

Electoral Rules and Clientelistic Parties: A Regression Discontinuity Approach*

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ABSTRACT

This paper studies the causal effect of electoral systems on the performance of clientelistic vs. programmatic parties. We argue that, contrary to majoritarian systems, proportional systems disfavor clientelistic parties as voters can hardly be pivotal for electing their local patron. We test this insight using data from local elections in Morocco from 2003 and 2009. We use a regression discontinuity approach exploiting the fact that the law stipulates a population threshold below which the system is majoritarian and above which it is proportional. Results

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show a differential causal effect of proportional systems on programmatic and clientelistic parties: Clientelistic parties halve their seats and the programmatic party doubles them when crossing the threshold of proportionality. An important caveat is that the sample size around the threshold being relatively small, some coefficients are estimated relatively imprecisely. Fixed effects estimates exploiting a change in threshold from 2003 to 2009 yield similar results.

In many developing countries, clientelistic parties are dominant in electoral contests. Such parties have persisted in spite of modernization and democratization processes, both in the form of so-called party machines that rely on brokers to mobilize clients and of more caucus style parties that rely on all sorts of notables for this task (Piattoni, 2001; Roniger and Gunes-Ayata, 1994). How clientelistic parties operate, gain support and monitor the compliance of their voters has received increasing interest in recent years from political scientists and economists alike (see, for instance, Bardhan *et al.*, 2008; Finan and Schechter, 2012; Hicken, 2011; Manacorda *et al.*, 2011; Kitschelt and Wilkinson, 2007b; Lindberg and Morrison, 2008; Stokes, 2005; Vicente and Wantchekon, 2009; Wantchekon, 2003). The type of linkage these parties establish with voters - where especially poorer voters exchange their say in the political process for some form of particularistic good — is conflicting with the spirit of democratic elections (Stokes, 2007). Additionally, and to some extent as a result of the distortion of democratic representation, clientelism is also associated with bad economic outcomes, such as inequality persistence, the inefficient allocation of public resources, and worse public services for the poor (see Pellicer, 2009; Bardhan and Mookerjee, 2012; Keefer and Khemani, 2005).

In spite of the strong research interest that clientelism has generated in the last decade, there is still relatively little knowledge about its determinants. This is probably in part because clientelism is so difficult to measure. Low levels of economic development as well as poverty are generally associated with clientelism (Brusco *et al.*, 2004; Calvo and Murillo, 2004; Kitschelt and Wilkinson, 2007a). Several authors have also argued that robust political competition benefits programmatic parties (e.g., Kitschelt and Wilkinson, 2007a; Grzymala-Busse, 2007) although this is not uncontested (e.g., Lindberg and Morrison, 2008).

Little is known regarding the impact of political institutions, such as electoral rules, on clientelism. Electoral rules are likely to be relevant, since they affect the strategic calculations of parties and voters (see Duverger, 1954; Riker, 1982; Cox, 1997; Taagepera and Shugart, 1989, among many others in a vast literature). Among other things, electoral rules affect the relative electoral value of emphasizing individual characteristics of politicians vs. party platforms/labels. Systems that pit individual candidates against each other, such as majoritarian systems and open list Proportional Representation (PR), provide incentives to cultivate a “personal vote” as opposed to party labels (Carey and Shugart, 1995; Lancaster, 1986; Shugart *et al.*, 2005). On the basis of such insights, Piattoni (2008) and Kitschelt (2000) articulate the intuition that these types of electoral systems benefit clientelism. However, even if this is plausible, it is difficult to ascertain empirically. The main reason is that electoral rules typically vary only at the cross-country level, and many factors that are difficult to control for could be behind any observed correlation. More generally, as stated by Hicken (2011), institutional choice is likely to be endogenous to preferences regarding clientelism so that an independent role of electoral institutions is particularly difficult to identify.

In this paper, we study the effect of electoral rules on the success of clientelistic vs. programmatic parties in Morocco in the local elections of 2003 and 2009. Our analysis uses what we believe is a credible identification strategy to estimate the effects of electoral rules. We exploit the fact that a population threshold was introduced in 2003, stipulating that municipalities with less than 25,000 inhabitants hold elections with a majoritarian systems, and municipalities with more than 25,000 inhabitants under PR.¹ This institutional feature allows us to employ a regression discontinuity approach to uncover the causal effect of the electoral system on the success of different parties. The regression discontinuity approach essentially estimates and compares the performance of each party in towns at either side of, and very close to, the threshold. The idea is that towns with around 24,000 inhabitants are likely to be very similar to towns with around 26,000 inhabitants, except for the fact that the former had a majoritarian system and the latter had a proportional one. If party performance differs across these types of town, this difference can be quite safely attributed to the electoral system.

We provide a simple argument, complementary to the insight mentioned above, for why majoritarian systems may encourage clientelism. Whereas

¹ In 2009, the population threshold increased to 35,000.

majoritarian systems allow clients to reward their patrons with their vote directly, proportional closed list systems make it impossible for clients to select their patron and thereby reward her for her services. Thus, in proportional closed list systems, voters are more likely to follow their programmatic inclinations. This insight differs slightly from the one suggested in the literature, in that it focuses on the strategic behavior of *voters* instead of that of *politicians*. The argument actually comes from a local politician in Morocco, whose town had been switched to PR in 2003. He complained about PR, saying that in the previous single member districts, he “didn’t even have to campaign” because “everybody knew him” and was “grateful” for the “services he had provided.” Now, he was buried in a list of 25 people for the whole town where people could not select him personally any longer so that he “could not be sure that he would be elected.”²

To test this insight, we construct two municipal level datasets, one for 2003 and one for 2009, merging the respective election results with population data and some municipal characteristics. The election data contains the number of seats won by each party in each municipality (no information on votes is available).

We classify the major Moroccan parties into clientelistic parties, programmatic parties, and parties in-between. This classification is based on the historical origins and evolution of different political parties in Morocco. Our classification is consistent with the programmatic and clientelistic scores in data from the Political Accountability Project by Herbert Kitschelt and others at Duke University.

We estimate the causal effect of electoral rules on clientelistic, in-between and programmatic parties using as main identification strategy a regression discontinuity approach, as explained above. In addition, we use fixed effects as an alternative identification strategy. The change in population threshold from 2003 and 2009 together with heterogeneous population growth implies that some towns that were majoritarian in 2003 became proportional in 2009 and vice versa. We exploit this variation over time to control for municipal fixed effects when attempting to explain party results. This identification strategy is less credible than the regression discontinuity one, because changes in electoral system are correlated with population growth, and this may bias results. However, the exercise is valuable in that the identification assumptions are completely unrelated to those of regression discontinuity.

² Authors’ interview with a municipal councilor in Boujaad, Morocco, November 26, 2008.

Our results show that there is indeed a causal effect of proportional systems on the success of different types of parties in line with our hypothesis. In the two years, parties we identify as clientelistic lose, on average, around 5 percentage points (pp.) of seats from PR. The in-between parties are indeed in between, losing around 2 pp. in 2003 and essentially zero in 2009. Our programmatic party, in turn, benefits from a 2 pp. increase in seats in 2003 and around 6 pp. in 2009. These magnitudes are large in a party system as fragmented as the Moroccan one. PR essentially halves the seats of the clientelistic parties and doubles the seats of the programmatic party. The fixed effect results are qualitatively and even quantitatively similar to the regression discontinuity ones.

