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Candidate geolocation and voter choice in the 2013 English County Council elections

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Abstract

The degree of 'localness' of candidates, including their residential location, has long been theorised to influence voters at election time. Individual-level tests of distance effects in the 2010 British general elections demonstrated that, controlling for standard explanations of vote, the distance from a voter's home to that of the candidate was negatively associated with the likelihood of voting for that candidate. To test this theory in a sub-national electoral context more likely to produce distance effects than a national election, this paper builds upon previous analysis by using the 2013 English County Council elections. It improves upon the previous analysis in a number of ways, analysing an election where 'localness' effects would be expected to be stronger; combining a bespoke YouGov survey of voters with more precise locational data; including United Kingdom Independent Party candidates in its specification; and considering more closely how voters construe distance. It finds that distance does matter, not only as a linear measure but also in terms of candidates living in the same or different electoral division to voters. Finally, the paper simulates the effect of distance on candidate performances in this type of election to measure its real-world strength.

Keywords

Voter choice, candidate location, local elections, UK

Introduction

A growing literature has examined the effect that candidate profiles have on voter choice (e.g. Campbell and Cowley, 2013; Fisher et al., 2014; Johns and Shephard, 2008; Johnson and Rosenblatt, 2007). Candidate demographics have been demonstrated to alter voters' perceptions of such traits as competence and trustworthiness, and thereby the likelihood of vote. Similarly, candidates' origins and residential location have been shown to influence vote once traditional determinants have been controlled for (Arzheimer and Evans, 2012; Gorecki and Marsh, 2012, 2014). Most of this recent work examined national elections. However, older research into voter geography often focused on local elections (Cox, 1968; Johnston, 1973; Rice and Macht, 1987), and there are good reasons for expecting that 'distance effects' – voters assessing competing candidates in terms of their geographical proximity – should be stronger at the local level. Building on the model developed for an analysis of distance effects in the 2010 General Election in England, this paper tests the hypothesis that, other things being equal, voters in the 2013 local elections for English County Councils will have preferred candidates who live closer to them.

Why voter distance should matter locally

Previous research into the effect of localism on voting suggests that such influences would be more likely at the local than at the national level. For example, Johnston's New Zealand study (1973) speculated that effects found in the 1968 Christchurch City Council election would be less likely to occur at the national level, where party loyalty should exercise greater effect. Many US studies of proximity on vote have looked at sub-national elections, such as gubernatorial races (Gimpel et al., 2008). Work on presidential elections has focused more on the 'home-state advantage' hypothesis, and its applicability to different territorial aggregations (Garand, 1988; Lewis-Beck and Rice, 1983). In the British case, qualitative evidence indicates that voters want local Members of Parliament (MPs),

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perhaps above all else, and parties are aware of this (Campbell and Cowley, 2013; Evans, 2012), but there has been no test of the extent to which distance or localness plays a role in local elections.

Many of the theoretical arguments extended for both national and local elections do point to the latter's greater relevance. Firstly, local election candidates may be expected to have a stronger vested interest in the whole area that they are representing. For a British Parliamentary candidate, the area represented, that is, the constituency, is often territorially sizeable – an average of 37,000 hectares.[1] Voters may expect that a representative living in that constituency will be more likely to represent its interests in a more capable fashion, given accessibility, but the candidate is less likely to be perceived as being implanted in a single community. In a County Council electoral division (ED) with a much smaller territorial size – on average, just over 5000 hectares – the notion of a council representative rooted in a single community has greater credibility.

Secondly, in the British case, the political context of representing a smaller ED provides a clearer logical connection between voter expectations and candidate interests than at the constituency level. Whilst MPs will spend a significant proportion of their time working on national policy issues in Westminster, local councillors will spend the majority of their time in their locality, working on issues relevant only to the local authority area. Furthermore, the possibility of contact between councillor and voter is greater – and, as Norman et al. (2007: 59) note, the reform of local councillors' roles in the Local Government Act 2000 has underlined the importance of that councillor–electorate linkage. Thirdly, then, the 'personal vote' theory is highly relevant to local elections. Direct evidence of retrospective delivery of benefit to the community, or prospective perception, of a candidate's capacity to deliver will count in his or her favour. The 'constituency attentiveness' found in general election constituencies (Cain et al., 1984: 115) should transfer to the local election division.

