the underlying theoretical constructs of interest.

Fourth, the external validity – or generalisability – of the results remains an open question. Indeed, the generally high levels of internal validity of RD designs come at the price of decreased external validity, since the LATE estimates apply only to observations *in the neighbourhood of the threshold*. More broadly, although various features arguably make Zambia a 'modal case' for Africa, there is also reason to believe these results might be unique to the Zambian context. For instance, like many young African democracies, Zambia transitioned to multi-party democracy in the early 1990s following economic hardship, power remains heavily concentrated in the executive, political competition has been historically restricted by a dominant ruling party, state capacities remain weak, and elite clientelism has been a predominant feature of the political landscape since independence. On the other hand, Zambia is simultaneously one of the few African countries where an opposition party has successfully defeated a sitting incumbent and political violence has remained comparatively low since independence relative to many other African countries (see Di John, 2010).

7. Concluding remarks

The prevailing wisdom of how politics 'work' in Africa's emerging democracies states that incumbents systematically manipulate the electoral process to their own advantage through a wide range of licit and illicit tactics, such as vote-buying, repression, and elite co-optation. Yet, in direct contrast to this perspective, this study has found that incumbent parties in Zambia's local government elections are significantly *dis*-advantaged relative to non-incumbents, on the order of an estimated 19.6% decrease in the probability of electoral victory and a 7.5 percentage point decrease in vote share relative to non-incumbents in the neighbourhood of the threshold. Moreover, even at the parliamentary level, there are no discernible party incumbency advantages over the period 1991-2011. These non-parametric RD results not only remain robust to a variety of alternative estimators and bandwidths, but also appear to satisfy the minimal continuity assumption necessary to identify an unbiased treatment effect of incumbency on electoral performance in the neighbourhood of very 'close' elections.

How can we explain these results? In other words, why are incumbent parties disadvantaged in Zambia's local government elections? For one, Zambia's formative and still unstable party system appears to be an important source of explanation. Specifically, incumbency disadvantages are concentrated most heavily among the members of the former UDA coalition that broke apart after the 2006 elections. Moreover, the results suggest that levels of voter information (as measured by radio ownership) and economic conditions (as measured by access to electricity, safe drinking water, et cetera) play an important role in explaining these disadvantages. Specifically, incumbency disadvantages are strongest in constituencies with high levels of voter information and poor economic conditions.

Although a more nuanced consideration of these factors awaits further analysis, these results are broadly consistent with the mechanisms that have been argued to play a key role in the incumbency disadvantages across many other low and middle income countries. Moreover, these findings support the growing literature on voter behaviour in Africa that points to increasing voter sophistication, improvements in political accountability, and the deepening of democratic values. Overall, this study not only brings the incumbency effects literature to the African context, but also makes a unique contribution to the study of African politics through an application of the non-parametric HLATE estimator in an RD framework.

In touching on deeper issues relating to the nature of political power and accountability beyond concerns with incumbency effects alone, these results point to a number of directions for further inquiry. For instance, the relative dearth of understanding on what drives the persistent incumbency disadvantages in many low and middle income countries demands much further attention. Moreover, strong incumbency disadvantages in the Zambian context raise important questions about possible shifts in the clientelistic strategies that elites may choose to employ (see van de Walle, 2012; Werghorst & Lindberg, 2013; Kosack, 2013). Similarly, an important line of inquiry relates to how the behaviour of elites influence what voters value and base their decisions upon (see Eifert, Miguel, & Posner, 2010; Bandyopadhyay & Green, 2013; Posner, 2005).

Finally, perhaps the most important yet unanswered question is how incumbency advantages and disadvantages affect the welfare of ordinary citizens. Do incumbency disadvantages reflect improvements in the ability of citizens to make their voices heard – and thus force public policies to reflect their preferences – or do they merely facilitate short-term policy horizons and discourage 'honest' candidates from entering politics (see Svolik, 2013; Leftwich, 2005)? On the flip side, do incumbency advantages reflect low levels of political accountability – and thus a significant divergence in public policies from the preferences of ordinary citizens – or can they in fact facilitate strong dynamic growth trajectories through centralising economic rents and encouraging long-term policy horizons (see Khan, 2010; Putzel & Di John, 2012; North, Wallis, & Weingast, 2009)?