The robustness of our results and the validity checks we perform make us quite confident that we uncover a differential effect of electoral rules on parties that differ in their degree of clientelism. However, even if our classification of parties does capture differences in clientelism, our results could be driven by something else that happens to be correlated with clientelism. We discuss whether our results can be driven by differences in the size of parties (a variable known to be relevant for the effect of electoral rules on party performance) and in government/opposition status.

How relevant are our results for the impact of electoral rules on the success of clientelistic parties more generally? Our results are quite “local,” in the sense that they apply to a particular type of municipality (those with population around 30,000 inhabitants) in a specific country. While we cannot be sure of how well our results would actually generalize, we argue that the type of mechanism that drives our results is likely to be widespread. In particular, the two characteristics of Moroccan clientelistic parties that are critical for their decline under PR are also typical for many other historical and present-day clientelistic parties. The first is a weak organization, a characteristic associated with many clientelistic parties (Gunther and Diamond, 2003; Kitschelt and Kselman, 2011). Weak organizations with no clear institutions to reach legitimate decisions make it impossible to credibly promise goods to clients of lower ranked patrons for their vote *in case their patron is not elected*. As a result, clients of lower ranked patrons are more prone to follow their programmatic inclinations under PR. The second critical feature is that voters are clients of a specific patron, not of an organization. We believe that this is also a characteristic of a large number of clientelistic parties: parties that are collections of notables such as rural landlords or urban businessmen who all engage in a direct exchange with clients. In contrast,

our results are not likely to apply to machine type clientelistic parties, which have more formal bureaucratic organizations (see Hopkin, 2006) and may thus be able to circumvent their problems under PR. Therefore, our results are likely to be most relevant in settings where “traditional” clientelism, rather than machine clientelism, dominates.

The paper is organized as follows. The next section provides our conceptual framework for establishing a link between electoral rules and the success of clientelistic parties. Then, we describe the Moroccan electoral law for the local elections of 2003 and 2009 and establish the classification of Moroccan parties into clientelistic/programmatic types. The following sections describe the data, present our empirical approach and present the results from the regression discontinuity approach as well as the fixed effects estimation. Finally, we discuss the interpretation of the results and conclude.

1 Conceptual Framework

We are interested in understanding the effect of electoral rules on the prevalence of clientelism. Electoral rules and in particular district magnitude potentially affects the behavior of parties and voters in a way that may promote or discourage clientelism. The works of Carey and Shugart (1995), Lancaster (1986), and Shugart *et al.* (2005) point out that majoritarian systems/low district magnitudes as well as proportional open list systems give incentives to politicians to emphasize personal characteristics over party platforms. In electoral systems that pit specific candidates against each other instead of parties, the value of promoting a party label diminishes. This can be interpreted as encouraging clientelism and patronage from the politicians side (Kitschelt, 2000; Piattoni, 2008).

While being intuitively plausible, no concrete mechanism by which such systems would encourage clientelism has so far been elaborated. We argue that at the center of such a mechanism should be the strategic calculus of voters, an aspect that has been relatively neglected by the personal vote literature, which tends to focus rather on the politicians.³ When focusing on clientelism as opposed to personal vote, it seems warranted to consider that parties and politicians find it difficult to adapt their strategies to different

³ The key exception is Shugart *et al.* (2005) who emphasize that personal characteristics are information shortcuts for voters that are more important in some electoral systems than in others.

electoral rules, at least in the short run (i.e., to rapidly establish programmatic linkages instead of clientelistic ones and vice-versa). Clientelistic parties in developing countries usually do not have a credible platform that they could put forward when faced with a (new) electoral rule that would warrant doing so. For a clientelistic party to credibly emphasize a “party label” and for a programmatic party to establish a clientelistic network requires costly and lengthy investments, unlikely to yield fruits in the short run.⁴ In contrast, voters can adapt much faster to changes in electoral rules. We thus elaborate on a potential mechanism on how different types of electoral rules could influence the prevalence of clientelism by focusing on the strategic considerations of voters regarding the choice between clientelistic and programmatic parties.⁵ In particular, we argue that clientelistic parties, all else being equal, will gain more support the lower the district magnitude (i.e., in majoritarian systems as opposed to proportional (closed list) ones).

Our argument is simple. Consider a polity where there are two parties, a programmatic and a clientelistic one. The clientelistic party is just a collection of local patrons, with no program, and thus no value as a party. Candidates of this party have value as individuals, but only for the inhabitants of their respective neighborhood/district. The programmatic party, in contrast, implements some program if elected, a program that for simplicity we consider as providing some public good. The relevant trade off for voters in such a polity is essentially between the local patron and the public goods that the programmatic party could provide. Voters will obviously differ in the value they attach to each of them. Some voters will be core voters, unconditional either to their patron or to the programmatic party. Others will be more opportunistic swing-voters, acknowledging the benefits of the public goods provided by the programmatic party but possibly favoring the clientelistic party if this has a fair chance of having their local patron elected. We believe this setting captures well the political choices faced by citizens in many developing contexts.

⁴ Some parties aim of course to pursue a mixed strategy, that could for example try to establish clientelistic linkages in rural areas and programmatic linkages in urban areas. While some parties have indeed the infrastructure to follow this type of strategies, we believe most parties tend to specialize in either clientelistic or programmatic linkages.

⁵ We consider strategic voting as a broad concept whereby citizens take into account what other voters do when casting their vote.

In such a setting, electoral systems can have a strong impact on the voting behavior of the opportunists. In majoritarian systems, the choice voters face is directly and unambiguously between the benefits provided by the programmatic party and the benefits provided by their local patron. To the extent that opportunists value the benefits of their local patron more than the public good provided by the programmatic party, they will vote for the clientelistic party. In closed list proportional systems, instead, their vote can go to the programmatic party for strategic reasons. In proportional systems where the vote is for an established list, the order of the candidates is crucial. Opportunists supporting patrons in end-of list neighborhoods will realize that their local patron has little chance of being elected and will therefore rather vote for the programmatic party. Without the support of these opportunists, the chances of patrons positioned just above the bottom of the list decrease, making their opportunistic clients less inclined to vote for the clientelistic party. In this way, a cascade effect can be set into motion that may swell considerably the votes of the programmatic party.⁶ In other words, in closed list PR, clients will hardly be pivotal to elect their own patron, and the larger the district magnitude, the less pivotal they will be.

In principle, a simple way to counteract this drain of the opportunists' vote under PR would be for clientelistic parties to promise supporters of bottom of the list patrons rewards for their vote even if their patron did not get elected. Rewarding voters would thus become a party, instead of an individual patron's, business. This path would, however, require stronger organizations than many clientelistic parties appear to have.⁷ In practice, and as we will discuss in more detail in the next section, the instability of decisions and political personnel of clientelistic parties in Morocco — and possibly elsewhere — does not enable them to make credible commitments to voters on a party level.

⁶ There is a substantial debate if such clientelistic exchanges need to be sustained by monitoring (e.g., Stokes, 2005; Kitschelt and Wilkinson, 2007a) or if norms of reciprocity are sufficient (e.g., Finan and Schechter, forthcoming). Our approach is compatible with both views and we do have anecdotal evidence that more explicit monitoring (taking a picture of the ballot with a mobile phone) as well as norms of reciprocity (where clients feel a moral obligation) are at play in Morocco.

⁷ Kitschelt and Kselman (2011) find that informal organizations, that delegate their voter interaction to notables are particularly associated with clientelistic practices, whereas formal organizations are associated with programmatic linkages.