Finally, whatever the link between voter and councillor or council candidate, the distance hypothesis can only hold if voters are aware of candidate location. In the General Election test, the candidate's home address on the ballot papers means this information is available, but the assumption that voters can parse the location other than to realise whether it is in their direct locale or not is a large one. Nonetheless, we found evidence that voters are indeed including the notion of distance in their vote calculus (Arzheimer and Evans, 2012). This assumption is much less heroic at the local level, involving smaller and more familiar districts for a voter.

Of course, given the much-reduced distances of local election candidates' residences from any voter in the ED, a counter-hypothesis would be that relative distance becomes irrelevant – any candidate is likely to be deemed 'local'. Compared with General Elections, the qualification criteria for local councillor candidates in England and Wales are far more stringent, requiring candidates to be resident in or working in the local authority area in which they wish to stand for 12 months previously.[2] Nevertheless, the residency requirements are for the *local authority area* – the county, rather than the ED itself. The bounds of variation in distance are therefore sufficiently large to allow a distance effect to manifest itself. In the County Council case, areas within EDs will be familiar to voters, and potentially divisive. Our expectation, then, is that voters are aware of their local environment, and will assume better representation from a candidate based closer to or in that local environment, than from a candidate in an adjoining ED or further afield, other things being equal.

Refining distance analysis in voting

Our analysis of the 2010 General Elections in England provided a first step to understanding the relationship between voter–candidate distance and party choice at the individual level (Arzheimer and Evans, 2012). Controlling for political preference, incumbency and socio-economic context, we found that the distance between voter and candidate residence did matter. Substantively, the effect was small but significant. Using the parameter estimates from the conditional logit model in a simulation of candidate residence locations, we estimated that a much more distant location for a candidate would cost her between nine per cent (for a Labour candidate) and 16 per cent (for a Tory candidate).

It is important to look for evidence of this effect in a different electoral context. Furthermore, the County Council elections of 2013 allow us to improve upon our General Election test in a number of ways. Firstly, in order to provide a consistent choice-set across the country, we only previously included candidates from the three main parties that fielded candidates in all English constituencies. Arguably, the United Kingdom Independent Party (UKIP), a right-wing Eurosceptic party that had finished second in the 2009 European election, had established itself as a national challenger in the 2010 General Election, fielding candidates in 558 constituencies. The saliency of the UKIP campaign on immigration controls, fighting crime and anti-social behaviour, as well as its continued anti-European rhetoric, consolidated its challenge to the Conservative Party in the County Council elections, winning it 147 council seats, underlining the need to include it as part of the consistent choice-set in 2013. This does omit a number of EDs where three-party competition – generally an absent Liberal Democrat or UKIP candidate, but also a number with Labour missing – is the norm. We would need to test separate models to confirm that the role of distance is not dependent upon party supply.

A second constraint was the withholding of residential addresses by a minority of Parliamentary candidates, invoking the statutory change to the Electoral Law (*Political*

Parties and Elections Bill, SN/PC/05004).[3] For the County Council elections, there has been no such relaxation of the electoral law – candidates are required to provide their home address, which is published on the Statement of Persons Nominated (SoPN) and on the ballot paper.