8. References

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Appendix A. Zambian electoral results, 1991-2011

	Parliamentary elections					Ward elections	
	1991	**1996**	**2001**	**2006**	**2011**	**2006**	**2011**
MMD	125	131	69	72	55	707	540
PF	-	-	1	43	60	314	527
UDA[a]	-	-	-	26	-	286	-
UNIP	25	0[b]	13	-	-	-	3
UPND	-	-	49	-	28	7	258
FDD	-	-	12	-	1	-	3
IND	-	10	1	3	3	38	31
Other		9	5	4	1	17	14
Total	**150**	**150**	**150**	**148**[c]	**148**[c]	**1369**[d]	**1376**[d]

Notes: Election results obtained from the Electoral Commission of Zambia (ECZ).

[a] UDA was a coalition between three opposition parties – UNIP, UPND, and FDD – that formed for the 2006 local government and parliamentary elections only;

[b] The 1996 parliamentary elections were boycotted by UNIP;

[c] Two races were postponed in the 2006 and 2011 parliamentary elections;

[d] Zambia has a total of 1,421 ward constituencies, yet a number of postponed and unopposed elections are not reported by the EZC and are thus not included in this table.

Appendix B. Number of observations and electoral performance in *t+1*

Appendix B.1. Number of candidate-level observations

	All Obs.	**|MOV| < 25%**	**|MOV| < 15%**	**|MOV| < 10%**	**|MOV| < 7.5%**	**|MOV| < 5%**	**|MOV| < 2%**	**|MOV| < 1%**
Local Government elections (2006)	3278	1216	721	475	347	211	92	48
Parliamentary elections (1991-2006)	2350	611	319	189	131	95	35	22

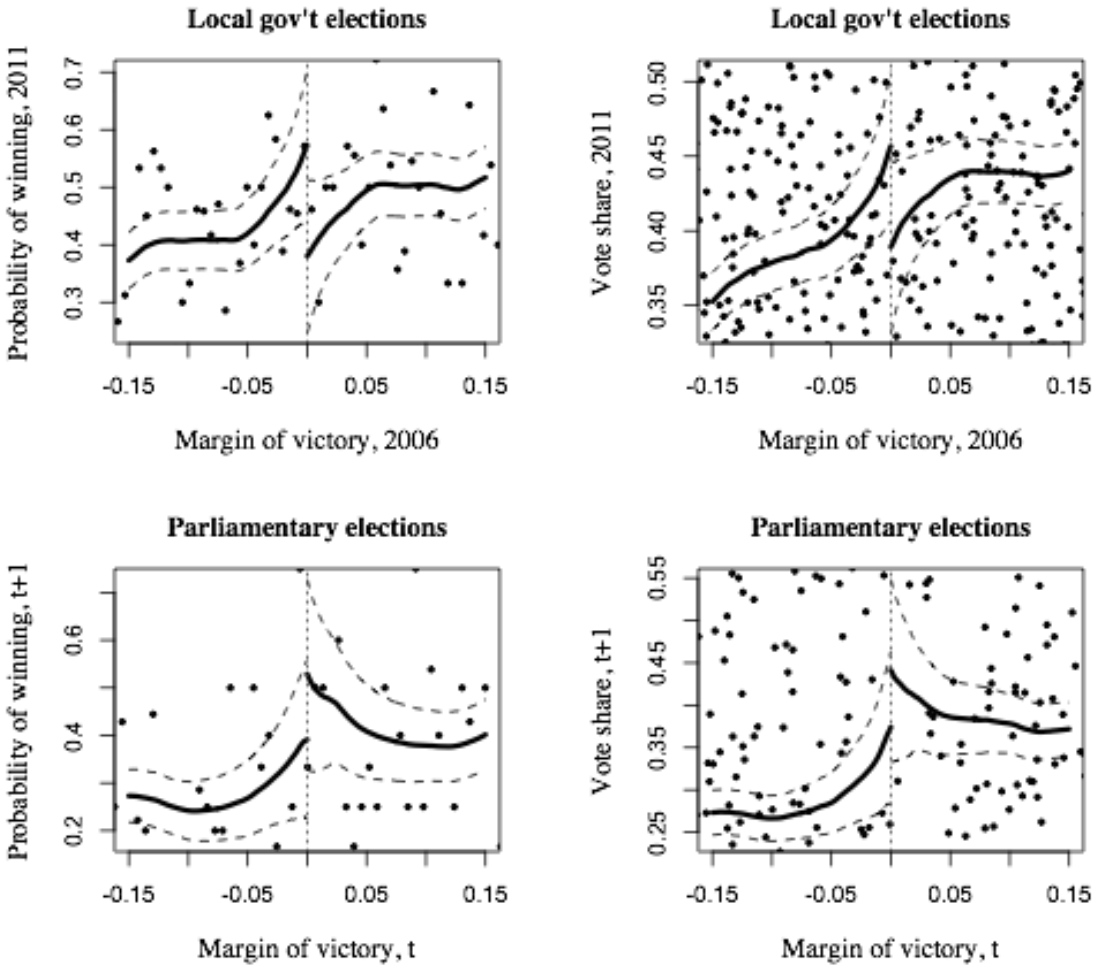
Appendix B.2. Electoral performance in *t+1*, Ward candidates

