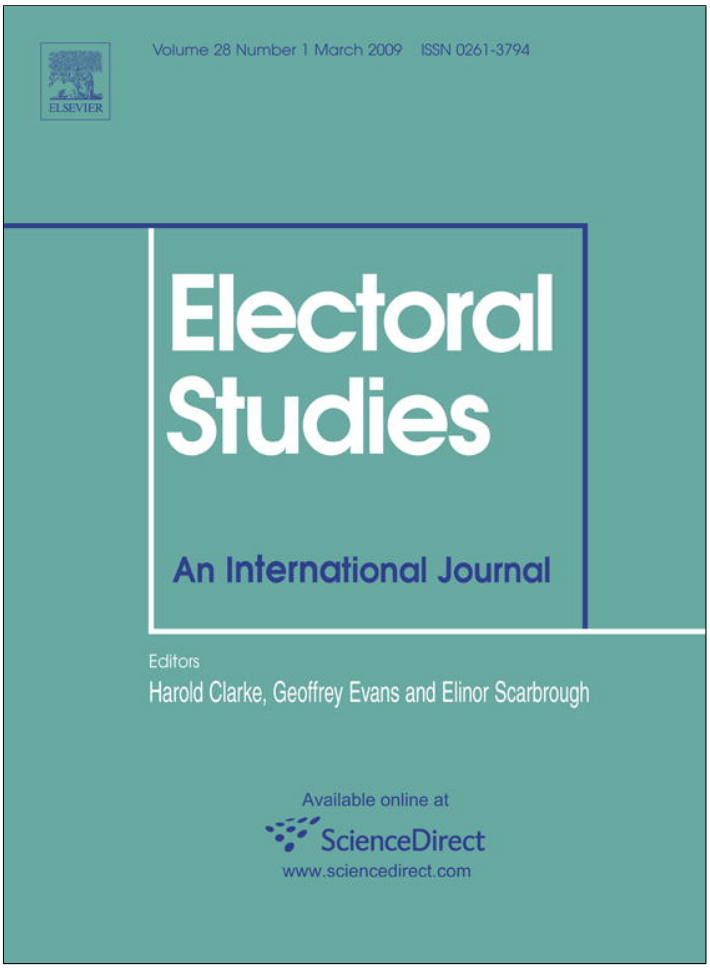

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Candidate effects and spill-over in mixed systems: Evidence from New Zealand

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A B S T R A C T

Although mixed member proportional (MMP) systems offer several advantages they also have one potential problem that threatens the legitimacy of electoral outcomes. Some suggest that these systems suffer from a 'contamination effect' where candidates have the potential to influence the party list vote which ultimately determines the partisan composition of parliament. This paper examines this theory in New Zealand which has conducted four elections under MMP. The analysis is based on district level data merged with individual level data. The findings suggest that although many voters do not have an opinion of candidates, those who do are likely to evaluate incumbents and party leaders more positively. While these factors can also have an influence on the party list vote, the overall effect is quite limited.

1. Introduction

Mixed Member Proportional (MMP) electoral systems are considered by some to be "the best of both worlds" because they combine single member district representation with proportional outcomes (Shugart and Wattenberg, 2001). They have become increasingly popular as a means of election to legislative assemblies. Generally, voters in these mixed systems cast two votes: one for the party list and another for a candidate standing in a single member district (SMD). These systems are attractive because they combine the advantages of both electoral systems: single member district representation together with proportional representation (PR), and help to offset some of the disadvantages associated with each type of system (Bawn, 1999, pp. 490–491).

While such a system may be attractive for the reasons discussed above, it also has some potential disadvantages. Some have expressed concerns that voters can be confused by the existence of two sets of rules which translate their votes into seats, and such confusion can discourage participation, produce results that are not consistent with voters' preferences, and undermine system legitimacy (Cox and Schoppa, 2002). Others have suggested that mixed systems suffer from 'contamination' effects that alter the incentives of parties and voters (Ferrara and Herron, 2005). In this view, the two sets of electoral rules are not truly independent of one another. Cox and Schoppa (2002) find that German parties consistently run SMD candidates everywhere even when their candidates have little chance of winning. The decision to 'go it alone' rather than withdraw is intended to boost their share of the party list vote by either putting a human face on the party and/or possibly benefiting from voter confusion (Ferrara and Herron, 2005). If this strategy is effective, then it raises a potential problem for MMP systems, where the party list vote is used to determine the partisan balance in the legislature.

It is largely assumed that PR systems encourage 'sincere' voting where voters are likely to choose the party they most prefer (Cox, 1997). In cases where party preference may be inconsistent with choice, voters are assumed to

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be acting strategically. For example, in Germany or New Zealand, where parties must win 5% of the vote to gain representation, voters may be willing to vote for a second preference to help that party cross the threshold (Blais et al., 2004; Cox, 1997, p. 160). In the SMD contests, where competition is likely to be reduced to two viable candidates, voters are more likely to cast a strategic vote when their first preference is not viable in order to defeat their least preferred candidate. Popular candidates may also encourage voters to split their votes (Moser and Scheiner, 2005). The difference is that voters who opt to support another party's candidate do so not because that candidate offers a more viable alternative but rather because they have a preference for that candidate. Either way, voters are likely to split their votes by voting for another party's candidate on the SMD side while voting for their sincere preference on the party list vote (see Karp et al., 2002; Moser and Scheiner, this Symposium).

The contamination thesis assumes, conversely, that candidate effects can have an influence on the party list vote. Parties may improve their party's overall prospects by running candidates in SMD contests even if they have little chance of winning. In a mixed system that allows for dual candidacies, where the same candidate can appear on a list and in an SMD context, one might expect parties to field their best candidates (Ferrara and Herron, 2005). Popular candidates, by virtue of their incumbency or popularity may either have 'coat-tails' or they may be better at mobilizing the party's base (Cox, 2005). In addition, candidates who appear on the party list who have a poor chance of winning in an SMD race may nonetheless have a strong incentive to campaign for the party list vote (Cox, 2005). Either way, one should expect candidate effort to pay dividends for the party. In an MMP system, where the party list vote is used to achieve proportionality, if spill-over occurs it could have a non-trivial effect on the overall partisan composition of the legislature.