Thirdly, we were unable to identify the precise location of voter residence using the British Election study. Only the first cluster of identifiers (the 'Outward Code') was available from the postcode, which denotes a relatively large area. The smallest locational unit included was the respondent's electoral ward. Consequently, we used the ward centroid – the centre of gravity for any geographical polygon – as the best estimate of their home address. Inevitably this solution introduces error into the estimation but, with no reason to suspect any pattern to the distance between centroid and latent home address of voters, this error should be noise, and not therefore bias our estimates. In the County Council elections, the survey used to tap relevant voter information, which we discuss in more detail in the data section below, did include the full postcode for each respondent. Under strict conditions of anonymity and embargo, then, we were able to use this postcode together with the candidate postcodes to identify the exact distance between the two.[4]

Fourthly, UK General Elections are prey to the phenomenon of candidates renting accommodation in constituencies for the duration of the election, and providing this as their home address. The location or extent of this practice is unclear, but where present this might influence a voter's perception of distance, if they are aware of the nature of the location, that is, a rented property rather than 'true' residence. In County Council elections, residency requirements of at least a year mean that council candidates are unable to move into the area simply for the short term, and the likelihood of them renting for a sufficient period simply for political reasons, at this level of governance, is very small. We can therefore be certain of the validity of the address as long-term residence.

The final improvement we would note relates to the notion of localness, in terms of understanding its properties. The counties form an auspicious geographical unit on which to test this. While driving distance formed a useful first proof of a stable distance effect in the General Election, it is not the only measurement of distance that might matter in voting. Firstly, distance in terms of where voters and candidates live might usefully be conceptualised in terms of a dyadic 'local or not' perception, based upon some notion of geographical locality. In the General Election, the importance of the driving distance tested with a fractional polynomial suggests that the relationship was not a blunt 'either/or'. However, from a territorial point of view, constituencies are relatively large areas, and to hypothesise that voters would regard presence or absence from the constituency by a candidate as the crucial distinction seemed arbitrary. Moreover, empirically, such a distinction would be clearest to voters in constituencies where candidates withheld their addresses, and instead gave their constituency of residence. By definition such voters were not in our analytical sample. For voters in constituencies where all three candidates gave their addresses, only candidates' postal address is given, thereby relying on voters to be aware of proximity and constituency location.

For County Council elections, however, the EDs are much smaller units, and as we have noted a candidate for this ED is required to have a formal presence in the local authority area. We assume that voters will be more aware of local addresses and geography, and therefore have a greater sense of whether addresses are inside or outside their ED. The extent and precision of this knowledge is unclear, however. Consequently, in the new model, we test the explanatory potential of three measurements as follows.

- Home division: does the candidate live in the ED they are contesting or not?
- Contiguity: does the candidate live in the ED they are contesting, a neighbouring ED or a non-contiguous ED?
- Distance: the Euclidean distance between voter and candidate residences.[5]

Data and method

Multiple data sources were used to provide the requisite information for this analysis. Information on voters, including residential postcode, voting behaviour at the County Council elections and party thermometer scores to measure party support were collected piggybacking on 10 waves of YouGov's daily polling survey to its regular internet panel between 4 and 26 March 2013. From an initial sample of 17,194 covering Britain, an analytical sample of 1,354 was obtained after removing individuals in any authority other than non-metropolitan counties, voters in redistricted EDs, which prevented the inclusion of an incumbency control, non-voters, voters for minor parties or independent candidates, and voters living in EDs with either one or more of the four main parties missing, or more than one seat up for election.[6] The surveys were carried out before the beginning of the official campaign in order to minimise campaign conditioning of the party thermometer scores, and then immediately after the election on 2 May to record actual vote. Candidate information was collected during the two weeks preceding the elections from the relevant local government websites, where the SoPNs were posted as part of the Notice of Poll. Incumbency information was collected after the election through the same websites.

The ED and county locations of voters and candidates were mapped using the Ordnance Survey Boundary-Line™ vector shapefile and the Code-Point® point dataset,

which provides eastings and northings for all UK postcodes. Each voter living in an ED with a council seat contested by candidates from the four principal parties was then linked to the relevant candidates, and the distance between them calculated using a simple Euclidean calculation from eastings and northings for the straight-line distance.[7] The maptools and spdep GIS packages in R were used to calculate the home division dummy and contiguity categorical measures.