	P(win), *t+1*	**Vote share, *t+1***						
	Mean	**Mean**	**Min**	**1st Qtr.**	**Med.**	**3rd Qtr.**	**Max.**	**Obs.**
All parties								
All candidates, *t*	**0.34**	**0.31**	0	0.08	0.29	0.51	0.95	3278
Winning candidates, *t*	**0.65**	**0.49**	0	0.34	0.51	0.64	0.95	1183
Losing candidates, *t*	**0.17**	**0.21**	0	0.02	0.17	0.35	0.92	2095
MMD								
All MMD candidates, *t*	**0.38**	**0.38**	0	0.23	0.36	0.51	0.92	1212
Winning candidates, *t*	**0.56**	**0.46**	0	0.33	0.45	0.57	0.92	634
Losing candidates, *t*	**0.18**	**0.30**	0	0.19	0.25	0.38	0.92	578
PF								
All PF candidates, *t*	**0.61**	**0.47**	0	0.28	0.51	0.64	0.90	710
Winning candidates, *t*	**0.95**	**0.63**	0	0.57	0.65	0.73	0.90	279
Losing candidates, *t*	**0.40**	**0.36**	0	0.19	0.37	0.53	0.81	431
UDA								
All UDA candidates, *t*	**0.23**	**0.23**	0	0.04	0.15	0.38	0.95	961
Winning candidates, *t*	**0.58**	**0.43**	0	0.19	0.47	0.65	0.95	257
Losing candidates, *t*	**0.11**	**0.16**	0	0.03	0.10	0.27	0.71	704

Appendix B.3. Electoral performance in *t+1*, Parliamentary candidates

	P(win), *t+1*	**Vote share, *t+1***						
	Mean	**Mean**	**Min**	**1st Qtr.**	**Median**	**3rd Qtr.**	**Max.**	**Obs.**
All parties								
All candidates, *t*	0.22	**0.18**	0	0.00	0.04	0.33	1.00	2350
Winning candidates, *t*	0.57	**0.42**	0	0.25	0.42	0.60	1.00	556
Losing candidates, *t*	0.10	**0.11**	0	0.00	0.00	0.16	0.90	1786
MMD								
All MMD candidates, *t*	0.54	**0.42**	0	0.26	0.39	0.57	1.00	571
Winning candidates, *t*	0.62	**0.45**	0	0.30	0.43	0.59	1.00	382
Losing candidates, *t*	0.39	**0.35**	0	0.21	0.30	0.48	0.86	187
All other parties								
All non-MMD candidates, *t*	0.11	**0.11**	0	0.00	0.00	0.12	0.90	1779
Winning candidates, *t*	0.47	**0.35**	0	0.04	0.34	0.6	0.89	174
Losing candidates, *t*	0.07	**0.08**	0	0.00	0.00	0.08	0.90	1599

Appendix C. Conditional estimates of incumbency effects, Ward and Parliamentary elections



Notes: The above plots exhibit the estimated causal effect of incumbency on vote share in election period *t+1* and probability of winning in election *t+1* in both ward-level and parliamentary elections. The plotted curves are estimated from non-parametric locally weighted regressions of next period electoral performance on incumbency status and margin of victory in period *t* as well as incumbency status interacted with margin of victory.