Such a view assumes that candidate effects and incumbency matter and have the potential to influence how voters view political parties. The thesis also predicts 'sticky voting' where voters are encouraged to cast a straight vote when a party has a strong candidate. While the contamination literature emphasizes the benefits of running candidates it does not acknowledge that there may also be potential liabilities. If candidates matter to voters then there may be a risk to parties running weak candidates. In such cases, voters may also cast a straight vote by deserting both the candidate and the candidate's party. Thus candidates could either have a positive or negative influence on their party's electoral fortunes.

Most of the studies examining these contamination effects have focused on party strategy. For example, Ferrara and Herron (2005) examine strategic entry across a more diverse set of mixed systems while Cox and Schoppa (2002) examine the number of parties entering SMD contests in Japan, Italy and Germany. Both studies find that parties are more likely to contest the SMD races than would otherwise be expected. These studies imply that there is an electoral advantage to running candidates in hopeless races. However it is not at all clear whether and to what extent candidates can boost their party's list vote. Cox and Schoppa (2002 p. 1034) suggest that parties in Japan that compete in the SMD tier increased their party list vote by about 6%.

The problem in assessing such an impact is that if parties are selective they are likely to contest elections where they have the strongest base of support. Thus, the relationship between contesting seats and vote share may well be spurious. Another problem is that if parties believe they must contest seats everywhere then there may be little variation across districts to test the hypothesis. In Germany, for example, the small parties run candidates in virtually all of the districts. Given the lack of variation, it is not possible to determine what effect if any contesting a race has on the party list vote. For this reason, Hainmueller and Kern (2008) restrict their analysis of contamination effects in Germany to parties that have successfully won a constituency seat. They find that incumbency results in a gain of about 1–1.5% in the party list vote share which they claim is enough to trigger significant shifts in Bundestag majorities. The problem here is that the analysis is restricted to the two largest parties because they are the only ones that have had success in winning constituency seats.

2. The New Zealand case

This paper examines the potential for constituency candidates to influence the party list vote in an MMP system. The analysis relies on data from New Zealand, which has had an MMP system since 1996. New Zealand had previously had a single member plurality system where two parties—National and Labour—located on the right and left respectively dominated New Zealand politics since the 1930s. In the 1980s, growing dissatisfaction with both parties gave rise to smaller parties which produced increasingly disproportional results creating the impetus for electoral reform (see Vowles et al., 1998).

Although New Zealand voting choice is shaped much more by strong parties than by candidate preferences, electoral districts are relatively small, with approximately 30,000 voters on average. Contact with members of Parliament is as high as that of members of the US House of Representatives in which electoral contests are highly candidate-centred and under the previous FPP system there was some evidence of a personal vote (Vowles et al., 1995, p. 161). Even under the MMP system, voters in New Zealand appear to be more likely to cast a personal vote for incumbents than in other mixed systems (Moser and Scheiner, 2005). If contamination or spill-over occurs in mixed systems, then it should be apparent in New Zealand.

The design of the New Zealand ballot might also increase the potential for contamination. As Fig. 1 reveals, candidate and party choices are lined up together to encourage voters to cast a straight vote. In addition, the order of these paired choices is determined alphabetically by the names of the candidates (see also Vowles, 2005, pp. 298–299). Parties that do not stand candidates in the electorates will appear in alphabetical order below the parties with candidates. This may place smaller parties at a disadvantage since they are likely to contest fewer electorates than the