The choropleth map in Figure 1 identifies the 626 EDs in 20 non-metropolitan counties across which the sample of voters is distributed, and the number of voters per ED.

Table 1 shows the distribution of candidates by residence, using the contiguity coding, in these 626 EDs.

Table 1 illustrates higher levels of local candidates amongst Conservatives and Liberal Democrats – above 86 per cent in both cases – with UKIP almost 10 per cent lower, as a newer party recruiting a candidate base.

The conditional logit model itself is a discrete choice model that is a variant of multinomial logistic regression. The conditional logit model allows for the inclusion of so-called 'alternative-specific' variables that test their effect on a set of choices each respondent must pick between. There are as many observations per individual respondent as there are valid alternatives – in this case, four. In our model, controlling for standard explanations of vote such as party incumbency and party feeling (a 0–10 thermometer score for each of the parties by respondent, acting as an instrument to pick up their normal vote), we test the independent effect of distance on vote for one of the four party choices.[8]

Analysis

Table 2 presents the different specifications of the distance model.

Model 0 is an empty model simply controlling for party. As compared with the baseline Labour party, Conservatives and UKIP enjoy a higher likelihood of support, while the Liberal Democrats hold a deficit, reflecting both the overall outcome of the Council elections, and expectations of support in non-metropolitan counties. In Model 1, the inclusion of the incumbent and party feeling thermometers washes out the party effects, most notably in the case of the Conservatives, who were incumbent in more than half of the EDs in the sample (see Tables 3). Straight-line distance follows the expected direction, with greater distance resulting in lower likelihood of vote. Similarly, the home-division measure sees greater support for candidates standing in their own ED. However, there is no evidence of a significant contiguity effect – whilst there is a significant difference between home and non-contiguous EDs, this difference is no greater than that with a neighbouring ED. Voters are concerned by the location of a candidate *outside* the ED, but not *where* outside. As the Bayesian Information Criterion (BIC) demonstrates, this measure of distance results in the least powerful model of the three.

Conditional logit coefficients give a sense of the effect of variables, but do not lend themselves easily to real-world implications of distance. Tables 3 and 4 provide a simulation of the effects of distance and of home ED residence, respectively, on each of the parties' candidates, and how different scenarios play out in terms of voting support. The first three lines give (1) the average observed score on the party thermometers; (2) either the average distance from candidate to voter (Table 3) or the proportion of candidates living in their contested ED (Table 4); and (3) the proportion of incumbent candidates. The 'Real' line gives the expected probabilities of vote for the four parties. In both tables, the Conservative and Liberal Democrat scores are very close to the observed values. The Labour score is somewhat under the observed vote, presumably because of low incumbency in council seats. Conversely, the UKIP score is much higher than observed, given the higher average party feeling score. An even higher expected score is dampened by the higher average distance that UKIP candidates live from voters.

Turning to the simulations using straight-line distance, relatively small shifts in distance produce notable changes in the vote share. For scenario 1, all candidates are assumed to live at 5.1 km (the average observed distance across all candidates and voters) from the voter. The vote distributions change very little, with the only climb in vote share being for the UKIP candidates, again who on average live further away than their mainstream party counterparts. Scenarios 2–5 then keep all but one candidate at 5.1 km, in turn moving one candidate to 20 km away (the candidate moved to 20 km is denoted in bold text).

In interpreting the distance effects, we must bear in mind that the main effects logit model constrains the effect of distance to be the same across all parties – the observed differences are due to the differing baseline probabilities for each party.[9] Consequently, in this election, the largest losers from distant candidates are the Conservatives, with an eight per cent loss – and UKIP benefits slightly more from this loss than the other parties do. For UKIP, the move to 20 km results in a similarly large loss. Labour and the Liberal Democrats, starting from a lower electoral score, lose less in real terms from a non-local candidate. Probably the most striking finding is that distance can reduce UKIP support to the same level as the Liberal Democrats support. The geographical structure of competition would be sufficient to prevent the Liberal Democrats from being pushed down the party rankings into fourth place in the popular vote, as occurred in 2013 for this sample. The home ED simulations in Table 4 show similar, although less pronounced relative shifts, with a Conservative candidate outside the ED losing around five per cent when pitched against other home ED candidates.