Appendix D. Placebo outcome tests

	Local gov't elections			Parliamentary elections		
Placebo outcome	**Full sample**	**|MOV| ≤ 25%**	**|MOV| ≤ 7.5%**	**Full sample**	**|MOV| ≤ 25%**	**|MOV| ≤ 7.5%**
Probability of winning, *t-1*	0.106 (0.141)	0.041 (0.044)	0.063 (0.082)	-0.381 (0.288)	-0.350*** (0.078)	-0.482*** (0.163)
Vote share, *t-1*	0.059*** (0.018)	0.030 (0.023)	0.042 (0.043)	0.147*** (0.023)	0.070* (0.036)	-0.003 (0.086)
Voter turnout (%)	0.012** (0.006)	-0.001 (0.009)	-0.010 (0.017)	-0.014 (0.011)	-0.001 (0.019)	-0.020 (0.043)
Total votes cast	-237.4* (141.48)	73.28 (203.06)	8.676 (441.19)	-1070.6 (736.3)	-140.0 (1373.0)	-816.8 (3637.7)
Number of registered voters	189.5 (238.3)	52.16 (210.40)	319.8 (285.7)	-1328.4 (1044.3)	-266.4 (1880.8)	-571.6 (4853.6)
Rejected ballots (%)	-0.001 (0.002)	-0.001 (0.002)	-0.0004 (0.003)	0.005*** (0.002)	-0.0004 (0.003)	-0.0002 (0.005)
Winner vote share, *t*	0.0305*** (0.005)	-0.003 (0.007)	0.001 (0.012)	0.122*** (0.008)	0.005 (0.013)	0.028 (0.030)
Best opposition candidate vote share, *t*	0.0106** (0.004)	0.003 (0.006)	0.001 (0.012)	0.028*** (0.007)	0.017 (0.012)	0.029 (0.030)
Number of candidates	-0.021 (0.040)	0.057 (0.088)	-0.058 (0.160)	-0.253*** (0.041)	0.070 (0.372)	-0.191 (0.797)
Effective number of parties	-0.212 (0.032)	0.020 (0.060)	-0.002 (0.115)	-1.112*** (0.090)	-0.105 (0.182)	-0.365 (0.400)
Access to electricity (%)	-0.861 (1.433)	1.209 (2.090)	-0.123 (4.22)	-4.515** (2.246)	2.034 (3.412)	1.186 (8.316)
Radio ownership (%)	-1.381 (6.569)	0.592 (1.550)	-0.600 (3.027)	-3.764** (1.647)	0.731 (2.560)	1.004 (6.180)
Access to safe drinking water (%)	-2.494 (1.878)	0.882 (2.872)	-1.675 (5.323)	-5.447* (2.976)	1.411 (4.511)	1.534 (10.333)
Total population	-2777 (2174)	1671 (3136)	296.8 (6028)	-8204** (3744)	-3061 (5736)	-2363 (12689)
Province: Central	0.249 (0.271)	-0.002 (0.024)	0.001 (0.035)	0.255 (0.321)	-0.032 (0.041)	-0.027 (0.089)
Province: Copperbelt	0.006 (0.178)	0.005 (0.038)	-0.026 (0.065)	-0.519* (0.281)	0.006 (0.055)	0.031 (0.111)
Province: Eastern	-0.085 (0.195)	-0.026 (0.038)	-0.020 (0.071)	-0.182 (0.263)	0.030 (0.060)	0.015 (0.133)
Province: Luapula	0.027 (0.233)	0.009 (0.0307)	0.002 (0.050)	0.268 (0.345)	0.018 (0.034)	0.054 (0.093)