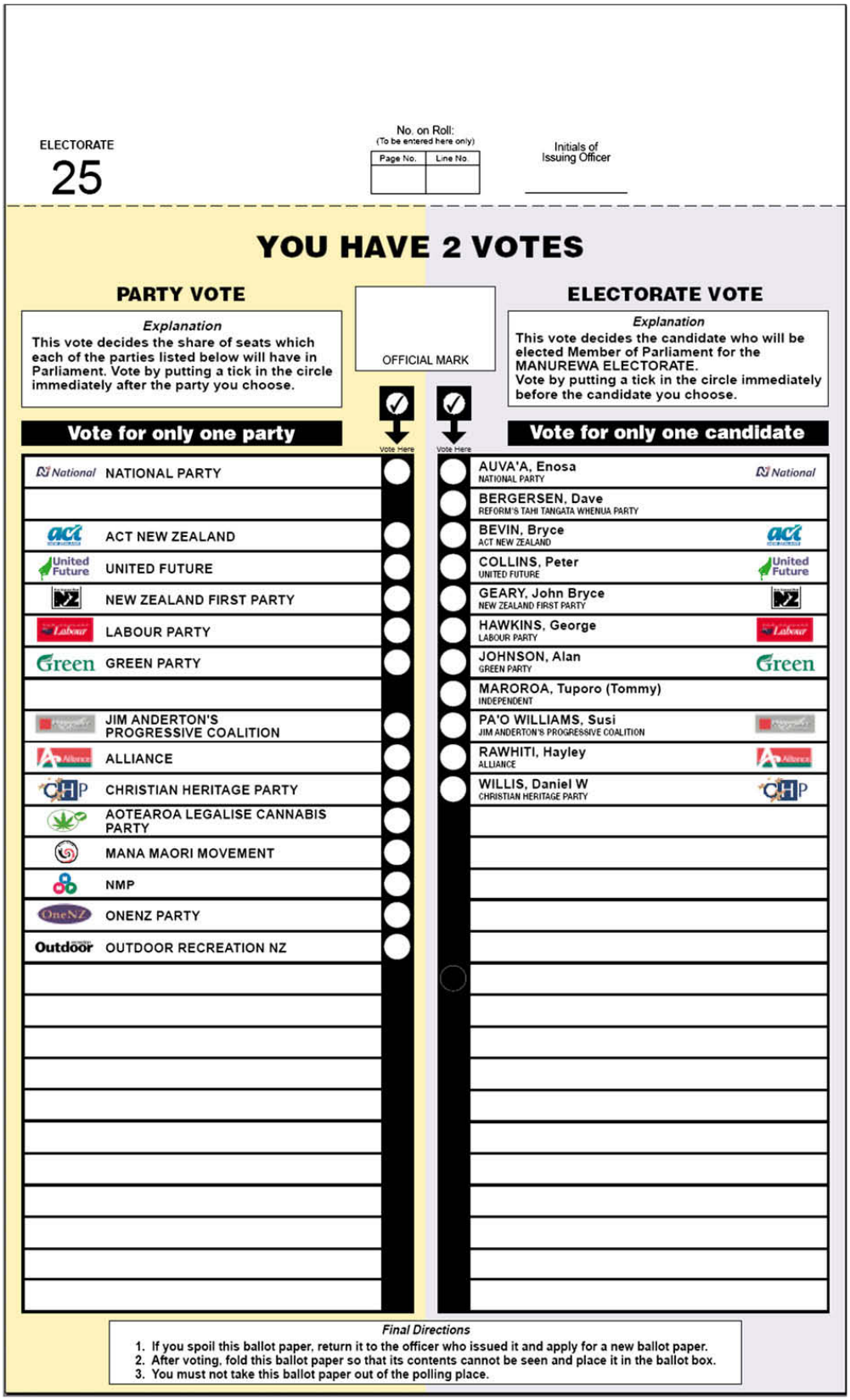

Fig. 1. The New Zealand ballot.

larger parties. As an illustration, a small party such as United Future will appear at the bottom of the ballot paper unless the party contests the electorate. If that candidate's last name begins with 'A', then United Future would likely appear on the top left side of the ballot. A number of studies have found that the position of candidates on a ballot can influence electoral outcomes though the magnitude of these effects varies (Miller and Krosnick, 1998; Koppel

and Steen, 2004). Little is known, however, whether these effects would extend from voting for candidates to parties. Nevertheless, the design of the ballot would suggest that parties in New Zealand would have a strong incentive to contest electorates.

For these reasons, New Zealand provides a good test for contamination effects. If the contamination hypothesis is not supported in New Zealand, then it is unlikely to be a problem in other MMP systems where parties have more influence on vote choice or in systems where the ballot design does not encourage voters to link candidates and parties. The New Zealand case thus provides a more conservative test for the absence of contamination effects in MMP systems because the conditions are biased in favour of rejecting the null hypothesis.

3. Why candidates matter

The contamination literature assumes that simply running a candidate in an SMD race will produce positive dividends for the party. Beyond that, the theory implies that voters are influenced by candidate characteristics but is not clear what attributes might be influential. It is well known, for instance, that incumbents everywhere have an electoral advantage though the size of the advantage varies from one context to another. In part this is assumed to depend on the magnitude of the 'personal vote' conferred by greater familiarity, personal regard, and reputation for competent performance (Desposato and Petrocik, 2003). The literature on the US Congress emphasizes the importance that members of Congress attach to constituency service in cultivating a personal vote. Outside the US, legislators may also have an electoral incentive to provide constituency service depending on whether a candidate is directly elected (Carey and Shugart, 1995). Heitshusen et al., (2005, p. 40) find that compared to other MPs in SMD systems, electorate MPs in New Zealand were likely to place the highest priority on constituency service. They suggest that this may be explained by the competition faced by rival list MPs in their electorates who also engage in constituency service. There may also be a difference in the priorities that different legislators attach to constituency service. Surveys of legislative candidates in New Zealand suggest that electorate candidates are far more likely to attach importance to casework than list candidates; 52% of electorate candidates believed helping with individual problems was a very important part of an MP's job, compared to just 21% of list candidates (Karp, 2002). Moreover, electorate MPs in New Zealand receive greater financial resources to engage in constituency service than list MPs (Ward, 1998). This suggests that electorate MPs may be able to build a larger 'personal vote' than list MPs giving them a greater incumbency advantage. Aside from constituency service, public images of MPs may diverge. Following the first MMP election, cartoons, TV political satire, and the print media contributed to a growing perception that there were two types of MPs and that list MPs were 'second-class' (see Ward, 1998). In part, these perceptions may have been shaped by their perceived lack of legitimacy because they are not directly elected.

Aside from incumbency, parties may be affected by other traits associated with their candidates. In some countries women are more likely than men to express a willingness to vote for a female candidate (Burrell, 1996; Welch and Studlar, 1988). Experimental research finds that women candidates are perceived to be more compassionate on social issues and more liberal than men (Huddy and Terkildsen, 1993). This gender stereotyping also underlies the role of candidate gender as a cost-cutting decision heuristic; when compared to their male counterparts in the same party, women candidates perform better among voters on the left and worse among voters on the right (McDermott, 1997). Repeat challengers may also be better known and more experienced at campaigning. In the US repeat challengers are likely to raise more money and improve on their previous vote share (Mack, 1998). Finally, a growing body of research on leadership effects in parliamentary systems summarised by McAllister (1996) suggests that party leaders can have an influence on electoral outcomes. Party leaders then may be more positively evaluated than others and these evaluations may spill-over onto the party list vote.