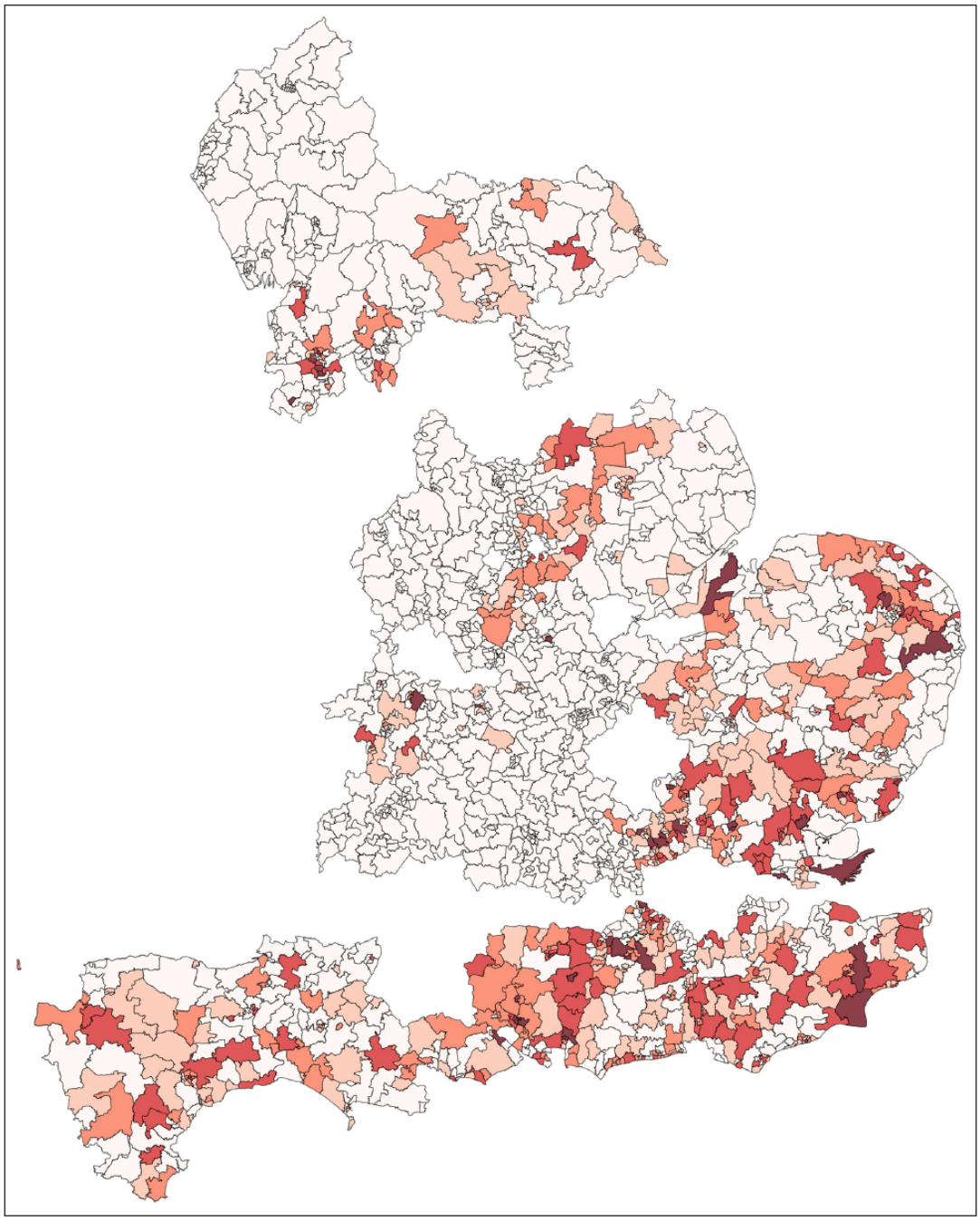

Figure 1. Sampled non-metropolitan counties with number of voters per electoral division.
Note: light areas = not sampled; darker areas = larger number of voters (up to nine).