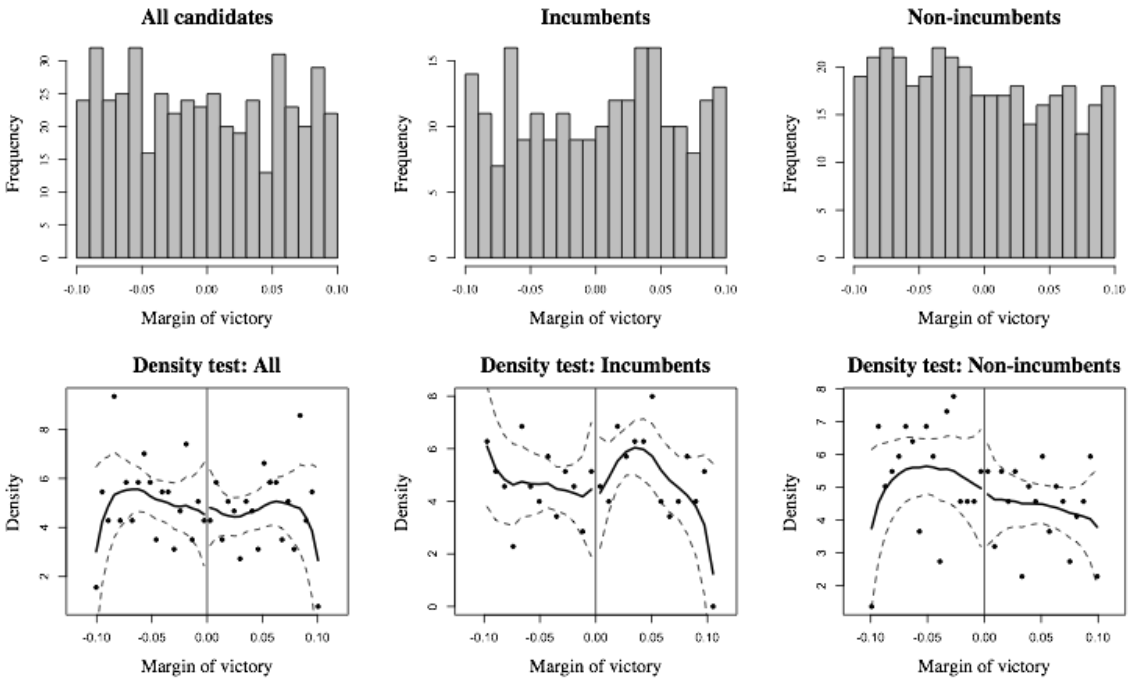
Province: Lusaka	-0.085 (0.268)	0.017 (0.025)	0.016 (0.032)	-0.468 (0.317)	-0.014 (0.050)	-0.013 (0.129)
Province: Northwestern	0.017 (0.271)	-0.005 (0.018)	-0.001 (0.051)	-	-	-
Province: Northern	0.097 (0.183)	-0.007 (0.041)	-0.001 (0.081)	-0.429 (0.279)	-0.015 (0.051)	-0.081 (0.105)
Province: Southern	0.069 (0.241)	-0.009 (0.028)	-0.008 (0.048)	1.246*** (0.352)	0.003 (0.031)	0.012 (0.064)
Province: Western	0.091 (0.239)	0.019 (0.027)	0.025 (0.050)	0.106 (0.293)	-0.005 (0.055)	0.001 (0.121)

