Ideal and Real Party Positions in the 2015–2016 Spanish General Elections

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Abstract. In this paper, using data from the pre-electoral and post-electoral Spanish surveys conducted by the Centro de Investigaciones Sociológicas (CIS) in the 2015 and 2016 general elections and assuming that parties maximize votes, we use an iterative algorithm to derive the optimal party positions (as predicted by spatial competition models based on proximity and directional models of voting). These optimal policy positions constitute a Nash equilibria, in which no party can increase its vote share by changing unilaterally its policy position. Then we compare the actual ideological positions of Spanish parties (as perceived by all voters) to their ideological party positions. Our aims are to examine the predictive power of proximity and directional models in the two Spanish electoral processes, to explore the degree to which parties deviate from their ideal positions and to examine the evolution of party positions from December 2015 to June 2016.

Keywords: Spatial models of voting · Directional, proximity models
Party competition · Nash equilibrium

1 Introduction

This work deals with an application of decision making modeling in Political Science. We compare the actual ideological positions of Spanish parties (as perceived by all voters) to their ideal ideological party positions (as predicted by spatial competition models based on proximity and directional models of voting). We do that by analyzing the pre-electoral and post-electoral surveys conducted by the Centro de Investigaciones Sociológicas (CIS) in the 2015 and 2016 general elections (Survey numbers 3117, 3126, 3141 and 3145). Our analysis restricts the

sample to the respondents who voted for the main Spanish-wide parties: Partido Popular (PP), Partido Socialista Obrero Español (PSOE), Podemos (Ps), Ciudadanos (Cs) and Izquierda Unida (IU) in 2015, and PP, PSOE, Unidos Podemos (coalition of Podemos and Izquierda Unida, UPs) and Ciudadanos in 2016. Our work has several goals. In the first place, we examine the predictive power of proximity and directional models in these two Spanish electoral processes. In the second place, we intend to examine the degree to which parties deviate from their ideal positions. This analysis can pave the way for future work on the ideological, organizational and strategic   factors conditioning theoretically non-vote maximizing positions. Finally, our work allows us to examine the evolution of party positions from December 2015 to June 2016.

For this analysis we follow the unified model of party competition in [1] to predict ideal party positions in the sense of Nash equilibrium. We use their unified model of voting, but we consider both spatial proximity and directional voting [11]. In Nash equilibrium, parties adopt ideological positions from which none of the vote-maximizing parties has incentives to deviate [1] if the others remain at their positions. That is, in such situations, no party would improve its electoral share by unilaterally modifying its position. We consider in our analysis both ideology and non-policy characteristics and attitudes (including here party identification). We first estimate conditional logit models for each survey using proximity and directional models, and then, following [1], we calculate the Nash equilibrium for party positions using the estimated parameters. We derive Nash equilibrium by using the iterative algorithm developed by [8], as implemented in the nopp R package (Nash Optimal Party Positions) that has been developed by [6]. The original package only deals with the proximity model, therefore we have developed a new R-project to implement the directional model.

The results of our analysis can be compared to those obtained on other cases by [1,5,9]. [10] has contributed a spatial analysis of voting in Spain that includes both proximity and directional models. However, whereas [10] focused on the receptivity of Spanish voters to positions that are distant from the status quo, a goal for which both proximity and directional models are used and tested in his work, our paper uses the unified proximity model of party competition in order to predict optimal policy positions. For that reason, although our interests and findings partially overlap with those of [10], our analytical approach and focus diverge from the ones he developed.

Our findings confirm the importance of ideological voting and the stability of party ideological positions. They also reveal the well-established centripetal bias of spatial models. This bias is particularly intense in the cases of Podemos, Ciudadanos, and, to a much larger extent, the PP, a fact that is entirely consistent with the findings in [10] about the importance of directional considerations among the PP voters. This result suggests the need to refine our analytical tools, test new models of party competition, and deepen our understanding of the organizational, strategic, and ideological factors conditioning the ideological positions of political parties.

The paper is organised as follows. In Sect. 2 we analyse the real positions of the Spanish political parties (as perceived by all the voters) and predict their optimal ideological positions in the sense of Nash equilibrium. We finish with some concluding remarks in Sect. 3.