Conclusion

Distance matters for County Council elections. There is evidence that voters view representatives at the local level in terms of whether they are 'from here' or 'from elsewhere'. However, the notion of distance goes beyond that – the further away candidates are, the less appealing they are to voters, other things being equal. Voters do not appear to be distinguishing between neighbouring EDs and those that are non-contiguous – indeed, depending on the EDs in question, a neighbouring Division may be further away than some non-contiguous counterparts. Instead, rising distance matters whatever the location. Given the small size of County Council EDs, this distance does not need to be large to put a candidate outside the voter's community.

Further study of how voters conceptualise their political geographical space would help provide a theoretically solid idea of whether distance matters more as a scale or as a categorical location. Our conclusions here are drawn solely

Table 1. Location of candidates across four-party competitive non-metropolitan County Electoral Divisions (EDs).

%	Conservative	Lib Dems	UKIP	Labour	TOTAL
Non-neighbouring ED	13.26	13.58	22.20	16.93	16.49
Neighbouring ED	29.87	35.30	27.80	31.95	31.23
Home ED	56.87	51.12	50.00	51.12	52.28
Total			100.00 (626)		

Chi-square: 29.28 (6 df), $p < .001$.
UKIP: United Kingdom Independent Party.

Table 2. Conditional logit estimates of party support in 2013 County Council elections in England.

	Model 0	Model I	Model II	Model III
Conservatives	.250**	−.177	−.176	−.176
	(.083)	(.149)	(.149)	(.148)
Lib Dems	−.237*	.232*	.231*	.218*
	(.094)	(.129)	(.129)	(.126)
UKIP	.128	.163	.165	.197*
	(.079)	(.117)	(.118)	(.117)
Party feeling (0–10)	–	.552***	.552***	.554***
		(.022)	(.022)	(.022)
Incumbency	–	.806***	.804***	.800***
		(.113)	(.112)	(.111)
Straight-line distance (km)	–	–	–	−.026***
				(.008)
Home ED	–	.242**	.260*	–
		(.094)	(.137)	
Neighbour ED	–	–	.026	–
			(.138)	
(Non-neighbour ED)	–	–	–	–
Pseudo-R^2	.011	.491	.491	.492
BIC	3701.3	1944.2	1952.8	1939.3
N		5353		

* $p < 0.1$; ** $p < .01$; *** $p < .001$.
Note: all explanatory variables (except party controls) are alternative-specific, having separate values for each party and therefore including multiple observations per respondent.
UKIP: United Kingdom Independent Party; BIC: Bayesian Information Criterion; ED: electoral division.

from what we observe in the analysis. A larger sample might have allowed us to test both distance and contiguity categories simultaneously.[10] A comparative study of distance effects across EDs with different two- and three-party competition would also allow a better understanding of how supply mitigates or accentuates distance.

Compared with the General Election test, the effect of localness (whether distance or categorical) appears stronger. Of course, this could be a reflection of the larger distances involved in Westminster constituencies, with voters accepting less physical proximity for representatives standing for large territorial units. Nevertheless, the literature to date has underlined the likelihood of distance mattering more for sub-national ballots, and so to find this at least confirmed suggests that the distance effect spotted in the 2010 General Election analysis is less likely to have been by chance. Further analysis of the two elections – for example including UKIP in the choice-set for 2010, as well as of the forthcoming 2015 General Elections – will provide the opportunity for a further proof of concept.

