
Amy Catalinac*

Abstract

Do candidates position themselves differently under different electoral systems and is their positioning in line with the expectations of spatial theories? We reexamine these core political science questions using substantively-meaningful estimates of candidate ideological positions derived from quantitative scaling of 7,497 Japanese-language election manifests used by candidates competing in the eight elections to Japan’s House of Representatives (HOR) on either side of its 1994 electoral reform. Leveraging variation before and after Japan’s electoral reform, as well as within each electoral system, we find that candidates converge in single member districts and diverge in multi-member districts, and converge on their co-partisans when not facing intraparty competition and diverge when they do. Our study helps to clarify debates about the effects of electoral systems on polarization and party cohesion, in Japan and more generally.

*Assistant Professor of Politics, New York University. Mail: 19 West 4th St., 2nd floor, New York NY, 10012. Email: amy.catalinac@nyu.edu.
1 Introduction

The notion that office-seeking candidates position themselves differently in different electoral systems – specifically, closer to the median voter in majoritarian systems – underpins decades of theoretical development in political science. It has helped explain outcomes as diverse as democratic and government stability (e.g. Powell, 1982; Sartori, 1976), representation and inclusiveness (e.g. Iversen and Rosenbluth, 2010; Dalton, 2008), turnout (e.g. Norris, 2004), consumer prices (Rogowski and Kayser, 2002), banking regulation (e.g. Rosenbluth and Schaap, 2003), and even troop contributions to the Iraq War (Baum, 2012). Despite this plethora of work, few studies have examined the empirical validity of this proposition in the real world, and those that have report conflicting results. While work by Dow (2011, 2001) finds that parties adopt more ideologically “compact” positions in majoritarian and less-proportional systems than in moderate and highly-proportional ones, work by Ezrow (2008) finds no evidence of this. Other work casting doubt on the proposition that actors position themselves close to the median voter in majoritarian systems include Poole and Rosenthal (1984), Alvarez, Nagler and Bowler (2000), Karp and Banducci (2002), and Schofield and Sened (2006). The lack of evidence for convergence where convergence is due has led to charges that spatial theories are of limited value in understanding politics in the real world (e.g. Green and Shapiro, 1996).

In this paper, we reexamine the relationship between electoral system and candidate positioning. We use a quantitative scaling model to estimate the ideological positions adopted in 7,497 Japanese-language election manifests produced by almost all the candidates who competed in the eight elections to Japan’s House of Representatives (HOR) on either side of its 1994 electoral reform. After validating our estimates with the positions candidates reported in surveys, the relative locations of the average candidate of each party, and the substantive meaning of the scale upon which candidates were located, we use them to test two propositions: one, that candidates converge on their opponents in single member districts (SMDs) and diverge in multi-member districts (MMDs) (e.g. Cox, 1990; Merrill and Adams, 2002; Magar, Rosenblum and Samuels, 1998; Downs, 1957); and two, that candidates converge on their co-partisans in electoral systems with no intraparty competition and diverge from their co-partisans in election systems with intraparty competition (e.g. Carey and Shugart, 1995). Leveraging variation across Japan’s two electoral systems and within each system, we find support for both propositions.
Our study helps to resolve two debates in the Japanese politics literature, both of which speak to broader debates in political science. The first is whether candidates of Japan’s two majority-seeking parties, who have made up the bulk of candidates contesting and winning elections since 1994, are converging after electoral reform. Studies suggesting they are include Reed, Scheiner and Thies (2012), who found that their support bases began to converge after 2005 and valence considerations such as competence became important determinants of electoral victory; Scheiner (2012), who found that they discussed more of the same issues in 2009 than in 2003; and Dalton and Tanaka (2007), who found that voters perceived them to be closer in 2004 than in 1996. Indirect evidence of convergence is also found in the absence of conspicuous policy changes following the DPJ’s landslide victory in 2009 (e.g. Lipsky and Scheiner, 2012; Hughes, 2012). Studies implying divergence, however, include Sasada, Fujimura and Machidori (2013), who document polarization in their roll-call votes after 2000; Taniguchi (2006), who finds considerable differences in their policy preferences; Shinoda (2009), who finds evidence of pre-election parliamentary confrontation between them; and Winkler (2013), who finds that candidates of the Liberal Democratic Party (LDP) shifted to the ideological right in recent years. Our findings come down firmly on the side of convergence. Two implications are that polarized behavior in the Diet after reform is due to something other than their campaign promises, and while differences exist among candidates on the issues asked about in surveys, their campaigns are characterized by proximity on the main dimension of competition.