2   Real and Optimal Ideological Positions

The first step in our analysis consists in the prediction of vote-choices through a conditional logit model. We use the Survey numbers 3117, 3126, 3141 and 3145[1] conducted by Centro de Investigaciones Sociológicas (CIS) in the 2015 and 2016 general elections. We have restricted our analysis to Spanish-wide parties, and have left out of the analysis voters for subnational parties, on the grounds that just voters from specific territories had the possibility to vote for them[2].

The conditional logit model of vote choice assumes that voter is probability of voting for party j is given by

$$P_i(j) = \frac{\exp(U_i(j))}{\sum_{l=1}^{n} \exp(U_i(l))} \tag{1}$$

where n stands for the number of political parties.

The conditional logit model can not determine absolute utility. The utility for an individual must be specified with respect to a base value. We have chosen PP, the government party, as the reference value.

The normalized utility is given by $U_i(j) - U_i(1)$, where 1 stands for the reference level, and $j = 2, \ldots, n$.

Our conditional logit model is the unified model of voting of party competition (see [1]).

The utility of voter i for voting party j, $U_i(j)$, is given by

$$U_i(j) = \alpha V_{ij} + \beta p_{ij} + \sum_{k=1}^{4} \gamma_{jk} Z_{ik} + \epsilon_{ij} \tag{2}$$

where ϵ_{ij} have standard Type 1 extreme value distributions.

We conduct models using both ideological proximity (quadratic proximity utility given by the negative of the squared distance between the voters and the partys location in the left-right dimension, scale 1 to 10) and directional (product of the difference between the respondent's position and the status quo by the difference between the mean party position and the status quo).

The variables in model (2) can be grouped into two types:

– Alternative specific variables, which vary with alternative, V_{ij} and p_{ij}, where p_{ij} equals to 1 if i identifies with party j and 0 elsewhere and V_{ij} has different expressions depending on the model we are working with.

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[1] Survey numbers 3117 and 3141 are included in a two stage panel data study (panel 7715).

[2] We have considered as voters of Podemos respondents who voted for the alliances in which Podemos participated in Cataluña, Galicia and Valencia.

Proximity model:

$$V_{ij} = -(x_i - s_j)^2 \tag{3}$$

Directional model:

$$V_{ij} = (x_i - sq)(s_j - sq) \tag{4}$$

(x_i stands for i's location, s_j for j's location (mean party positions) and sq for the neutral point –status quo–.

– Individual specific variables which do not vary with alternative, Z_{ik}. Table 1 reports these variables in our analysis (k from 1 to 4).

Table 1. Individual specific variables in the model.

Variable	Description
Z_{i1}	Sex of voter i
Z_{i2}	Age of voter i
Z_{i3}	Education of voter i
Z_{i4}	Evaluation of government performance of voter i

We follow the existing literature and use individually perceived party positions in both models. As status quo, we take the center of the policy space. Both directional and proximity models include non-ideological variables as predictors of vote choices. Our dependent variable is vote intention for the pre-electoral surveys and vote choices as reported by the respondents for the post-electoral surveys. As [1] have shown, parties have incentives to present policies distant from the center in the direction of voters leaning towards them for non-policy reasons. Party identification is a critical variable in this respect. In addition to party identification we use cultural and territorial identifications as measured by the Linz-Moreno question[3], evaluations of the current economic situation, and controls for education, gender, and age. Full statistical results for these models are available on demand. As expected, ideological variables (based on proximity or direction) and partisanship carry the bulk of the models explanatory power. We report in Table 2 the number of voters selected and in Table 3 ideological and party identification impact coefficients in these models. The vote shares for the surveys are given in Table 4.

Our analyses show that the coefficients for ideology are larger in the post-electoral than in pre-electoral surveys (very considerably so in the case of directional models). They also show, interestingly, that directional and proximity

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[3] Based on the Linz-Moreno question, the standard CIS question on the balance of Spanish and regional identities, which asks people if they feel only Spanish; more Spanish than from their autonomous community; both Spanish and from their autonomous community; more from their autonomous community than Spanish; only from their autonomous community.