Finally, the better quality data from the County Council survey now allows us to investigate some of the assumptions we needed to make to operationalise the model in 2010. For example, the assumption that ward centroids could be used as an estimate of voter location can now be tested at least indirectly by overlaying Westminster constituencies on the County Council voter sample, to allow a

Table 3. Simulations of variations in candidate distance on vote share (%).

	Conservative	Lib Dems	UKIP	Labour
Party feeling (0–10)	5.36	4.29	5.50	4.55
Straight-line distance (km)	4.27	4.78	7.00	4.73
Incumbent	66.0%	25.4%	0.8%	5.1%
Real[a]	34.26	20.03	29.79	15.92
Scenario 1	33.37	19.77	31.16	15.69
Scenario 2	**25.34**	22.15	34.92	17.58
Scenario 3	35.64	**14.31**	33.29	16.76
Scenario 4	37.10	21.98	**23.47**	17.45
Scenario 5	35.15	20.82	32.82	**11.20**

[a]Expected probabilities of party vote conditional on the distribution of the explanatory variables.
Scenario 1 – all candidates at 5.1 km from notional voter.
Scenario 2 – bold candidate share moved to 20 km from voter.
UKIP: United Kingdom Independent Party.

Table 4. Simulations of variations in candidate location on vote share (%).

	Conservative	Lib Dems	UKIP	Labour
Party feeling (0–10)	5.36	4.29	5.50	4.55
Home ED	57.4%	52.0%	46.0%	53.5%
Incumbent	66.0%	25.4%	0.8%	5.1%
Real[a]	34.08	20.23	29.83	15.86
Scenario 1	33.67	20.24	30.28	15.82
Scenario 2	**28.50**	21.82	32.64	17.05
Scenario 3	35.19	**16.62**	31.65	16.53
Scenario 4	36.00	21.65	**25.43**	16.92
Scenario 5	34.85	20.95	31.34	**12.86**

[a]Expected probabilities of party vote conditional on the distribution of the explanatory variables.
Scenario 1 – all candidates live in home ED.
Scenario 2 – bold candidate moved to another ED; others remain in home ED.
UKIP: United Kingdom Independent Party; ED: electoral division.

test of the distribution of residual distances between voter address and the relevant ward centroid.

Overall, then, a relatively under-studied set of sub-national elections provide a very useful case for retesting the localness hypothesis, and given the circumstances particular to 2013, to expand upon previous analyses to include minor parties such as UKIP. The analytical importance of distance in models of voting continues to make a case for itself.

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Notes

1. Sizes calculated using OS Boundary-Line™ data. County Council Electoral Divisions cover all non-metropolitan counties in England. Westminster divisions include all 632 British constituencies.
2. Requirements are flexible for land occupation and residency, including occupancy of premises such as a tent or houseboat. Electoral Commission, 'Local elections in England and Wales: guidance for candidates and agents', http://www.electoralcommission.org.uk/__data/assets/pdf_file/0007/141784/

Part-1-Can-you-stand-for-election-LGEW.pdf.

3. For the first time in 2010, candidates could opt to provide only the constituency in which they lived on the Statement of Persons Nominated and the ballot paper.
4. Strictly speaking, the postcode covers a small area rather than a pinpoint location. In terms of widely available locations that can reasonably be included in a large-*n* survey, this is still the most precise unit of observation, however.
5. We tested three separate specifications of the model using straight-line distance, driving distance and driving time. As the correlation between all three was very high – no lower than for 0.95 for any pair-wise test – we report the straight-line distance model, which is the simplest to calculate using eastings and northings in standard GIS packages.
6. EDs with more than one seat up for election could not be included as the vote indicated by the survey respondent could not be identified as being cast for one specific candidate, ballots including candidates for both seats simultaneously.
7. A log-transformed measure accounting for the right skew in distance, which produces essentially identical results to the linear measure used here, is discussed and reported in the appendix (Table 1A).
8. We also tested social deprivation as a possible influence on vote choice that might correlate spuriously with distance and vote choice. However, as with the General Election model, there was no discernible effect, so we exclude this in the reported model. Other possible controls, such as 'distance from contention', could be used (Fisher et al., 2014).
9. To test for differential distance effects by party, we ran an alternative specification including a party–distance interaction effect, which is reported and discussed in the appendix in Table 1A. The only evidence of a differential effect was for UKIP. We also tested for interactions between party and home ED, and party and party feeling, but there was no evidence of any effect here. The replication .do file contains the syntax for all these first-order models.
10. Fractional polynomial models of distance should allow us to identify a more complicated distance effect that, for example, plateaus after a certain distance away is reached. The model specifications we have run thus far using these fractional polynomial measures of distance do not indicate any such non-linear effect.