4. Competition in the electorates

The contamination hypothesis assumes that parties can increase their share of the party list vote when they contest electorates. While the large parties are likely to run candidates in all districts, the smaller parties are likely to be more selective. This can be seen in Table 1 which shows the number of electorates contested by all parties that successfully gained representation in parliament over three election cycles. On average, the smaller parties contest about three-quarters of the seats. However the number of contested electorates has been declining somewhat in recent elections. Act, a liberal party advocating lower taxes and privatization is positioned to the right of the National party while the Greens and the Alliance are to the left of Labour. Prior to the 2002 election, internal divisions within the Alliance which had formed a coalition with Labour led to its collapse. Jim Anderton, the former leader of the Alliance, formed a new party, Progressive Coalition which remained aligned with Labour. Both New Zealand First, a populist party that had held the balance of power

Table 1
Number of electorates contested by party.

	1999		2002		2005	
	%	*n*	%	*n*	%	*n*
Labour	100.0	(67)	100.0	(69)	100.0	(69)
National	97.0	(65)	100.0	(69)	89.9	(62)
New Zealand First	100.0	(67)	34.8	(24)	58.0	(40)
Act	91.0	(61)	81.2	(56)	81.2	(56)
Greens	74.6	(50)	82.6	(57)	75.4	(52)
Alliance	98.5	(66)	88.4	(61)	4.3	(3)
Progressive Coalition	–	–	75.4	(52)	75.4	(52)
United	1.5	(1)	1.4	(1)	89.9	(62)
Maori Party	–	–	–	–	60.9	(42)

Source: Chief Electoral Office.

following the 1996 election and United Future are widely perceived as being centrist parties. Unlike their counterparts in Germany, the smaller parties have been successful in winning constituency seats, though the winners have generally only been those leading the smaller parties.[1] In 2005, the newly formed Maori Party won four of the seven Maori constituency seats, which are set aside for voters of Maori descent.[2] The Maori party also contested 35 of the general electorates.

As an initial test of the contamination hypothesis, I consider the relationship between candidate and party list votes. If spill over occurs the relationship between the two votes should be strong. Fig. 2 plots the percentage of the vote for all candidates and parties in the 2005 election where each observation represents the percentage of the candidate and his/her party list vote in each of the 69 electorates. The broken line represents an equal relationship between candidate and party list votes (where $\beta = 1$ and $\gamma = 0$). Electorates below the diagonal line are those where candidates outperform their party while those above the line indicate a weaker candidate or drop-off from the party. As Fig. 2 reveals, the relationship between the candidate vote and the party list vote is strong. The coefficient (β) for the electorate vote indicates that for every one unit increase in a candidate's share of the vote, the party list vote increases by 0.87. Overall the explained variance is high, with the candidate vote explaining 90% of the variance in the party list vote.

There is a notable difference between small and large parties. The relationship is somewhat weaker for small parties ($\beta = 0.43$) than for large parties ($\beta = 0.69$) suggesting that the fate of a small party candidate is less likely to impact on the party (or vice versa). In the case of the small parties, all of the observations that fall substantially below the regression line are those where a party leader stood in the electorate. In these four cases, the candidate received substantially more votes than his party. The fact that these are party leaders suggests that while they may have had a higher profile which made them competitive in the SMD contests, that appeal did not necessarily translate into support for their party. This suggests that in these cases voters are more likely to split their votes. When these observations are dropped from the model, the fit increases from 0.65 to 0.80, which is similar to the fit for the large parties. The coefficient also increases from 0.43 to 0.56 indicating a stronger relationship but still not as strong as that observed for the two largest parties.

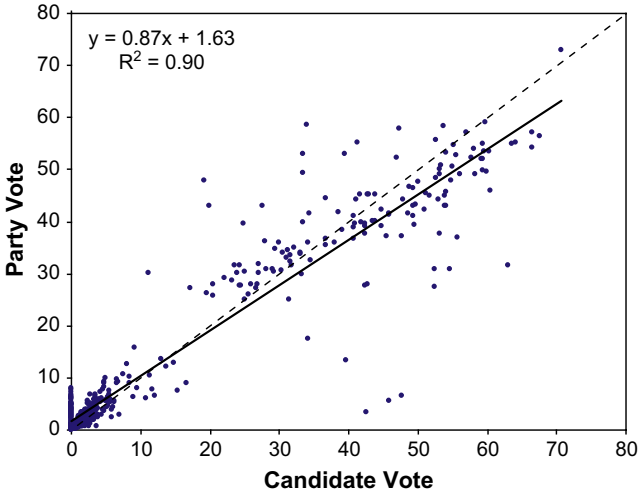

Fig. 2. Relationship between candidate and party votes. Source: 2005 New Zealand Election, Chief Electoral Office.

While the results above confirm the relationship between candidate and party list votes, the causal mechanism remains unclear. The contamination hypothesis assumes that the causal arrow runs from candidates to the parties but it is equally plausible that party choice could influence candidate choice. One strategy to investigate this question is to determine whether candidate attributes that have the potential to increase candidate vote share also influence the party list vote. As suggested above, incumbents by virtue of their visibility are likely to have an electoral advantage. Among the most visible candidates are the party leaders themselves. In the case of the smaller parties, those holding a constituency seat were also a party leader. Repeat challengers may also have greater visibility than first time challenges. Other potential factors include candidate gender which voters may rely upon as a cue for voting.

Along with these characteristics, campaign spending on local advertising, posters, and leaflets may increase a candidate's visibility in the electorate which may also promote party's image in the electorate. Campaign finance laws limit each candidate's expenditures to NZ$20,000. Although this is a relatively small sum, campaign expenditures have been found to influence New Zealand elections (Johnston and Pattie, 2008). In 2005, no candidate spent the maximum, though several of Labour and National's candidates spent more than $18,000 (see Appendix A for details). National's candidates not only spent the most, with an average of NZ$12,410 per constituency but the spending was also more evenly distributed across the electorates. The smaller parties spent considerably less, with an average of less than half the amount spent by the larger parties. While standing candidates in the electorates, the smaller parties often neglected to spend any money contesting the electorate. As suggested above, the presence of a candidate on the ballot alone would increase the party's visibility by raising its placement on the ballot. Therefore, ballot position is another factor that must be considered.