The second debate is whether the elimination of intraparty competition that accompanied Japan’s electoral reform made parties more unified. When candidates face no intraparty competition and thus have incentives to create unified parties (Carey and Shugart, 1995), governments tend to be less corrupt (Chang and Golden, 2007), policy outcomes tend to be more programmatic (e.g. Bagashka, 2012; Rosenbluth and Thies, 2010; Estevez-Abe, 2008), and policymaking tends to be more “efficient” (Cox, 1987). Japan’s electoral reform was supposed to bring about unified parties, which were expected to tilt policy away from the interests of organized groups toward the interests of the median voter. In line with these expectations, post-reform governments increased spending on programmatic goods such as science, technology, social welfare, and public order (Noble, 2010), pursued a more active security policy (Hughes, 2009), imposed consumer-friendly regulations on banks (Rosenbluth and Thies, 2010), and curbed some of the protection offered farmers (Horiuchi and Saito, 2010; Davis and Oh, 2007). Evidence that par-
ties became more unified after reform, however, has not been forthcoming. Pempel (2010, 254) characterizes parties as “internally divided” after reform, and Scheiner (2012) suggests that the new system permits variation within parties because it discourages candidates from sorting themselves into parties with their like-minded peers. We show that parties became more unified after reform and were less unified before reform because of intraparty competition. Not only does this confirm that the effects of electoral systems extend to the cohesiveness of parties, but it also reinforces the relationship between Japan’s 1994 electoral reform and these shifts in policy.

Our empirical strategy offers several advantages over existing studies. Sacrificing cross-national variation for cross-temporal variation within a single country enables us to minimize the effects of variables such as constitutional structure, preexisting social cleavages, and demographic changes. It also allows us to examine the positions of some of the same candidates over time, and obtain estimates of positions that can be more easily compared across candidate and system. Furthermore, the effective number of parties in the Japanese electorate (ENEP) was similar under both electoral systems,\(^1\) the same party was in power under both systems,\(^2\) and primaries, which influence candidate positioning in the U.S., were not used for Democratic Party of Japan (DPJ) candidates until 2000 and LDP candidates until a 2004 by-election (Smith and Tsutsumi, 2014). It is therefore unlikely that any observed changes in candidate positioning will be due to such factors.

A further advantage of our study is that we use material produced by candidates for the explicit purpose of communicating their policy views to voters during election campaigns. Studying candidates in districts enables us to conduct a more nuanced test of our theoretical expectations than has previously been attempted. We can be confident that this material – candidate election manifests – is representative of candidates’ broader campaign strategies, thus yielding reliable estimates of their ideological positions, for two reasons: one, because local electoral commissions are required to distribute the material to all registered voters at least two days before the election; and two, because heavy campaign restrictions prohibited candidates from using other means of communication, such as television or radio advertisements, during election campaigns (McElwain, 2008; Curtis, 1971). With this material, we can study how individual candidates


positioned themselves over time relative to their same-district opponents and co-partisans. To our knowledge, our study is the first to use candidate-generated election material to estimate and analyze candidate ideological positions, and the first to examine the relationship between candidate positioning and electoral system outside of the United States.

2 Candidate Positioning in Districts and Parties

The first hypothesis we test concerns the relationship between ideological competition and the size of an electoral district. Using a spatial model, Cox (1990) demonstrates that ideological competition in multi-member districts (MMDs), which combine plurality rule with a single vote per voter and a district magnitude \((M)\) greater than one, will be centrifugal, with candidates adopting positions that are dispersed across the ideological spectrum. The intuition behind this is that a larger \(M\) relative to number of votes per voter will produce more competitors, who will avoid bunching together because of the disadvantages this confers on candidates at the center of the bunch. In single member districts (SMDs), on the other hand, which combine plurality rule with a single vote per voter and an \(M\) of one, competition tends to be winnowed down to two serious candidates. Ideological competition between those candidates will be centripetal, with both converging on a centrally-located position. This is a vote-maximizing strategy in an SMD because it enables both candidates to capture the universe of votes on their respective sides of the spectrum (see also Downs, 1957; Duverger, 1963; Merrill and Adams, 2002; Magar, Rosenblum and Samuels, 1998). To summarize:

- **Hypothesis 1**: Candidate positions converge on their opponents in single member districts and diverge in multi-member districts.