2 Electoral System and Political Parties in Morocco

Morocco's political system combines authoritarian and democratic institutions. The king decides on core policies but the elected government has a say. Multi-party elections have been held since independence in 1956. Political parties are well-established although only few of them are institutionalized and the party system is highly fragmented (Santucci, 2001; Willis, 2002). Until the mid-1990s, outright electoral fraud served to ensure docile parliaments dominated by pro-palace parties; since then, political liberalization measures have included the cleaning of voters' rolls and an increase in the transparency of elections (Storm, 2007).

Morocco's current electoral legislation is the regime's response to opposition demands for a PR system (Bendourou, 2001; Ferrié, 2002). Up to the 2000s, both national and municipal elections in Morocco were held under a simple first-past-the-post system. In 2002, the law was changed into closed list PR for parliamentary elections, a mixed system was adopted for municipal elections. In the 2003 municipal elections, a single member plurality system was maintained only for towns with less than 25,000 inhabitants. In towns with more than 25,000 inhabitants, councilors were elected under a proportional, closed list, system.⁸ For the 2009 elections, the population threshold was increased to 35,000 inhabitants.⁹

The Moroccan case has the advantage of allowing for a quite straightforward identification of clientelistic and programmatic parties. The dividing line is a party's origin, that is whether it was created from within the monarchy or from the ranks of the opposition. The country's monarch is considered to be the "ultimate patron" (Willis, 2002, p. 15) of a vast clientelistic network established by the late King Hassan II to govern the country after independence. This network was politically organized by means of parties (Lust-Okar, 2005; Moore, 1993). These clientelistic parties never invested in a political program as their core appeal to voters — and to politicians joining them — was their access to power structures and the concurrent ability to gain and distribute favors. Programmatic parties were created by

⁸ In 2003, lists needed to obtain at least 3% of the votes locally to gain seats, in 2009, the threshold was increased to 6%. The minimum district magnitude under PR was 25 seats in 2003, 29 seats in 2009.

⁹ Seats are distributed according to a largest remainder formula that favours small parties, see Gallagher (1992).

opposition figures whose mobilization and appeal was tied to demands for democratic reforms (Santucci, 2001).

Clientelistic parties and practices in Morocco resemble those in many developing countries. In rural areas, parties rely on traditional notables and tribal leaders who provide all sorts of favors throughout the legislative period (emergency relief, payment for funerals, sheep for religious occasions, etc.) (Leveau, 1976; Liddell, 2010). In towns, notables can also include other types of locally relevant figures such as owners of local companies. In larger cities, especially in districts that include shanty towns, wealthy businessmen engage either in outright vote-buying via brokers or may even provide club goods such as sewerage on their own account (Catusse, 2002; Zaki, 2007).

Two characteristics of these parties are important to note as they address the question why clientelistic parties are unable to credibly promise rewards to opportunist supporters of bottom of the list patrons under PR. First, and most importantly, party organizations are weak and play no or only a small role in selecting candidates and leaders and in legitimizing and enforcing decisions (Willis, 2002). Second, notables — whether rural or urban — are non-partisan in the sense that their loyalties are not tied to a specific political party.¹⁰ The combination of these two factors implies that party decisions and political personnel are unstable. Thus, parties cannot make credible commitments to voters who are unlikely to trust that promises of rewards are enforced if their local patron is not elected.

The most important clientelistic parties in Morocco are the *Mouvement Populaire* (MP) founded in 1958 by Mohand Laenser to organize the support of the rural notables for the regime, the *Rassemblement National des Indépendents* (RNI), founded in 1977 by Ahmed Osman, a brother in law of King Hassan II, and the *Union Constitutionnelle* (UC), a split off the RNI in 1983. Since 2008, the *Parti Authenticité et Modernité* (PAM), established by Fouad Ali el Himma, who has a well advertised close friendship with King Mohammed VI (Liddell, 2010) has been a powerful addition to this group.¹¹ The MP, RNI, UC, and PAM (in the 2009 analysis) form the group of clientelistic parties in our study.

Programmatic parties were founded by opposition figures or movements, the key programmatic point being the advancement of political reforms and

¹⁰ In Morocco, this is shown by ubiquitous floor-crossing, typically when another party offers a better deal (Willis, 2002).

¹¹ The PAM has absorbed many politicians of other clientelistic parties and has gained the largest number of seats in the 2009 municipal elections.

in some cases also the promotion of social justice. With the exception of the 1950s and 1960s none of these parties had, however, a revolutionary agenda. Their programs all advocate incremental democratic reforms, in line with the official regime discourse about political development in Morocco. In the past, the most important programmatic parties were the *Istiqlal* (Independence) Party (PI), the *Union Socialiste des Forces Populaires* (USFP), and the smaller *Parti du Progrès et du Socialisme* (PPS). From the late 1990s up until 2011, all three parties have, however, been co-opted into national government. They have attracted more opportunistic candidates, softened or abandoned former demands for democratization and become less distinctive from the clientelistic parties. In contrast to the latter they do, however, have more developed organizations and some rank-and-file. The PI, USFP, and PPS will thus be considered as ambiguous, in-between parties.

In the last two decades, the most important remaining clear-cut programmatic party has been the Islamist Party of Justice and Development (PJD), founded in the early 1990s. The party was invited to join national government in 1998 together with the other opposition parties but left it after one year because party leaders felt that the party's platform was not taken into consideration in government policies.¹² In the meantime, the party has invested heavily into programmatic linkages regarding both the development of increasingly precise policies and mobilization structures to publicize the platform and make it credible. The party organization is an important tool for legitimizing leaders and candidates and for linking with voters. Party officials exert relatively tight control over the MPs and municipal councilors and enforce voting discipline as their reputation is important. They have avoided filling their lists with notables and have a strong preference for party candidates who are elected by the local rank-and-file.¹³ Our own observations of the PJD's 2003 and 2009 electoral campaigns where we interviewed party officials and candidates and attended electoral meetings in several town confirm the party's focus on programmatic linkages. The campaigns were strongly co-ordinated from the party's head office in Rabat. In all of the meetings we observed, a lot of emphasis was made on the party's platform and on the quality of its candidates — such as their level of education. Additionally, figures on the educational and professional profile of Moroccan 2003 and 2009 municipal councilors published by the Moroccan interior ministry

¹² For a detailed study of the Party of Justice and Development, see Wegner (2011).

¹³ See Wegner (2011), Chapter 3 on party organization.

(Direction Générale des Collectivités Locales, 2009) support more programmatic ambitions of the PJD compared to the average Moroccan party. PJD councilors are by far more educated than average councilors.¹⁴ The majority of PJD councilors are teachers — an unlikely profile for a patron — compared to a majority of farmers — a likely occupation of a local *notables* — for the average councilor. This combined evidence makes us confident to classify the PJD as the programmatic party of this study.

Our confidence in our ranking of key Moroccan parties into clientelistic, in-between and programmatic parties is further enhanced by its strong correlation with data collected by the Political Accountability in Democratic Party Competition and Economic Governance Project of Herbert Kitschelt and others. In this project, an expert survey targeted the type of linkages parties were establishing with voters and how much effort parties were making in establishing these linkages.¹⁵ Most of the parties considered in this paper were included, the exceptions being the PPS, the UC, and the PAM.¹⁶

Table 1 exhibits the mean scores for our programmatic, in-between, and clientelistic groups according to the Political Accountability Project, divided in programmatic and clientelistic linkages. For all the indicators, higher scores imply more programmatic/clientelistic linkages, respectively. The scores for programmatic and clientelistic effort are the answers to two

Table 1. Indicators of clientelism and programmaticness, by type of party.