[1] The co-leader of the Green Party, Jeanette Fitzsimmons, won an electorate seat in 1999 but lost it in 2002. Winston Peters, the leader of New Zealand First, had held a constituency seat in Tauranga since 1984 but was defeated in 2005. The leader of Act, Richard Prebble, won the Wellington Central seat in 1999 but lost in 2002. Jim Anderton who leads the Progressive Coalition and formally lead the Alliance (1993–2001) has been successful in holding a constituency seat. Similarly, Peter Dunne, the leader of United, is an electorate MP.

[2] Since 1867, New Zealand has had a dual constituency system where representatives are elected from two sets of single member electorates one for persons of Maori descent and the other for those of European descent. The Electoral Act of 1993 allowed the number of Maori electorates, which had remained fixed at four, to vary on the basis of enrollment (Banducci et al., 2004).

To examine the impact of these variables on candidate vote share, the following model is estimated:

$$CV_{ikt} = a + \beta \times PV_{ikt-1} + \beta \times S_{ikt} + \beta \times O_{ikt} + \beta \times X1_{ikt} + \cdots + \beta Xn_{ikt}$$

where CV_{ikt} is the percentage of votes won by the candidate i in constituency k at election t and PV_{ikt-1} represents the list vote won by party i in constituency k at the previous election. The use of a lag term provides a stronger test by controlling for a party's baseline support in constituency k. S_{ikt} represents candidate expenditures (measures in NZ$1000s) and O_{ikt} represents the ballot position of the party (ranging from 1–21). Candidates $X1_{ikt}$ to Xn_{ikt} represent the characteristics for each candidate i which are measured by dummy variables.

To test for contamination effects, another model is estimated that predicts the party list vote (PV) in constituency k:

$$PV_{ikt} = a + \beta \times PV_{ikt-1} + \beta \times S_{ikt} + \beta \times O_{ikt} + \beta \times X1_{ikt} + \cdots + \beta \times Xn_{ikt} + \beta \times C_{ikt}$$

Contamination would be apparent if the same variables affecting candidate vote share also influenced the share of the party list vote. C_{ikt} is a dummy variable that takes on a value of 1 when the party stands a candidate in constituency k and allows for a test of whether the presence of a candidate alone is sufficient to boost the party list vote. The analysis is based on data from the 2005 election because it was the only MMP election to date where the electorate boundaries were not altered between elections.[3]

The results for the model predicting candidate vote are presented in the first column of Table 2. As expected, incumbency emerges as a consistent predictor of candidate vote share. The effect of incumbency is greatest for Labour, which indicates that Labour incumbents enjoyed a 12% advantage over Labour non-incumbent candidates. In some cases, List MPs also enjoyed a slight advantage, with the greatest advantage of 4% for Green List MPs. In the case of the larger parties, the coefficient for List MPs is negative but not significant. Party leadership is also a significant predictor for all of the smaller parties. Each of these leaders was also the only incumbent elected from a single member constituency. With the exception of Winston Peters, the leader of New Zealand First, who narrowly lost his seat, all were reelected. In comparison, the effects for Labour's leader, Helen Clarke, are not quite significant, indicating that she did not receive significantly more votes than other Labour candidates. In the case of National, it is not possible to assess the effects of leadership as the party leader Don Brash, was the only leader not to contest an electorate. Surprisingly, campaign expenditures have little impact on candidate's vote share, presumably due to the fact that so little money can be spent contesting these elections. This is in sharp contrast to the findings of Johnston and Pattie (2008) who concluded from the same data that campaign spending made a difference, especially for the smaller parties.[4] In addition, few other variables emerge as significant predictors. The sign for ballot position is in the expected direction in only two cases (Labour and Green) but the coefficient does not approach statistical significance at $p < 0.05$.[5] All other things being equal, female candidates do not appear to be advantaged (or disadvantaged). Neither does it appear to matter if the candidate has stood before in the electorate.

The second column of Table 2 presents the results of the model predicting the party list vote. Parties do appear to benefit somewhat from contesting electorates; the difference is greatest for National, where its party list vote was almost 15% higher in contested electorates than in the two electorates it chose not to contest. In the case of the smaller parties, the differences, where they are significant, are smaller. The Green party list vote is 2% higher in contested electorates where there are no differences for United or Act. The advantages of incumbency appear to translate somewhat into party list votes but these are confined to electorate MPs. Incumbency increases the party list vote for both of the large parties, though the effect is greater for National. In contrast, status as a list MP was a liability for National candidates. All other things being equal, the National list MPs are expected to receive 5% less than other National candidates. The sign for list MPs is also negative for three other parties but is not statistically significant. The substantial advantage enjoyed by party leaders does not appear to translate into support for their party. In only two cases, is there a significant difference increase in the party list vote (New Zealand First and Progressive Coalition) and the difference is less than 3%. Neither the gender of the candidate nor being a repeat challenger appears to have any effect on distribution of the party list vote. Ballot position appears to reduce a party's list vote in only one case. For Labour, the negative coefficient indicates that the party could have lost as much as 2% of the party in electorates where their candidate appeared at the bottom of the ballot.

5. Candidates and vote choice

While inferences about the influence of candidates can be drawn from aggregate data, these hypotheses are best tested with survey data. The New Zealand Election Study (NZES) is ideal for this purpose. In 2002, the NZES sampled 5533 respondents from all 69 electorates, resulting in an average of 80 respondents sampled from each electorate or constituency.[6] As a result one is able to match district

[3] The analysis is based on the seven major political parties in 2005, defined by those winning at least one seat in parliament. The newly formed Maori Party, which won four seats in 2005 is not included in the analysis because it is not possible to include a lag term for the party.