The second hypothesis concerns the relationship between intraparty competition and ideological congruence among candidates of the same party. In systems where voters are asked to choose between candidates of the same party, candidates gain little from cultivating and relying on a party label. Instead, they need to come up with alternative reasons why voters should vote for them over their same-district co-partisan(s). In contrast, when voters are not asked to choose between candidates of the same party, candidates have greater incentives to cultivate and rely on a party label (e.g. Carey and Shugart, 1995). Party labels can provide credible signals of the policies candidates will provide after reaching office and can help candidates overcome the
challenges of communicating those policies to voters during campaigns (e.g. Cox, 1997; Snyder and Ting, 2002). To summarize:

- **Hypothesis 2**: Candidate positions converge on their co-partisans when there is no intraparty competition and diverge when there is.

Since 1947, Japan has used two electoral systems to select members of its HOR. From 1947 until 1994, it used SNTV-MMD (single non-transferable vote in multi-member districts) to elect between 467 and 512 members of the HOR in between 118 and 131 electoral districts. Under this system, voters cast a single vote for a candidate in a district that elected between two and six representatives, with most districts electing between three and five. Being a parliamentary system, parties need to capture a majority of seats to form a government. To capture this majority, parties had to win, on average, two seats per district. After its formation in 1955, Japan’s party system was dominated by the LDP, which won enough seats to form every government between 1958 and 1993. Several smaller opposition parties contested these elections, but they soon stopped running (or never ran) enough candidates to qualify as majority-seeking.

Electoral reform was placed on the agenda by media coverage of, and public anger about, large-scale corruption scandals in 1988 and 1992. Politicians were (allegedly) forced into corruption because intraparty competition prevented them from running on their party labels and required them to source massive amounts of personal campaign funds. In July 1993, the opposition parties submitted a motion of no confidence in the LDP government over its failure to enact electoral reform, and the motion passed when a group of LDP politicians did not oppose it. This group then left the party, depriving the government of its majority. In the ensuing election, all parties, including three new ones, campaigned on the need for reform. After the election, a seven-party coalition government was formed, which reformed the electoral system in early 1994. In June 1994, the LDP returned to power in a coalition with the Japan Socialist Party (JSP) (Curtis, 1999).

Since 1994, Japan has used mixed member majoritarian (MMM). It is comprised of two tiers: in the first tier 295 members are elected in SMDs, and in the second tier 180 members are elected from closed party lists in 11 regional blocs according to proportional representation (PR).\(^3\) Each bloc elects between 6 and 29 members. The allocation of seats in the tiers is

\(^3\)The number of seats available in the SMD tier was 300 until 2013, after which five seats were cut to address disparity in the number of votes needed to elect representatives in urban versus rural areas. The number of seats
independent, meaning that the seats a party wins in one tier are added to those it wins in the other tier. Majority-seeking parties thus have to win seats in both tiers. Because competition in SMDs tends to be between two serious competitors and competition in MMDs tends to be between multiple competitors, scholars expected that competition in the SMD tier would be dominated by candidates of two majority-seeking parties, while competition in the PR tier would be between those parties plus a raft of other, non-majority-seeking parties (e.g. Reed and Thies, 2001; Scheiner, 2012).

After electoral reform, the Democratic Party of Japan (DPJ) and the New Frontier Party (NFP) were formed. Both fielded large numbers of candidates in the SMD tier in the 1996 election. In 1998, the NFP disintegrated, leaving the DPJ as the second majority-seeking party. Since then, competition in most SMDs has been between an LDP and DPJ candidate (Reed, 2007). While both parties permit their candidates to be dual-listed in both tiers, they make their candidates’ chances of being resurrected in PR dependent upon how closely they lost their SMD. The fact that a candidate’s chances of entering parliament depend entirely on her SMD performance means we can assume that all LDP and DPJ candidates are trying to maximize their SMD vote shares (Bawn and Thies, 2003; McKean and Scheiner, 2000).