		Programmatic PJD	In-between USFP istiqlal	Clientelistic RNI MP
Programmatic effort		3.6	3	2.3
Programmatic indices	cosalpo3econ	0.16	0.13	0.07
	cosalpo4	0.13	0.11	0.1
Clientelistic effort		2.7	3.1	3.5
Clientelism index		12	13.6	14.7

¹⁴ Only 10% of PJD councilors have only primary education or less, compared to half for average councilors. 60% of PJD councilors are university educated, compared to 20% for the average councilor.

¹⁵ 13 experts completed the survey in Morocco.

¹⁶ The survey questionnaire and information about the project is available at <http://www.duke.edu/web/democracy>

general questions asking directly about the extent to which parties seek to mobilize electoral support by emphasizing the attractiveness of the party’s platform (programmatic effort) or the capacity of the party to deliver targeted material benefits (clientelistic effort).

In addition to questions asking directly about clientelistic and programmatic effort, Kitschelt and Freeze (2000) construct indices of clientelistic and programmatic linkages.¹⁷ As shown in Table 1, our programmatic party consistently gets the highest score on programmatic effort and linkages and the lowest on clientelistic effort and linkages while the opposite is true for our clientelistic parties. In all cases, the “in-between” parties lie indeed in-between the other two groups.

3 Data

Our aim is to understand the effect of the electoral system on the success of different types of parties. The main identification strategy we use is a regression discontinuity approach that exploits the fact that the electoral system in Moroccan local elections is designed to change from majoritarian to proportional at a given population threshold. Our approach thus requires a dataset that contains, at the municipal level: 1. electoral results, 2. population, (ideally as used by the administration to assign the electoral system) and, 3. some average demographics to serve as control and for validity checks.

We construct two datasets, one for 2003 and one for 2009. The details of the construction of our datasets as well as their descriptive statistics are in the online appendix. The 2003 dataset contains the 2003 election results from the ministry of interior, population from the 1994 census and demographic variables from the 2004 census. The 2009 dataset contains the 2009 election results merged with population and demographic variables from the 2004 census. Moreover, we merge the two datasets to obtain a panel structure that we exploit later in the analysis. Overall, the mergers are quite successful, and only around 2% of observations are lost. Electoral results

¹⁷ Regarding programmatic linkages, they establish two indices that measure issue cohesion, salience and distinctiveness (*cosalpo3econ* and *cosalpo4*). For clientelistic linkages, they construct an index that adds up answers regarding how much effort parties make in providing different types of particularistic goods to voters, such as gifts and access to social policy entitlements. Notice that these indices are arguably more trustworthy because they should suffer less from possible biases that experts may display regarding their opinions about the degree of clientelism or programmaticness of parties.

have information only on seats, not on votes. Thus, we measure party success as the proportion of seats won by the party in each municipality. Municipal characteristics from the census data include, in addition to population, variables such as literacy rates, percent of mobile phones, rates of public and private employment, age structure, etc.

For 2003 we feel confident that the 1994 population data we use is precisely the one used by the administration to implement the electoral law.¹⁸ Thus, for 2003 we use a sharp regression discontinuity design. For 2009, in contrast, the mapping between the electoral system and our 2004 population variable is not sharp. This is likely to be because there was a substantial redistricting in 2008, just before the 2009 elections. Since we have no information on the specifics of the redistricting, we are forced to use the 2004 population data as the forcing variable in the regression discontinuity analysis, which becomes, as a result, fuzzy.¹⁹

Our empirical approach relies heavily on the municipalities around the threshold of proportionality (25,000 in 2003 and 35,000 in 2009). Thus, we restrict ourselves to municipalities below 100,000 inhabitants. After merging and cutting these large municipalities we end up with sample sizes of 1,471 for 2003 and 1,449 for 2009. Figure 1 shows the distribution of the population across municipalities. The figure shows that most of the Moroccan municipalities are small, way below the corresponding thresholds, particularly for 2009. For 2003, there are 95 municipalities in a $\pm 5,000$ window around the threshold and 266 within a $\pm 10,000$ window. For 2009, the figures are only 36 and 92, respectively.

4 Empirical Approach

To identify the causal effect of electoral rules on the success of different types of party we rely mainly on a regression discontinuity approach (RD), exploiting the discontinuity of the electoral system at a particular population

¹⁸ See online appendix.

¹⁹ Using 2004 population as forcing variable for the 2009 elections turns out to have both a disadvantage and an advantage. The disadvantage is that this may introduce additional noise in our estimation, as the population measure used does not correspond to the true population at election time. The advantage is that, if the redistricting happened for political reasons, using the true population in 2009 could threaten our identification strategy: potentially, governing parties could put pressure to have their population changed to end up at the side of the threshold more beneficial to them; municipalities at different sides of the threshold *on the basis of the 2009 true population data* would end up being different. The 2004 population data, which pre-dates the process, avoids this problem.

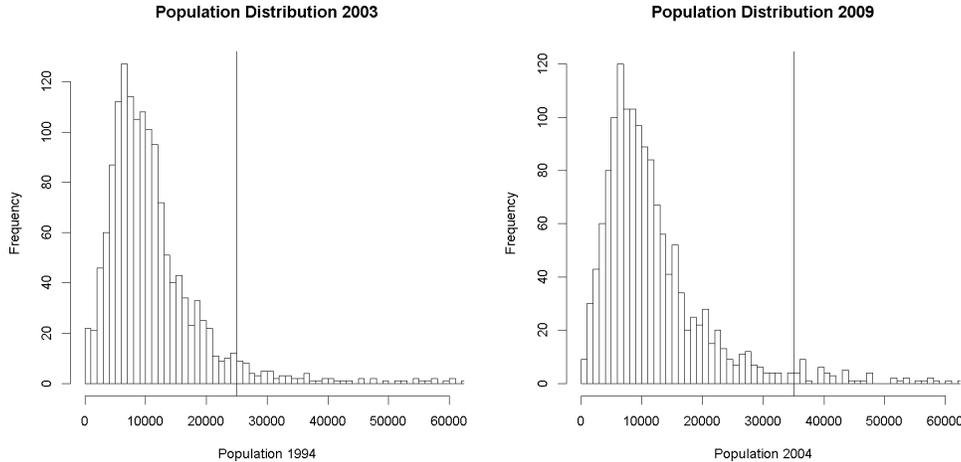


Figure 1. Distribution of Population in 2003 and 2009 elections.

threshold. A growing literature in economics and political science uses this approach to uncover the causal effect of electoral rules on different types of variables (see Gagliarducci *et al.*, 2011; Eggers, 2010; Pettersson-Lidbom and Tyrefors, 2009). To the extent that other potentially relevant variables are continuous at the respective threshold, the jump in seat shares at the threshold represents the causal effect of the electoral system on the performance of the different parties.²⁰

For 2003 we use a sharp design, considering that 1994 population perfectly determines the electoral system. For *each* type of party j (clientelistic, programmatic and in-between), we estimate the following model, using simple OLS with robust standard errors:

$$y_i^j = \beta_0 + f(p_i) + \gamma T_i + \beta_1 X_i + \varepsilon_i \quad (1)$$

$$T_i = \begin{cases} 1 & \text{if } p_i > \tilde{p} \\ 0 & \text{if } p_i \leq \tilde{p} \end{cases}$$

where i indexes municipalities. Thus, y_i^j is the average share of seats in municipality i of the parties we have included in category j . $f(p_i)$ is some possibly nonlinear but continuous function of population that captures the effect of population on the success of different types of parties. We allow for different polynomial specifications of $f(p_i)$ with and without spline. T_i is

²⁰ See Imbens and Lemieux (2008) and Angrist and Pischke (2009) for details on regression discontinuity designs.

an indicator function that measures treatment status, whether the electoral system is proportional as opposed to majoritarian, as given by the population threshold \tilde{p} , which in 2003 equals 25,000. X_i is a vector of controls such as number of councilors, municipal socioeconomic characteristics and provincial dummies. Finally, ε_i is an error term.