*** = $p < 0.01$; ** = $p < 0.05$; * = $p < 0.10$.

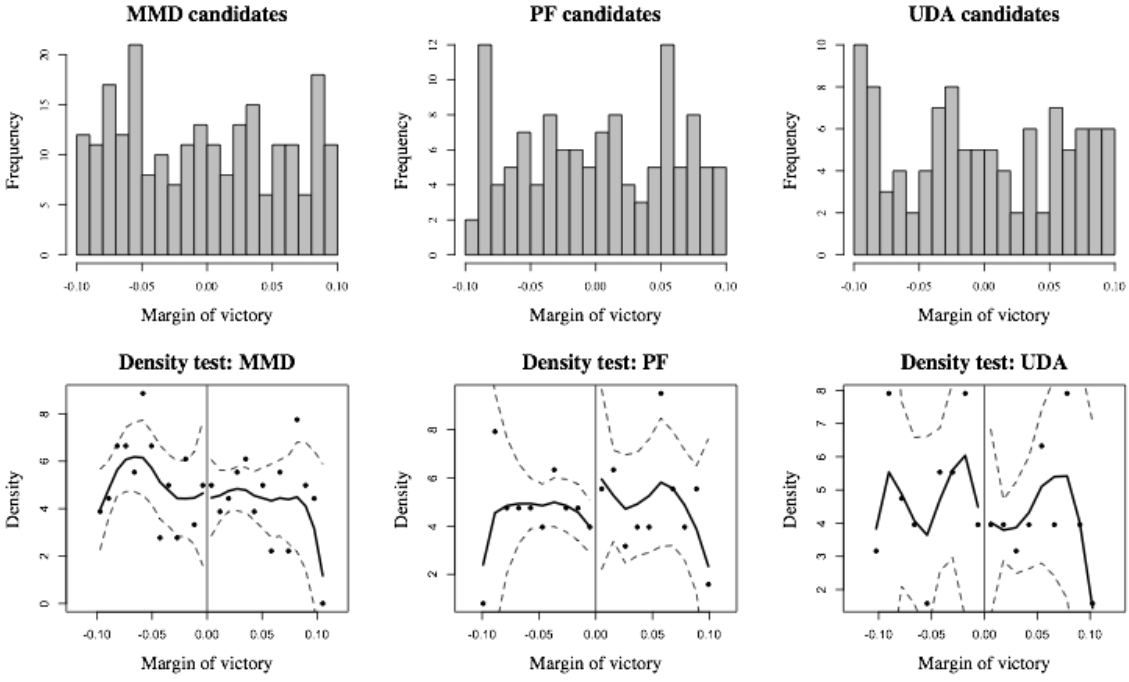
Notes: Every row contains a placebo treatment effect estimated at the threshold MOV=0, obtained from non-parametric locally weighted linear regression with a triangular kernel. Huber-White standard errors are used. Ward-level placebo outcomes for electoral performance in *t-1* are estimated using 2011 election data. Placebo outcome for Northwestern province is not estimated in parliamentary elections due to insufficient sample size around the threshold.

Appendix E. McCrary Density tests

Appendix E.1. McCrary density tests by incumbency, Ward elections

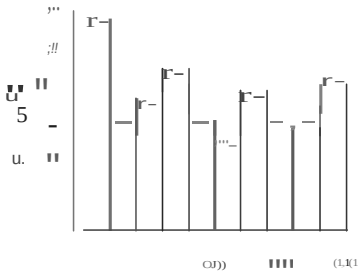


Appendix E.2. McCrary density tests by party, Ward elections



Appendix E.3. McCrary density tests by incumbency, Parliamentary elections

All candidates



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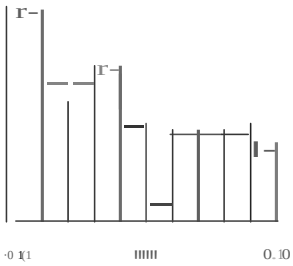
Incumbents



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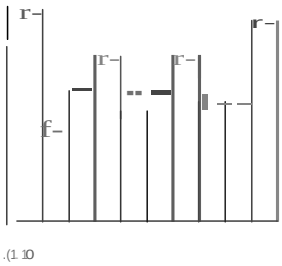
Non-incumbents



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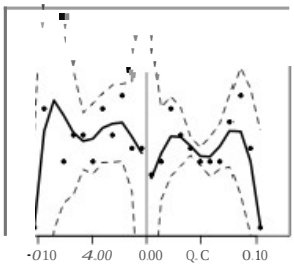
Density test: All



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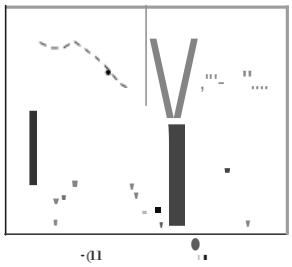
Density test:Incumbents