Supplementary material

The replication files are available at: http://thedata.harvard.edu/dvn/dv/researchandpolitics

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Appendix

A standard approach to linear distance is to log-transform it before inclusion in a model, to correct for the right skew inherent in a measure lower bounded by 0. The use of postcodes in our model to estimate distance produces a small number of respondents with 0 distance, where the respondent lives in the same postcode as one of the candidates. Because ln(0) is undefined, we add 25 metres to 0, being half the observed smallest distance, and intuitively a realistic estimate of distance between two houses on a street. The resultant model IIIA is reported in Table 1A. We report this here, and retain the linear distance in the main paper, as the models are functionally identical and linear distance does not require an ad hoc correction.

Table 1A. Conditional logit estimates of party support in 2013 County Council elections in England [alternative specifications].

	Model IIIA (log-distance)	Model IV (first-order party–distance interaction)
Conservatives	−.163	−.282
	(.148)	(.175)
Lib Dems	.221*	.165
	(.127)	(.164)
UKIP	.182	−.074
	(.116)	(.151)
Party feeling (0–10)	.553***	.555***
	(.022)	(.023)
Incumbency	.802***	.786***
	(.112)	(.115)
Log-distance	−.132**	–
	(.043)	
Distance	–	−.060***
		(.020)
Conservatives × Distance	–	.028
		(.027)
Lib Dems × Distance	–	.014
		(.025)
UKIP × Distance	–	.054*
		(.022)
Pseudo-R^2	.492	.495
BIC	1941.3	1956.0
N	5353	

* $p < 0.1$; ** $p < .01$; *** $p < .001$.
UKIP: United Kingdom Independent Party; BIC: Bayesian Information Criterion.

Table 2A. Simulations of variations in candidate distance on vote share [alternative specification including party–distance interactions] (%).

	Conservative	Lib Dems	UKIP	Labour
Party feeling (0–10)	5.36	4.29	5.50	4.55
Straight-line distance (km)	4.27	4.78	7.00	4.73
Incumbent	66.0%	25.4%	0.8%	5.1%
Real[a]	34.43	19.87	30.06	15.64
Scenario 1	33.91	19.80	30.81	15.47
Scenario 2	**24.14**	22.73	35.37	17.76
Scenario 3	37.64	**11.00**	34.19	17.17
Scenario 4	34.96	20.41	**28.68**	15.95
Scenario 5	37.34	21.80	33.93	**6.93**

[a]Expected probabilities of party vote conditional on the distribution of the explanatory variables.
Scenario 1 – all candidates at 5.1 km from notional voter.
Scenario 2 – bold candidate share moved to 20 km from voter.
UKIP: United Kingdom Independent Party.

Model IV reports the linear distance model with an added party interaction term to examine whether distance affects the four parties' candidates differentially. There is no evidence of differential effect for the three mainstream parties, but there is some evidence of a dampening effect for UKIP in this election. To understand the effect this has, Table 2A reports the simulations including the interaction effect. The change in UKIP vote as the candidate is moved 20 km away is notably smaller than for other parties (and simultaneously the Labour effect increases significantly). We present this as tentative evidence that UKIP candidates in 2013 were less affected by distance as a 'protest' alternative to the mainstream. However, we would encourage caution in this interpretation, given the risk of retrospective overfitting for a single election.