The key identification assumption of the RD approach is that $f(p_i)$ is continuous around \tilde{p} : i.e., conditional on the number of councilors (and other controls if applicable), nothing potentially relevant jumps at the threshold. In that case, γ captures the jump in the dependent variable at the threshold \tilde{p} over and above the smooth change captured by $f(p_i)$. Thus, γ is the local causal effect of interest, where local refers to the type of municipality with population around the threshold. Intuitively, if nothing relevant jumps at the threshold and we observe a jump in our dependent variable, this jump ought to be caused by the change in treatment status at the threshold.²¹

From an inference point of view, our key limitation is the small sample size around the threshold. This implies that coefficients are often not precisely estimated. To partially address this, we use several specifications for $f(p_i)$, estimating a variety of polynomial models using different windows around the discontinuity point and controlling for several sets of variables. While this does not make estimates more precise it allows to verify whether the coefficient of interest is stable under different specifications.

Our choice of specifications is informed by the cross validation criterion (see Imbens and Lemieux, 2008) and is discussed in the online appendix. Our preferred specifications will be a linear spline with bandwidth of 15,000 and a fifth order polynomial with no spline using the full sample. In addition, to check the robustness of the results to observations close to the threshold, we will also use a linear spline with a window of 5,000.²² Finally, the linear spline with 15,000 window will be augmented with a variety of controls.²³

²¹ In our case, the number of councilors *does jump* at the threshold \tilde{p} . However, since it jumps at many other thresholds (7,500, 12,500, 15,000, and 50,000), its effect can be netted out from our treatment effect of interest by conditioning. Moreover, the jump in number of councilors at \tilde{p} is small, from 23 to 25 (as opposed to, for instance, from 15 to 23 at the 15,000 population threshold) so that it is highly unlikely that it would drive the results we obtain. Nevertheless, to make sure that it is not the number of councilors that is driving our results, we include the thresholds where the number of councilors changes in placebo tests below.

²² In the specification with the 5,000 window, we cannot control for number of councilors as this variable becomes collinear with the treatment.

²³ In the models with spline, we center the population variable around \tilde{p} in order for the OLS coefficient estimates to yield the jump at the discontinuity point.

For 2009, due to imperfect compliance, it is necessary to use fuzzy RD. This amounts to estimating Equation (1), where the treatment T_i is now to have a proportional as opposed to a majoritarian system. This treatment is then instrumented by the assignment variable Z_i , which is simply the indicator function for municipalities of population higher than the relevant 2009 threshold \tilde{p} . For 2009 we run the similar specifications as for 2003, with and without interactions, and with full as well as restricted samples.^{24,25}

In addition to regression discontinuity, we use a second unrelated identification strategy: to control for municipal fixed effects. The change in population threshold from 2003 to 2009 together with population growth implies that the electoral system of some municipalities changed from 2003 to 2009. Municipalities with population less than 25,000 in 2003 but more than 35,000 in 2009 would have shifted from majoritarian to proportional while those that had population higher than 25,000 in 2003 but lower than 35,000 in 2009 would have shifted from proportional to majoritarian. This allows us to control for municipality fixed effects when estimating the effect of the electoral system on the performance of the different types of party. We estimate the following equation:

$$y_{it}^j = \alpha_i + \lambda_t + \gamma T_{it} + \varepsilon_{it}, \quad (2)$$

where α_i are municipality fixed effects, λ_t are time fixed effects, T_{it} is the treatment (proportional system), and ε_{it} is the error term. The parameter of interest is γ .²⁶

This model exploits the time variation in treatment status to estimate the treatment effect. The key identification assumption is that changes in

²⁴ Our preferred specifications for 2009 will be a linear spline with window 25,000, and a polynomial of order five using the full sample (see online appendix). We will also use a linear spline with window 10,000 and augment the 25,000 linear spline with socioeconomic and provincial controls. In addition, we will report models that control as well for the percent seats won in 2003 and for the electoral system in 2003 in the corresponding municipality.

²⁵ When using instrumental variables, it is important to assess the strength of the instruments, as the instrumental variable estimator may be problematic in small samples when the instruments are weak. In our case, the instruments are quite strong, as only two municipalities below the threshold are in reality proportional while eight of those above the threshold are in reality majoritarian. The first stage regressions using our preferred specifications show a coefficient for the assignment variable close to 0.8, and an F statistic for the significance of the excluded instruments of more than 50, way above the rule-of-thumb value of 10 suggested by Stock *et al.* (2002).

²⁶ We cluster standard errors at the municipal level to account for the possibility of serial correlation within municipalities.

treatment status are not correlated with the error term, i.e., with the implicit support for the given type of party.²⁷

Because we believe that our RD identification strategy is more convincing than the one behind our fixed effects one, we focus primarily on the RD results. The important thing to note is that the identification assumptions behind each of the estimators are completely different and unrelated. Thus, we believe that results are considerably strengthened to the extent that the two sets of estimates agree.

5 Results

5.1 Regression Discontinuity Results

We consider first the results for 2003. Following the custom in studies using regression discontinuity (RD) designs, we present first graphical evidence of the relation between population and the average seats of the different types of parties around the threshold where the electoral system changes. Figure 2 presents such graphs for each type of party. The dots in the figure show the average seats of the respective type of party at intervals of 2,500 population windows. The lines correspond to the 5 degree polynomial fit with no spline. These are arguably the key figures in the paper. They show, for 2003, a strong and clear negative jump at the threshold for the clientelistic parties; a negative yet smaller and less clear jump for the parties “in-between”; and a strong and clear positive jump for the programmatic party.

The sizes of the effects are important. Clientelistic parties essentially halve their share of seats upon crossing the threshold of proportionality, from an

²⁷ It is not clear whether this assumption holds in practice or not. There are two types of potential violations. First, changes in treatment status, by the very structure of the data, are related to population growth. Stagnating towns are more likely to become majoritarian whereas fast growing towns are likely to become proportional. The features of a municipality that makes its population grow may be linked to the success of different types of party, hence generating bias in our estimate. Another potential source of bias is gerrymandering. Some (selected) municipalities may have been subject to redistricting precisely in order to prevent them from becoming proportional. There is nothing we can do to address the first type of bias. For the second type we will consider the intention-to-treat effect. We will rerun the analysis replacing the treatment variable T_{it} by assignment-to-treatment variable (the indicator of whether population is higher than the corresponding threshold). To the extent that our population data has not been manipulated for the elections, this approach will deal with the bias potentially induced by gerrymandering.