Table 2. Number of voters selected.

	Pre-electoral 2015	Post-electoral 2015	Pre-electoral 2016	Post-electoral 2016
Survey number	3117	3126	3141	3145
Number of selected voters	8479	2241	8562	1870

Table 3. Ideological and party identification coefficients in conditional logistic models (all coefficients are significant at the 0.001 level).

	Pre-electoral 2015	Post-electoral 2015	Pre-electoral 2016	Post-electoral 2016
Survey number	3117	3126	3141	3145
Number of selected voters	8479	2241	8562	1870
Ideology				
Proximity model	0.08	0.10	0.08	0.12
Directional model	0.10	0.20	0.15	0.23
Party Id				
Proximity model	3.19	4.47	3.49	4.44
Directional model	3.36	4.5	3.46	4.46

coefficients have become larger in 2016 (if we compare pairwise pre-electoral and post-electoral surveys of 2015 and 2016 elections). The only coefficient that remains identical is the proximity indicator in the 2015 and 2016 pre-electoral models. Party id coefficients are also larger in post-electoral surveys. They have become larger from 2015 to 2016 in the proximity models, but they have remained almost identical in directional models. In general, our data reveal that from 2015 to 2016 a trend towards the intensification of the effects of ideological orientations took place, and that party identifications either increased their effects (in proximity models) or remained stable (in directional models).

Table 4. Vote shares.

	Pre-electoral 2015	Post-electoral 2015	Pre-electoral 2016	Post-electoral 2016
PP	31.2%	31.1%	32.6%	30%
Cs	20.1%	10.3%	14.6%	7.6%
PSOE	27.3%	29.5%	26.5%	31.8%
Ps	16.5%	22.9%	-	-
IU	4.9%	6.2%	-	-
UPs	-	-	26.3%	30.6%

Based on the coefficients estimated by our conditional logit model we have inferred the Nash equilibria of party ideological positions. This equilibrium leads a system involving different participants to a stable state, in which none of them can gain by a unilateral change of strategy (position), if the strategies of the others do not change. We refer to the positions given by the Nash equilibrium (NE) as ideal –or optimal– positions. To compute it, we implement the iterative algorithm developed by [8]. Assuming that parties maximize vote-shares, in each step of the algorithm each partys position is shifted to its vote-maximizing position holding the other parties positions constant. This leads to a new vector of party positions and eventually converges to a unique NE.

We compare then those ideal positions to the actual positions of political parties as perceived by all voters in the sample. But before showing the results of this analysis it must be taken into consideration that the perceptions of voters on party positions have remained extremely stable. As Table 5 shows, the Pearson correlation coefficients between the average perceptions of party positions are never lower than +0.99.

Table 5. Ideological and party id coefficients in conditional logistic models (all coefficients are significant at the 0.001 level).

	Pre-electoral 2015	Post-electoral 2015	Pre-electoral 2016	Post-electoral 2016
Pre-electoral 2015	1			
Post-electoral 2015	0.999	1		
Pre-electoral 2016	0.999	0.998	1	
Post-electoral 2016	0.998	0.992	0.999	1

Figures 1, 2, 3 and 4 display the real and ideal positions (as estimated by both proximity and directional models) for each of these surveys. As it is the case in similar analyses [5,9], ideal positions have a strong centripetal bias. The magnitude of this centripetal bias can be better grasped by examining the spread between extreme parties in actual and ideal positions. Whereas actual distances are never lower than 6 points, distances between ideal positions are always lower than 2 points. Directional models perform better in this respect in the 2015 surveys. They are also always better at predicting the positions of the PP. However, in terms of general spread, in 2016 there is almost no difference between the predictions derived from directional and proximity models. Also interestingly, although the number of players moved from 5 in 2015 to 4 in 2016, the spread of actual ideological did not diminish but in fact slightly increased. Also in this case, parties (at least in the perception of citizens) chose to intensify their ideological messages in the face of second general electoral contest in a short time span.