[4] However their analysis did not control for incumbency or party leadership. When omitting these variables, campaign spending emerges as a significant predictor for Act, New Zealand First, and the Greens. However, expenditures are still not significant for any of the other parties.

[5] Using a one-tailed test, these coefficients are significant at $p < 0.05$.

[6] The main sample of the NZES is drawn from the electoral rolls stratified by electorate. A pre-election sample that is also carried over into the post election is drawn by a national random sample of households with telephones with respondents randomly selected within households. See Vowles et al. (2004) or http://www.nzes.org for further details.

Table 2
Influence of candidate effects on the vote: OLS coefficients.

	National		Labour		NZ First		Green		Act		National		Progressive	
	CV	PV	CV	PV	CV	PV	CV	PV	CV	PV	CV	PV	CV	PV
Constant	7.31	**−4.17**	12.65	−0.71	−1.42	0.68	0.88	**−1.64**	−0.14	−0.10	−0.54	**−0.53**	0.07	−0.08
	(5.88)	(2.07)	(6.69)	(2.12)	(1.28)	(0.39)	(0.66)	(0.68)	(0.42)	(0.15)	(0.78)	(0.25)	(0.28)	(0.10)
Party vote$_{t-1}$	**1.49**	**1.22**	**0.62**	**1.02**	**0.37**	**0.44**	**0.63**	**0.67**	**0.13**	**0.19**	**0.33**	**0.40**	**0.66**	**0.58**
	(0.22)	(0.11)	(0.14)	(0.04)	(0.10)	(0.03)	(0.08)	(0.07)	(0.04)	(0.02)	(0.11)	(0.05)	(0.15)	(0.06)
Contesting electorate		**14.67**				**0.78**		**2.10**		0.24		0.38		**0.27**
		(2.48)				(0.24)		(0.47)		(0.13)		(0.31)		(0.07)
Incumbent	**6.90**	**4.26**	**12.39**	**1.91**										
	(2.64)	(1.27)	(2.51)	(0.80)										
List MP	−0.05	**−5.10**	−3.38	−0.96	1.01	−0.29	**4.29**	1.61	0.83	−0.24	**1.11**	0.24	**1.94**	0.00
	(4.77)	(2.30)	(7.87)	(2.50)	(1.16)	(0.41)	(2.12)	(2.05)	(0.49)	(0.19)	(0.51)	(0.25)	(0.63)	(0.24)
Repeat candidate	1.80	1.04	−1.38	−0.03	2.15	0.72	0.07	0.37	0.21	0.01	0.73	0.10	0.10	0.02
	(2.74)	(1.32)	(2.91)	(0.92)	(1.11)	(0.38)	(1.49)	(1.54)	(0.29)	(0.12)	(0.37)	(0.18)	(0.26)	(0.10)
Female candidate	−4.49	−1.42	0.24	0.15	0.55	−0.37	0.12	0.11	0.16	0.04	0.00	−0.03	0.00	0.03
	(2.39)	(1.15)	(1.95)	(0.62)	(1.22)	(0.43)	(0.44)	(0.45)	(0.29)	(0.12)	(0.30)	(0.15)	(0.19)	(0.07)
Leader			13.07	1.40	**32.09**	**2.65**	**4.38**	−1.83	**38.46**	−0.59	**41.96**	0.32	**42.94**	**2.32**
			(7.75)	(2.46)	(2.65)	(0.89)	(1.88)	(1.93)	(1.13)	(0.44)	(1.21)	(0.60)	(0.98)	(0.36)
Candidate spending	0.10	**0.23**	−0.29	−0.02	0.04	**−0.06**	−0.02	0.13	0.01	0.01	0.11	0.00	−0.02	0.01
(NZ$1,000s)	(0.20)	(0.09)	(0.22)	(0.07)	(0.09)	(0.03)	(0.27)	(0.19)	(0.03)	(0.01)	(0.07)	(0.03)	(0.04)	(0.02)
Ballot position	0.04	0.10	−0.50	**−0.26**	0.13	0.00	−0.09	0.04	0.08	0.01	0.02	0.02	0.00	0.00
	(0.32)	(0.15)	(0.35)	(0.11)	(0.07)	(0.02)	(0.05)	(0.04)	(0.04)	(0.02)	(0.03)	(0.01)	(0.02)	(0.01)
Adjusted R^2	0.67	0.93	0.70	0.95	0.87	0.87	0.78	0.70	0.98	0.82	0.97	0.77	0.99	0.91
N	62	69	69	69	40	69	52	69	56	69	62	69	52	69

Source: 2005 New Zealand Election, Chief Electoral Office. CV, candidate vote; PV, party vote; standard errors are in parentheses. Bold coefficients are statistically significant at $p < 0.05$.

level information with a reasonable sample of respondents. To replicate the aggregate analysis, the same candidate characteristics identified above have been merged with the survey data for the 2002 election.[7]

The NZES includes an item that is designed to measure candidate preference. The question asks, "Regardless of the parties they were standing for, and their chances of getting elected, how did you feel on election day about the candidates who stood in your electorate?" Responses range from 0 (strongly dislike) to 10 (strongly like). In the 2002 study, respondents were asked to evaluate candidates representing Labour, National, New Zealand First, Act, and the Alliance.[8] Reflecting uncertainty about candidates, over 40% either responded 'don't know' or refused to evaluate candidates representing either of three smaller parties, while 20% are missing for National and 16% for Labour candidates. Apart from party leadership, which is associated with more positive evaluations, few characteristics appear to play a consistent role in shaping candidate evaluations. While this may suggest that candidate characteristics are not likely to play a major role in shaping voting behaviour in New Zealand, the item itself relies upon respondents to recall the candidates for each of the parties without naming them specifically. Therefore such evaluations may be of limited use for testing hypotheses about the effects of candidate characteristics on voting behaviour. Moreover they are almost certainly likely to be endogenous to party preference. Therefore, the analysis will focus on the influence of candidate attributes rather than subjective measures of candidate preference.