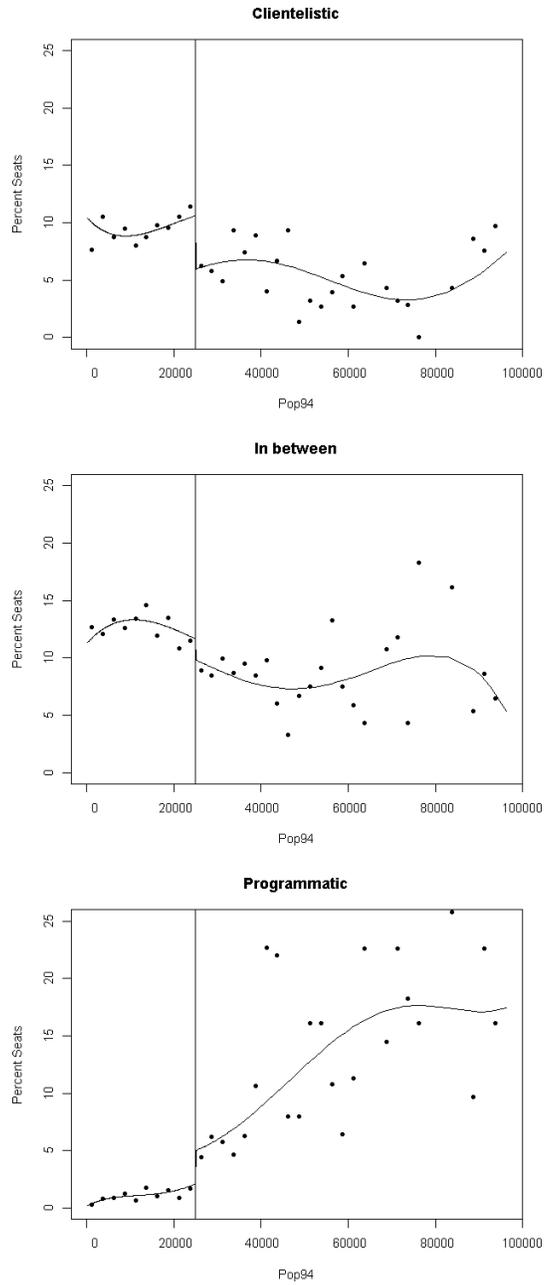


Figure 2. 2003 Discontinuity in seats for different types of party: Full sample.

Table 2. Discontinuity regressions for the 2003 elections.

Outcome vars	1	2	3	4	5
Clientelistic	-4.19 (1.59)	-5.48 (1.50)	-4.71 (2.81)	-5.89 (1.69)	-5.55 (1.75)
In between	-2.95 (1.60)	-2.97 (1.65)	-2.10 (2.59)	-2.58 (1.83)	-1.06 (1.99)
Programmatic	2.48 (1.32)	2.13 (1.41)	2.24 (2.00)	2.41 (1.38)	1.92 (1.46)
window	All	±15K	±5K	±15K	±15K
poly.order	5	1	1	1	1
spline		x	x	x	x
controls				Demogr	Provs
N.below	1383	581	64	581	581
N.above	88	54	29	54	54

Controls in columns 4 and 5 are a set of 29 municipal characteristics (see table on validity checks in the online appendix for a list) and a set of provincial dummies, respectively. N.below and N.above refer to the amount of observations above and below the threshold.

average of around 10% to around 5%. The programmatic party essentially doubles, moving up from a very small percentage (around 2%) to almost 5%.

Table 2 provides the estimates of the models specified above for 2003. All numbers refer to the estimate of γ , the treatment effect of interest, for the three different types of party under the different specifications. Columns 1, 2, and 3 show the specifications with different polynomials and windows around the threshold. The rest of the columns add different sets of controls to the linear specification with 15,000 window. The coefficients are roughly stable. For the clientelistic parties, the numbers are always negative, with values from -6 to -4 . For the programmatic party, the numbers are always positive, with values always around 2. For the parties “in between,” the coefficients are indeed in between, negative but typically less so than the clientelistic ones, with values between -3 and -1 .

For the clientelistic parties, the standard errors are reasonably low compared to the coefficient estimates: under most specifications, the coefficients are significant at a 1% level. For the programmatic party, p -values hover

around 0.1, so that coefficients are sometimes significant at a 10% level and sometimes not. However, and importantly, for both programmatic and clientelistic parties, the size of the coefficients remain similar even when samples are restricted to observations very close to the threshold (5,000 window). Also noticeable is the fact that coefficients barely change even when adding a set of around 30 demographic controls (such as literacy, occupational and age structure, etc.), or the full set of 59 provincial dummies (columns 4 and 5).

For 2009, the discontinuities are shown again graphically in Figure 3. Notice that since there is no perfect compliance in 2009, the pictures refer to the reduced form where the dependent variable is plotted directly against the instrument. On the basis of the estimates of the first stage provided above, the jumps observed in the pictures will be around four fifths of the true effect.

Qualitatively, however, the pictures are useful and the message they deliver is the same as for 2003: clientelistic parties lose and the programmatic party gains upon crossing the proportionality threshold; parties “in between” experience essentially no effect. An important difference with 2003 is the higher variability in the “dots,” particularly around the threshold. This is probably mainly due to the smaller sample sizes in 2009.²⁸ As we will presently see, this is reflected in less precise estimates below.

Table 3 shows the coefficient estimates of our different 2009 specifications (different polynomials and windows and different sets of controls). All numbers refer to the IV estimate of the effect of having a proportional system for each type of party in each specification. The estimates are relatively similar to those in 2003. Estimates range from -3 to -6 for the clientelistic parties. For the programmatic party they are somewhat larger and more variable, from 4 to 9. Notice, however, that the programmatic party obtained better results in 2009 so that, in relative terms, the coefficients reflect similar effects (i.e., the programmatic party doubles its share of seats upon crossing the threshold). For the parties in between coefficients are around zero, although they turn rather negative in the specifications with controls.

While the coefficients are similar to those in 2003, the standard errors are considerably larger, making the estimates imprecise and rarely statistically significant. P -values for the clientelistic parties hover around 0.1, so

²⁸ The measurement error of the population variable induced by the 2008 redistricting might compound the problem.

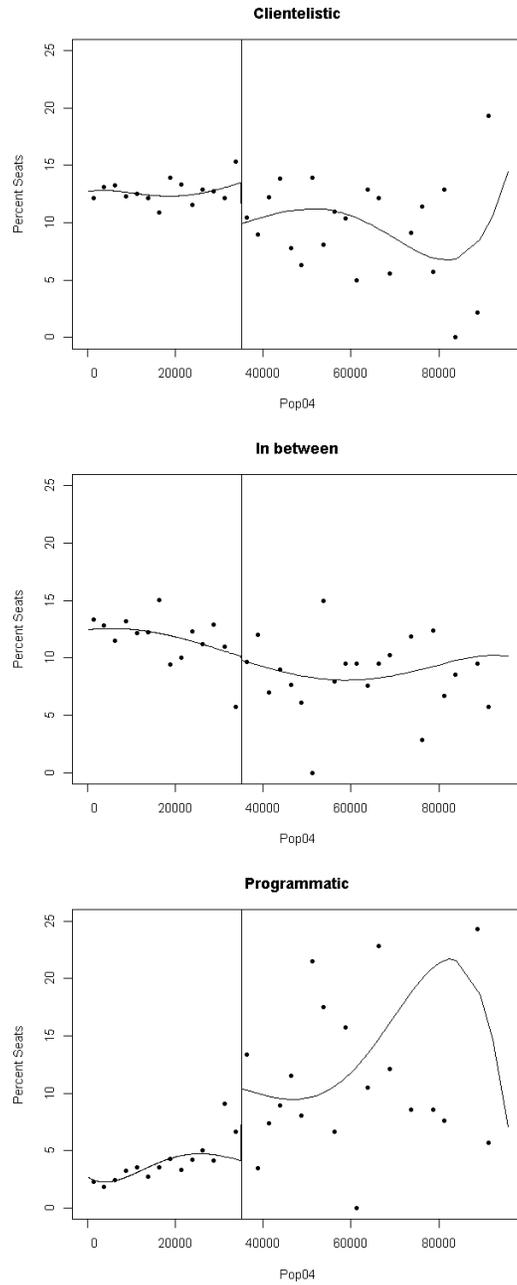


Figure 3. 2009 Discontinuity in seats for different types of party: Full sample.