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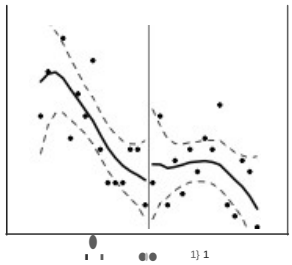
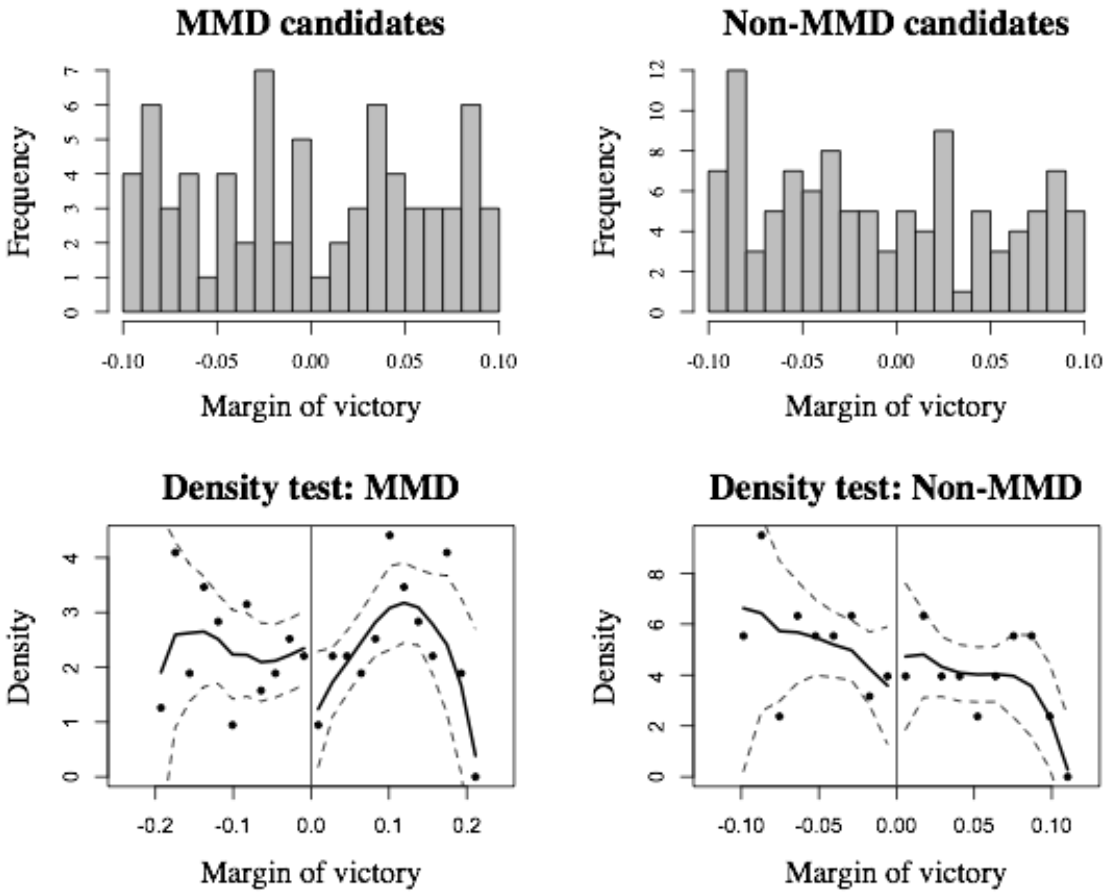
Density test:Non-incumbents



Margin of victOt)'

Appendix E.3. McCrary density tests by party, Parliamentary elections



Note: In these assessments of the marginal distribution of *V*, two plots are noteworthy. First, the histogram and density test for parliamentary incumbents in figure m appears to be unbalanced around the threshold. The density test, however, returns a p-value of 0.21 for a discontinuous jump in the density at the threshold. Second, the plots for MMD candidates at the parliamentary level similarly appear relatively unbalanced around the threshold. Again, however, this discontinuity is not significantly different from zero (p=0.20). The ward figures, on the other hand, do not show any evidence of discontinuities at the threshold.