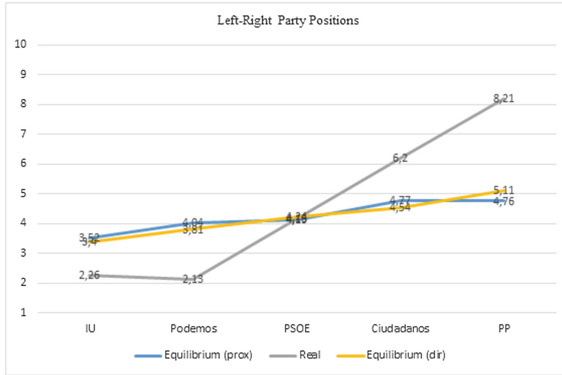Table 6 below reports the ideological spread given by the respondents and estimated by both models.

Fig. 1. Ideal and actual party positions (2015 pre-electoral survey).
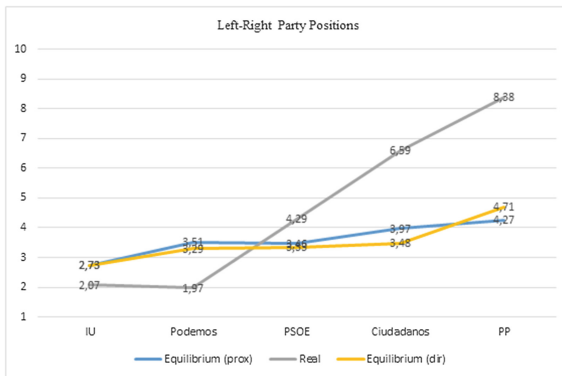

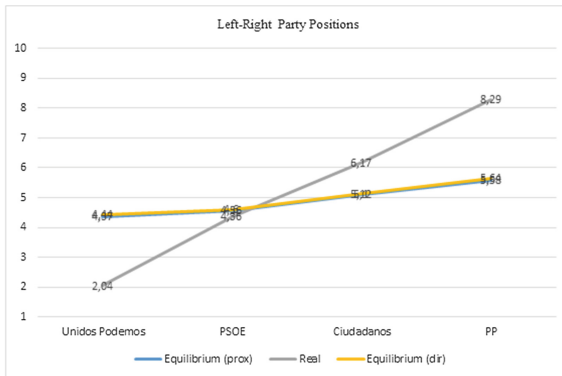**Fig. 2.** Ideal and actual party positions (2015 post-electoral survey).

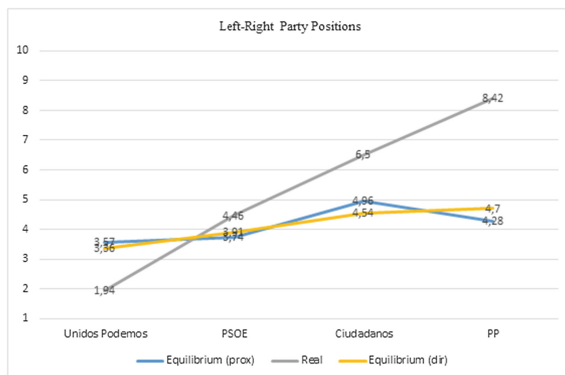**Fig. 3.** Ideal and actual party positions (2016 pre-electoral survey).

Fig. 4. Ideal and actual party positions (2016 post-electoral survey).

Table 6. Actual and predicted ideological spread.

	Pre-electoral 2015	Post-electoral 2015	Pre-electoral 2016	Post-electoral 2016
Ideological spread				
Actual	6.08	6.41	6.25	6.48
Proximity model	1.25	1.54	1.21	1.39
Directional model	1.71	1.98	1.2	1.34

Figures 1, 2, 3 and 4 show that the highest deviations from ideal positions are to be found, quite consistently, in the PP. But they tend to be high also in the case of Ciudadanos, and they are particularly high in the case of Unidos Podemos in 2016. Table 7 reports the average values for actual and ideal positions in the directional model[4], which is the one that tends to do better at predicting the

Table 7. Average actual (as perceived by all voters) and ideal party positions (directional model).