As a test of contamination effects, a model of party choice is estimated for the five main parties competing in the 2002 election.[9] Multi-party choice can be estimated in several ways. Multinomial Logit (MNL) is one strategy for estimating a model with nominal response categories with more than two outcomes. However, MNL imposes the property of independence of irrelevant alternatives (IIA). It implies in the case of party choice that the probability of voting for any party is completely independent of voting for another party which may well be an unrealistic assumption (Alvarez and Nagler, 1998). An alternative and more conservative strategy is to model the decision to vote for a party as a binary choice, where the dependent variable is coded as '1' for voting for the party in question and '0' otherwise. This method also has the advantage of estimating the likelihood of voting for a specific party compared to *any* other party, rather than against a single party such as Labour.

To control for party affiliation, the analysis relies on an item that measures closeness to a political party. This measure has the advantage of classifying more respondents than the traditional party identification measure, particularly those who consider themselves close to smaller parties. Demographic variables such as age, education, gender, and ethnicity have also been included as controls.

[7] A small number of respondents ($n = 250$) did not have an electorate classification. These have been dropped from the analysis.

[8] In the cases where the party did not have a candidate standing in the electorate, evaluations if any have been coded as missing.

[9] The 2002 NZES is based on a larger sample ($n = 5533$) than the 2005 study ($n = 3743$) and is therefore better suited for an analysis of contextual effects.

Table 3
Party vote choice: logit coefficients.

	Labour		National		NZ First		Green		Act	
	B	SE	*B*	SE	*B*	SE	*B*	SE	*B*	SE
Incumbent	0.17**	(0.06)	0.00	(0.08)						
Contesting electorate					−0.11	(0.20)	−0.60**	(0.18)	0.06	(0.16)
List MP	0.18	(0.13)	−0.16	(0.13)	0.25	(0.18)	0.26	(0.19)	−0.16	(0.25)
Repeat candidate	0.00	(0.12)	−0.05	(0.12)	0.25	(0.19)	0.21	(0.17)	−0.45*	(0.19)
Female candidate	−0.04	(0.06)	−0.24*	(0.11)	−0.37	(0.31)	0.03	(0.15)	−0.26	(0.22)
Leader	0.45	(0.30)	1.14**	(0.25)	0.16	(0.47)	0.68	(0.45)	0.90	(0.47)
Close to party	1.51**	(0.11)	1.50**	(0.13)	3.30**	(0.22)	3.30**	(0.21)	3.88**	(0.29)
Age	0.01**	(0.00)	0.00	(0.00)	0.02**	(0.00)	−0.03**	(0.00)	−0.01**	(0.00)
Female	0.23**	(0.06)	0.11	(0.08)	−0.13	(0.10)	0.04	(0.12)	−0.69**	(0.13)
Maori	0.47**	(0.10)	−1.62**	(0.23)	0.24	(0.17)	0.43*	(0.20)	−1.67**	(0.46)
Education	−0.04*	(0.02)	0.00	(0.02)	−0.20**	(0.03)	0.23**	(0.04)	0.15**	(0.04)
Constant	−1.05**	(0.16)	−1.68**	(0.20)	−2.60**	(0.28)	−2.28**	(0.33)	−2.47**	(0.34)
Nagelkerke R^2	0.09		0.08		0.17		0.19		0.17	
n	5026		5026		5026		5026		5026	

Source: 2002 New Zealand Election Study (NZES). Standard errors are in parentheses. $^{**}p < 0.01$; $^{*}p < 0.05$.

The results are given in Table 3.[10] Although the aggregate analysis suggested that contesting electorates increased a party's vote share, there is little evidence that the presence of a candidate competing in the electorate increases the likelihood of an individual voting for that party. In the case of the Greens, the coefficient is actually negative, indicating that the likelihood of voting for the Greens is reduced in electorates where the party stood a candidate. Similarly, while incumbency appeared to increase the party vote for both Labour and National, the individual level results suggest that incumbency increases the likelihood of voting for only Labour and the effect is small. Party leadership is also a significant factor for National, suggesting that constituents in Bill English's electorate were more likely to vote for National than in other electorates. Repeat candidates have no impact on voting for the parties expect for Act where the effect is negative. The gender of the candidate only appears to make a difference for National candidates. In these cases, the likelihood of voting for National decreases somewhat when a female candidate stood in the electorate.

Another way to assess the impact of candidate characteristics on the vote is to examine the extent to which candidates encourage straight ticket voting. The contamination hypothesis assumes that candidate characteristics will lead to 'sticky voting' where voters who are motivated to cast a vote for a particular candidate will also vote for that candidate's party. As discussed earlier, the design of the ballot also encourages voters to cast a straight vote by aligning party and candidate choices together on the same page. To examine whether candidates encourage straight ticket voting another logistic model is estimated where the dependent variable is coded as '1' where a respondent reports voting for the same candidate and party and '0' otherwise. Responses have been dropped in cases where a party did not contest an electorate. Similarly respondents who do not recall casting an electorate vote have been dropped.

The results in Table 4 suggest that voters are more likely to cast a straight vote when Labour incumbents are standing in their electorate but the coefficient is not significant for National. Incumbency effects are also apparent when examining the coefficients for party leaders which, for the smaller parties, is analogous to incumbency. In all but one case (New Zealand First) party leaders encourage straight ticket voting. Such a finding might suggest that leaders attract list votes from other parties. However the findings in Table 3 suggest that this is not the case. Rather, party leaders are likely to prompt fewer defections from the party than other less viable candidates. Such an explanation would be consistent with the interpretation of the party list vote as a sincere vote (see Karp et al., 2002). Split voting is likely to occur when candidates are recognized as not being viable. Each of the party leaders was viable in their electorates and as a result were almost certainly more likely to hold their party's supporters than less viable candidates. Aside from incumbency, several other factors appear to influence the likelihood of casting a straight ticket. Gender emerges as a significant influence again for National and is in the same direction. All other things being equal, female candidates are likely to reduce the likelihood of voting for National and less likely to encourage straight ticket voting. Or put another way, those voting for women representing the National party are more likely to vote for another party with their list vote. Candidates who had previously stood for Act are also less likely to encourage straight ticket voting than those who had not stood before. Finally, partisanship, as one would expect, is associated with straight ticket voting while education is negative in two cases and not significant in others.