SMDs also contain candidates of non-majority-seeking parties, which capture the bulk of their seats in PR. Because most of these candidates have next to no chance of winning their SMD, their candidacies are thought to provide a “human face” for their party to increase its PR vote share (Cox and Schoppa, 2002; Mizusaki and Mori, 1998). Some of these small party candidates, however, are running in SMDs because their party leaders have formed an electoral alliance with a large party. During our period of study, three small parties formed such alliances: the Komeito (with the LDP since 2000), the Social Democratic Party (SDP) (with the DPJ in 2009), and the People’s New Party (PNP) (with the DPJ in 2009). In principle, these agreements involved the large party agreeing not to run candidates in certain districts and asking their supporters in those districts to vote for the candidate fielded by their small party ally. In return, the small party ally would agree to run candidates only in the districts “ceded” to them by the large party and ask their supporters in other districts to vote for the candidate of their large party ally.

While these agreements were not always successful (Reed and Shimizu, 2009; Reed, 2013), for available in the PR tier was 200 in the 1996 election, after which twenty seats were cut by the LDP and its then-coalition partners to reduce the number of Members of the HOR.
our purposes they mean that candidates from allied small parties will be trying to maximize their SMD vote shares, not boost their party’s PR vote share.

Under Japan’s new system, parties no longer need to run candidates against each other, which gives candidates incentives to cultivate and rely on a party label (Rosenbluth and Thies, 2010; Carey and Shugart, 1995). A well-designed party label can help candidates from large parties and their small party allies capture the much-larger vote share required to win an SMD. It helps candidates from all parties increase their party’s PR vote share, which increases their own odds of snaring one of those seats.

To test Hypothesis 1, we can compare how dispersed candidate positions were in districts prior to electoral reform with how dispersed they are in districts after electoral reform using all candidates prior to reform and candidates from majority-seeking parties after reform. We expect that positions will be less dispersed after reform. We can also leverage the different incentives faced by different categories of candidate running after the reform to conduct a within-electoral system test. We calculate the dispersion in candidate positions in districts after electoral reform using three categories of candidates: candidates from majority-seeking parties, candidates from majority-seeking parties plus their small party allies, and candidates from all parties presenting lists in the PR tier. We expect that dispersion will be lower when it is calculated using the first two categories of candidates than when it is calculated using the latter category because the latter category contains candidates who are using their SMD campaigns to boost their party’s PR vote share.4

To test Hypothesis 2, we can compare how dispersed positions were among candidates of the same party for all parties in existence prior to electoral reform with how dispersed they are among candidates of the same party for all parties in existence after reform. We expect that parties will be less dispersed after reform. We can also leverage variation in the intensity of intraparty competition within the LDP prior to reform to conduct a within-electoral system test. We create an index capturing the number of LDP candidates in a district relative to the number of seats available, and examine its relationship with the level of dispersion in LDP candidate positions in that district. We expect that districts with more intense intraparty competition

4Even though the incentives of these three categories of candidate appear to mirror what they would be in pure-SMD and pure-PR systems, it is possible that candidates in mixed systems are subject to pressures we have not anticipated, which might limit the applicability of our findings. We do not address the applicability of our results to pure systems in this paper and encourage future work to consider it.
will have more dispersion in LDP candidate positions.

We expect change to be apparent from the first election under the new system. The flurry of activity that accompanied the reform, as politicians created new parties and chose which incumbent would receive the party’s nomination in which district suggest that they had an understanding of what was required of them (Reed, 1995). This is perhaps unsurprising given the years of media attention to the issue and the efforts by previous LDP leaders to consider it (Curtis, 1999). Reflecting this, studies of the effects of electoral reform on campaigning (e.g. Hirano, 2006; Horiuchi and Saito, 2010; Catalinac, 2015), the assigning of ministerial and party posts (e.g. Krauss, Pekkanen and Nyblade, 2006; Pekkanen, Nyblade and Krauss, 2014), relationships with interest groups (e.g. Hamamoto, 2007), and policy outcomes (e.g. Horiuchi and Saito, 2003; Estevez-Abe, 2008; Rosenbluth and Thies, 2010) found effects soon after the reform.