	Actual	Ideal	Average distance
PP	8.33	5.04	3.29
Cs	6.37	4.42	1.95
PSOE	4.32	4.02	0.30
Ps	2.02	3.73	1.71
IU	2.17	3.07	0.9

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[4] IU averages are based on just the 2015 values. Podemos values are based on its values in 2015 and the values of Unidos Podemos in 2016. This decision was based on the relative electoral size of Podemos and IU in the 2016 Unidos Podemos coalition.

positions of the PP and also ideological spread. This table provides us thus with a more systematic information on party deviations from ideal positions. It shows that average deviations are strikingly high for the PP and also important in the cases of Ciudadanos and Podemos. The graphs show as well some instances of ideological leapfrogging in the ideal positions predicted for Ciudadanos and IU. In general, as [1], ideological leapfrogging makes more sense for small parties. As shown by adopting more extreme positions than their competitors, IU and Ciudadanos can avoid being squeezed by Podemos and the PP respectively. In the case of IU that shift is more realist, given the fact that its actual position was already very close to that of Podemos. That is, these three parties, and in particular the PP, should adopt much more centrist positions according to these models. The distinctive, extreme actual position of the PP is clearly consistent with the findings in [10] about the prevalence of directional over proximity components in the voting for the PP[5].

3   Concluding Remarks

We can draw several main inferences from our analysis. The first one refers to the powerful explanatory role of ideological voting in the Spanish party system. Ideological coefficients (in proximity or directional models) carry the bulk of explanatory power in vote-choice models in Spain. The second one concerns the stability of actual ideological positions in the 2015–2016 period in Spain, despite the complexity of the institutional scenario from 2015 to 2016 and in spite of the presence of significant differences in the party offer in this period (from 5 to 4 national parties due to the electoral coalition between IU and Podemos). Our contrast of ideal and actual ideological positions reveals also the strong centripetal bias of the ideal positions estimated through both proximity and directional models. This bias is strong in the cases of Ciudadanos, Unidos Podemos and, in particular, the PP. The extreme position of the PP is consistent with the strength of directional components for PP voters in the analysis in [10]. At least part of this bias could be accounted for by the role played by discount factors in party system competition and voting decisions. Now, this explanation leaves us with new unanswered questions. In the first place, since the PP government enjoyed an absolute majority in the Spanish parliament from 2011 to 2015, we can only assume that the status quo will be much closer to the preferences of this party than to those of left and center-left parties. And in the second place, even if discount factors are generally strong and PP voters are strongly directional, the question remains as to why the PP does not shift to more centrist positions in order to improve its electoral results.

Different tentative answers can be advanced as to the reasons of the PP positions. Following [9] we could speculate on the interdependence of valence considerations and ideological positions: by moving to the center the PP party

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[5] The prevalence of directional voting among rightist voters has been also identified by [3] in several Latin American party systems.

could lose general credibility among voters (and not only among its conservative sympathizers). Still, the association of strongly conservative positions and credibility already depends on a continuous reassertion of very rightist positions. In contrast to policy switches, slow-paced and incremental ideological changes are not incompatible with maintaining general credibility, even if such moves displease very extreme or very ideologically committed voters.

Perhaps more importantly, the adoption of extreme positions may result from the preferences of intensive policy-demanders [4] among both core party constituents and social groups and civil actors endorsing the party. Internally, the fact that the PP is a strongly hierarchical and centralized organization should favor strategic maneuverability. However, this does not preclude the possibility that ideological shifts are penalized by core constituents and social actors with strong conservative leanings. Furthermore, to the extent that party leaders fear new party entries in the right side of the political spectrum (a realistic development that has already taken place in many other European countries), they may feel strongly compelled to adopt staunch conservative platforms, even if they risk leading the party, at least in the short term, to suboptimal electoral results.

Future developments of this work will demand testing the unified discount model of party competition. As it has been shown by previous analyses [1,9], this model can render more realistic predictions than proximity and directional models. Given data availability, our analyses will also have to assess the influence of new dimensions of political competition not mapped by the CIS survey we used for this work. This is particularly the case of populist attitudes, whose influence on voting decisions in Spain has already been established, from different perspectives, by [2] and by [7].

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