Table 3. Discontinuity IV regressions for the 2009 elections.

Outcome vars	1	2	3	4	5	6	7	8
Clientelistic	-5.03 (2.84)	-3.51 (2.25)	-6.15 (4.26)	-3.54 (2.28)	-4.12 (2.42)	-3.42 (2.20)	-3.66 (2.35)	-4.38 (2.39)
In between	-0.01 (3.09)	-0.02 (2.48)	0.85 (4.53)	-0.33 (2.55)	-0.39 (2.85)	-0.28 (2.27)	-0.74 (2.66)	-1.70 (2.53)
Programmatic	8.40 (6.17)	5.30 (4.64)	9.17 (9.78)	5.92 (4.93)	4.27 (5.10)	3.83 (3.86)	5.98 (5.00)	5.74 (4.48)
window	All	±25K	±10K	±25K	±25K	±25K	±25K	±25K
poly.order	5	1	1	1	1	1	1	1
spline		x	x	x	x	x	x	x
controls				Demogr	Provs	PastSeats	PastES	D+PS+PES
N.below	1379	634	59	634	634	634	634	634
N.above	70	49	33	49	49	49	49	49

Controls in columns 6 to 8 are the percent of seats obtained by the respective type of party in the 2003 elections, an indicator of whether the electoral system was proportional in the 2003 elections, and the demographic, past electoral seats and past electoral system variables simultaneously, respectively.

that coefficients are sometimes significant at the 10% level and sometimes not. The coefficients for the programmatic party, in turn, are never significant, even at a 10% level. Again, the fact that coefficients remain quite stable across specifications is remarkable. For 2009, coefficients are not only robust to a small window (10,000), to demographic variables, and to provincial dummies. They are also robust to including as control past results of the corresponding type of party in the given municipality (column 6). This important variable is unsurprisingly always very significant in the regressions. We believe that the fact that coefficients are robust to the introduction of this control (i.e., that even accounting for past results that the parties had in 2003, results in 2009 jump upon crossing the threshold in the expected ways) gives a degree of confidence in our estimates. Moreover, coefficients remain robust also to the inclusion of the 2003 electoral system as control (column 7). This implies that the coefficients we observe for 2009 are not just a noisy reflection of the 2003 effects.

In order to probe further the statistical significance of our results, we perform tests of equality of coefficients estimating the equations for different types of party as a system of Seemingly Unrelated Regressions (SUR). Our

hypothesis holds that clientelistic parties ought to suffer from a proportional system relative to programmatic ones. Thus, strictly speaking, our hypothesis is *not* that effects should be different from zero for the two types of party. Rather, the hypothesis is that the coefficient for clientelistic parties should be smaller than that for the programmatic one. To ascertain whether the coefficients for the different types of party are different, we estimate our equations as a SUR system, which allows for the (realistic) possibility that unexplained electoral results across types of party are correlated (good results of a party will typically imply worse results for the others, see Tomz *et al.* (2002) for details). We estimate equations using our two preferred specifications, both with robust standard errors. The test results clearly reject that coefficients for the clientelistic and programmatic parties are the same in 2003 (p -values less than 0.001). For 2009, rejections are less clear although arguably sufficiently so: the linear spline with 25,000 window yields a p -value of 0.109 whereas the full sample specification yields a p -value of 0.069. Besides these, in-between parties cannot be distinguished from the other parties in 2009, although they do appear different than the programmatic in 2003 (p -values less than 0.021).²⁹

Our RD results provide quite strong evidence of a differential effect of proportional system on different types of party. In order to make sure that our results can be interpreted causally, we perform validity checks usual in RD studies. The details of these validity checks are in the online appendix. For our study, the most important concern is that population values around the threshold might have been manipulated for political reasons. However, this manipulation can be ruled out by the very fact that our population data predates the elections for so many years: it seems implausible that the 1994 population figures would have been manipulated with an eye toward the 2003 elections and similarly with the 2004 population data and the

²⁹ As an alternative avenue to test our key argument, we stack the results of all our selected parties together, and perform our usual regressions, but adding an indicator of each party's degree of clientelism and interacting this variable with the indicator of the electoral system. We code the clientelism variable as one for clientelistic parties, zero for in-between parties, and minus one for the programmatic party. The interaction term then captures how much bigger is the jump at the threshold for more clientelistic parties. The results of this regression are in Table A1 in the appendix. The table shows that, under all our usual specifications, clientelism reduces the size of the jump at the proportionality threshold by around 3 pp. In addition to being statistically significant, results are again remarkably similar across specifications and across the two years.

2009 elections. Actually, there may have been manipulation for the 2009 election via the 2008 redistricting, but by using the 2004 population data, our approach should be immune to it. We also find no concerning evidence of other covariates jumping at the threshold or of jumps of our outcome variables at other thresholds. Overall, there do not seem to be grounds for concern about the validity of the RD results.

It is worth emphasizing that the estimated effects in 2009 are as large as in 2003. This suggests that parties have indeed been unable or unwilling to adapt their linkage strategies to the requirements of the different electoral rules. No learning seems to have taken place between the two elections. In our conceptual framework, this implies that the programmatic party has not established a clientelistic network to succeed in the majoritarian system, and that the clientelistic parties have not been able to overcome their problems under PR — which it could have done either by successfully making clientelistic promises at the party as opposed to the individual level, or by proposing a credible platform.

5.2 *Fixed Effects Results*

Our second identification strategy is the use of fixed effects, exploiting the change in population threshold from 2003 to 2009, that made some towns change their electoral system “exogenously.” The results of the fixed effects estimation of Equation (2) are presented in Table 4. Column 1 shows the coefficient of having a proportional system, controlling for municipal and time fixed effects, for each type of party. The figures are broadly consistent with the RD results: Clientelistic parties *lose* 3.7 pp. of seats upon becoming proportional, whereas the programmatic party *gains* 2.4. The in between parties, are still in between, although with a negative coefficient close to that of the clientelistic parties. Notice that all coefficients are statistically significant (at the 10% level), even with only 36 observations where the electoral system changes.

As mentioned above, these estimates may be biased. Column 2 presents the intention-to-treat effects that deals with the potential gerrymandering bias, where the indicator of proportionality is replaced by the indicator of whether the municipality has population higher than the corresponding threshold. The results are virtually the same as those in column 1: electoral manipulation does not appear to be driving the results.

Table 4. Fixed effect regressions.

Outcome vars	1	2
Clientelistic	-3.75 (1.26)	-4.30 (1.41)
In between	-3.69 (1.32)	-3.54 (1.49)
Programmatic	2.40 (1.39)	3.69 (1.72)
N	1449	1449
N.varying	36	32

Standard errors clustered at the municipal level.
 N refers to the total amount of municipalities
 N.varying refers to the amount of municipalities
 that experience a change in electoral system from
 2003 to 2009.