6. Discussion

While mixed systems have proven to be popular with electoral reformers, there is a concern that electoral outcomes can be distorted by 'contamination effects' whereby SMD contests have the potential to spill-over on the party list vote. This raises a potential problem particularly with

[10] Non-voters are included in the analysis following the assumption that candidates are not only likely to convert votes but they may also be able to mobilize them as well.

Table 4
Likelihood of casting a straight vote: logit coefficients.

	Labour		National		NZ First		Green		Act	
	B	SE	*B*	SE	*B*	SE	*B*	SE	*B*	SE
Incumbent	0.20**	(0.07)	−0.01	(0.09)						
List MP	0.22	(0.14)	−0.14	(0.14)	0.44	(0.30)	0.47	(0.29)	−0.52	(0.69)
Repeat candidate	0.06	(0.12)	0.00	(0.13)	0.43	(0.33)	0.42	(0.27)	−0.36	(0.43)
Female candidate	−0.03	(0.07)	−0.28*	(0.12)	−0.44	(0.55)	0.00	(0.25)	−0.28	(0.55)
Leader	0.63*	(0.30)	1.37**	(0.26)	0.33	(0.79)	1.17*	(0.54)	2.67**	(0.86)
Close to party	1.15**	(0.09)	1.26**	(0.14)	2.28**	(0.39)	2.72**	(0.27)	3.47**	(0.38)
Age	0.01**	(0.00)	0.01*	(0.00)	0.02**	(0.01)	−0.04*	(0.01)	−0.03*	(0.01)
Female	0.19**	(0.06)	0.14	(0.08)	−0.29	(0.29)	0.03	(0.22)	−0.30	(0.32)
Maori	0.35**	(0.10)	−2.06**	(0.32)	−0.35	(0.42)	−0.48	(0.40)	−16.36	(1935.65)
Education	−0.07**	(0.02)	0.01	(0.03)	−0.32**	(0.11)	0.12	(0.06)	0.01	(0.09)
Constant	−1.46**	(0.16)	−2.19**	(0.22)	−3.84**	(0.83)	−2.99**	(0.54)	−3.29**	(0.80)
Nagelkerke R^2	0.07		0.08		0.14		0.17		0.20	
n	5291		5065		1765		4192		4134	

Source: 2002 New Zealand Election Study (NZES). Standard errors are in parentheses. $^{**}p < 0.01$; $^{*}p < 0.05$.

the MMP variant where the party list vote ultimately determines the partisan distribution in parliament. The contamination thesis maintains that parties will contest SMD contests even if they have no chance of winning because they can lift their party list vote. This incentive may help to explain the presence of parties beyond a district's 'carrying capacity'. In a single member district, there should be no more than two viable competitors (Cox, 1997). Popular or well known candidates may be able to lift their party's vote which could help the party secure more seats than it would otherwise have. Parties with poor candidates, on the other hand, could have the potential to damage their party's chances.

In the aggregate analysis, there is some evidence to suggest that the presence of candidates helps to increase the party list vote. There is also evidence to suggest that the party list vote is two to four percentage points higher in districts with incumbents. The individual level analysis partly confirms these findings. Incumbency appears to make some difference but the effects are not consistent across parties. For the large parties, incumbency appears to have a small positive effect only for Labour. In those constituencies were Labour held a constituency seat, voters are somewhat more likely to either vote for Labour on the party list vote or cast a straight vote for Labour. In the case of the small parties, whose incumbents are also party leaders, none of the coefficients were significant. With the exception of National, voters in a party leader's constituency are not significantly predisposed to vote for that party with their list vote.

While these results provide some evidence that some candidates may be able to boost their party list vote, the contamination thesis is clearly at odds with the relatively high rate of split-ticket voting that has been observed in New Zealand. In the first three elections held under MMP, between 35 and 39% split their votes, although the figure declined somewhat to 29% in the 2005 election (Vowles et al., 2004, p. 23). In Germany, however, the proportion is closer to 20% (Pappi and Thurner, 2002). Surveys of voters suggest that this is not the result of confusion but rather sophisticated behavior (Karp, 2006). The results presented here also suggest that voters are slightly more likely to cast a straight vote when there is an incumbent or party leader in the district.

The overall impact of candidate effects appears to be quite small. A substantial proportion of the electorate, when asked to evaluate candidates, simply has no opinion. This reflects the fact that parties rather than candidates appear to matter more in New Zealand politics even though districts are relatively small and MPs are likely to invest a great deal of effort in constituency service. Moreover, New Zealand's previous experience under FPP would suggest a greater potential for candidate effects than in other systems where party lists are used. The limited findings in this context suggest that fears of contamination in other mixed systems might be over-stated.

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Appendix A

Table A.1
Candidate expenditures (NZ$) by party (2005).

	Labour	National	NZ First	United	Progressive	Green	Act	Maori	Alliance
Average spending per contested district	10,726	12,410	3684	1580	428	803	4259	3931	319
Standard deviation	4268	5173	4652	2438	2138	1262	4241	3931	319
Total candidate expenditures	740,095	769,448	147,358	97,951	22,252	41,774	4219	3873	319
No. of contested electorates with no spending	0	0	10	19	34	12	5	3	10

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