Overall, even if the fixed effects results need to be taken with caution, they do provide evidence in support of our hypothesis in line with, and in addition to, the RD results presented above.

6 Discussion: Is it Really Clientelism?

Our empirical approach allows us to claim to have identified the causal effect of electoral rules on the share of seats obtained by a given party or set of parties. Even if the effects are not always statistically significant, we believe the combination of all pieces of evidence we provide make our estimates reasonably credible. Thus we feel quite confident that there is a differential effect of electoral rules on different party types. Moreover, on the basis of criteria relating to the historical legacy of Moroccan political parties (and supported by Political Accountability Project indicators), we can claim that our party groupings do differ in terms of clientelism. We thus interpret our results as saying that, according to our data, majoritarian systems (as opposed to proportional ones) benefit clientelistic parties and harm programmatic ones.

However, even if our estimates are credible and if the grouping of parties we make maps well into the clientelistic/programmatic dimension, it is important to notice that there could potentially be other interpretations for our results. In other words, how certain can we be that the differential effects we uncover are driven by clientelism? Our party grouping could correlate with other factors that for some reason generate heterogeneous treatment effects of the type we observe.

We consider first the potential role of party size. The literature on electoral rules and number of parties suggests that small parties suffer in majoritarian systems.³⁰ Our results could be driven by this, if party size were correlated with our party grouping. However, this is not the case for the type of municipalities that matter most for our analysis (i.e., those around the threshold). Measuring party size by the percent of seats obtained under PR, it is clear that the clientelistic and the programmatic parties actually have a relatively similar degree of support close to the threshold in both years (around 5% in 2003 and 10% in 2009, see Figures 2 and 3). Thus, the fact that clientelistic parties benefit when the system becomes majoritarian and the programmatic party suffers, cannot be attributed to the clientelistic parties being bigger.

A second important point is that the distinction between clientelistic vs. programmatic parties correlates perfectly with the distinction between regime vs. opposition parties in Morocco. Our results could thus be related to a number of differences between regime and opposition parties other than their degree of clientelism. Most straightforwardly, regime and opposition parties could differ in their ideology. For the Moroccan case, this appears unlikely because regime parties do not have a marked ideology and neither has the Moroccan regime itself.³¹ Still, regime and opposition parties differ in other, possibly relevant, ways. Regime parties have — for historical reasons — a much bigger penetration of the countryside than opposition parties. Moreover, by definition, they are also closer to the authoritarian incumbents. This implies that they benefit from regime support that may translate into valuable resources ranging from material resources to favorable reporting by state media during the elections. Although these differences are important for electoral results in general, it is much less likely that they actually drive

³⁰ See, among many others, Duverger 1954, Cox 1997 and Taagepera and Shugart 1989, 1993.

³¹ Recall that regime parties had the lowest scores of programmatic indicators in the Kitschelt *et al.* data.

our findings about the effect of electoral rules on the success of different party types. For this to be the case, these differences would need to either change at the relevant population threshold, or interact significantly with electoral rules. Regarding the threshold, as our validity checks suggest, there is no reason to believe that any relevant characteristic changes specifically at the population threshold of 25.000 (or 35.000) inhabitants.

Interactions of regime/opposition differences with electoral rules are conceivable, although we believe much less plausible drivers of our results than the clientelistic vs. programmatic distinction we propose. If the vote for a regime party did in fact imply a vote in support of the regime, the same support could be expressed in PR. In this case, we should see no differential effect of the electoral system. Differential effects could emerge if the higher resources and state support enjoyed by regime parties were more useful in a particular electoral system. First, electoral systems might differ in their informational requirements. From this perspective, the most plausible scenario is actually one where PR would require more resources than majoritarian systems, at least in a country like Morocco, where party labels are not well established. In such a setting, a PR system requires investment into the generation and dissemination of party labels and reputations whereas majoritarian systems can rely on pre-established personal reputations. If this were the case, better resourced (regime) parties would benefit from PR systems relative to opposition parties, contrary to what we find. Second, electoral systems might also differ in the type of linkage they encourage. From this perspective, majoritarian systems might require more resources to the extent that they are more prone to clientelism. This could explain our results on the basis that regime parties use their more abundant resources to establish better clientelistic linkages in majoritarian systems. Notice, however, that this story is very close to the one advanced in this paper, relying as it does crucially on the argument that majoritarian systems benefit clientelistic parties. The difference would be that, whereas in our conceptual framework programmaticness does play a role, here it does not: All parties would wish to be clientelistic, but only those close enough to the regime would manage to be so. For the Moroccan case, however, two arguments stand against this alternative explanation. First, as we have discussed above, some Moroccan parties have explicitly invested in programmatic linkages. Second, in Morocco, cooptation has long been a key strategy of the regime, so that any social actor willing to give up strong political stances may join

the regime's clientelistic network, a point well illustrated by the trajectory of the historical opposition parties.

We attempt to assess in a more thorough way whether our results are driven by clientelism by constructing an alternative measure of clientelism/programmatically for each party and relating this measure to the causal effect of PR on each party.³² The results are explained in the online appendix. Although these results are merely suggestive, they do indicate that parties that appear more programmatic according to our measure experience a more positive gain from a proportional system.

7 Concluding Remarks

In this paper, we argue that electoral rules matter for the success of clientelistic parties. We hypothesize that, when clientelistic parties are just collections of local notables, these parties are more successful in majoritarian systems than in proportional ones. In proportional systems with higher district magnitudes, voters are hardly pivotal in electing their local patron and so they have more incentives to vote for the programmatic ones.

We tackle the question empirically using two local elections in Morocco, in 2003 and 2009. Morocco is particularly well suited for studying the topic for two reasons. First, because its peculiar party history makes it very straightforward to distinguish clientelistic parties from programmatic ones. Second, and more importantly, because its electoral system is based on a population threshold that can be exploited to uncover causal effects, using a regression discontinuity design.

We find that electoral systems have a strong effect on the success of different parties. Clientelistic parties lose an average of around 4–5 pp. of seats upon crossing the proportionality threshold in both years. These effects are sizable in the Moroccan context, corresponding to the clientelist parties halving their seat share. We believe such differences can have strong implications for governance as well as for the evolution of inequality and development of

³² Our alternative measure of clientelism of a party is based on the well established idea that poor and illiterate people are more susceptible to clientelism. Therefore, clientelistic parties ought to obtain relatively more support in districts with high levels of illiteracy and poverty than in middle class districts, where programmatic parties ought to do better. Our measure of programmatically is then essentially the difference in electoral support in wealthier vs. poorer districts. While this is by no means a perfect measure of clientelism/programmatically, it serves as a useful robustness check as it is a measure unrelated to our qualitative classification.

different localities. To obtain evidence of these implications is left for further research. Still, we believe that the present paper provides a relevant piece for understanding the causal determinants of clientelism in particular and voting behavior in developing countries more generally.

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Appendix**Table A1.** Interaction between Clientelism and Proportional System.

	2003	2003	2003	2009	2009	2009
Clientelistic × Programmatic	−4.07 (0.61)	−2.08 (0.70)	−3.79 (1.07)	−4.38 (1.20)	−3.29 (1.41)	−2.60 (2.34)
window	All	±15K	±5K	All	±25K	±10K
poly.order	5	1	1	5	1	1
spline		x	x		x	x
N.below	1383	581	64	1379	634	59
N.above	88	54	29	70	49	33

Standard errors clustered at the municipality level.