3 Estimating Candidate Positions

We used Wordfish to estimate the ideological positions of 7,497 Japanese-language election manifests produced by the universe of non-frivolous candidates who competed in the eight HOR elections between 1986 and 2009. By non-frivolous candidates, we mean candidates who captured at least 10,000 votes in their districts or who were endorsed by one of the major parties fielding candidates in these eight elections.\(^5\) A method of unsupervised scaling, Wordfish treats all documents in a corpus as residing somewhere on a uni-dimensional scale, with their relative locations on the scale determining the choice of words contained therein (Slapin and Proksch, 2008). Developed to estimate the over-time ideological positioning of parties in Germany (Slapin and Proksch, 2008), Wordfish has since been applied to a diverse set of documents in a range of languages, and has uncovered substantively different dimensions of competition. Using Wordfish, Proksch and Slapin (2010) modeled ideological competition in English, French, and German European parliamentary speeches and Proksch, Slapin and Thies (2011) modeled it in Japanese party leader statements. Kluver (2009) used it to model where interest groups stood on a pro-

---

\(^5\)This amounts to 2% of the valid votes cast in the mean district under the old system and 5% of the valid votes cast in the mean district under the new system. For a complete list of “major parties”, see footnote 18. It is standard in work on Japanese elections to restrict analysis to non-frivolous candidates (e.g. Shinada, 2006; Nyblade and Reed, 2008).
versus anti-environmental control dimension and Grimmer and Stewart (2013) used it to model where Senators stood on a credit claiming-promises of pork dimension.

To use Wordfish to estimate ideological positions, one must have good reason to believe that ideological competition is occurring, can be summarized in a single dimension, and will be reflected in the documents chosen for analysis. Studies of Japanese politics leave no room for doubt that a fundamental ideological divide existed between the LDP on the right and the JSP and Japan Communist Party (JCP) on the left, respectively (e.g. Curtis, 1971; Thayer, 1969; Curtis, 1999). Evidence that this divide governed how parties competed and can be summarized in a single dimension is found in Laver and Benoit (2005), who asked experts to locate parties on a single left-right dimension, as well as six other policy dimensions. They found that locations of the six parties in 2003 lined up in the same way across five of the six policy dimensions, which led them to conclude that “party competition in Japan is inherently one dimensional” (Laver and Benoit, 2005, 202). Further evidence is found in (Proksch, Slapin and Thies, 2011), who used Wordfish to model ideological competition between Japanese parties using statements made by their leaders. While there is less evidence that this divide governed competition between LDP candidates, studies documenting ideology-infused policy disagreements over national security (Vogel, 1984), constitutional revision (Samuels and Boyd, 2005), China policy (Langdon, 1968), and political reform (Otaka, 1996), as well as characterizations of the LDP as a “diverse party in terms of ideology and policy” (Krauss and Pekkanen, 2010, 231) suggest that it may have done.

The absence of conclusive evidence that LDP candidates in the same district differentiated themselves with pork raises the possibility that differentiation may have occurred on other, possibly ideological, grounds (Krauss and Pekkanen, 2010; McCubbins and Rosenbluth, 1995).

We have good reason to believe that the candidate manifesto will represent the “totality of the author’s policy positions”, a requirement for extracting a left-right dimension (Slapin and Proksch, 2008, 712). The manifesto is a form of about 22 by 8 inches. Candidates can use the space on the form however they wish, so the length of the manifesto varies across candidate. Excluding punctuation and numbers, the number of words in the average manifesto in our corpus was 385. Manifestos usually include the candidate’s name, head shot, party affiliation, policy promises (under headings such as “Promises”, “Policies”, or “Public Pledges”), background information (under headings such as “Profile”, “Biography”, or “My Journey”), and occasionally, accomplishments and endorsements. Remarkably, the manifesto was one of only
six means candidates were allowed to use to communicate their policy views to voters during election campaigns. The requirement that it be distributed to all registered voters in the district at least two days before an election means that it was one of only two means accessible to all voters. Post-election surveys suggest that these restrictions did not reflect a lack of interest in the candidate or her views: on average, 43% of respondents across the 12 HOR elections between 1972 and 2005 named “a candidate who thinks about the nation’s politics as a whole” as factors governing their vote and 42% reported seeing the manifestos of candidates in their district (Catalinac, 2015). It is therefore likely that candidates took their manifestos seriously and used them to summarize the positions they were advertising in their broader campaigns.

We estimated the positions separately for each election because it is reasonable to assume that the issues upon which competition occurred varied slightly across election. The Online Appendix describes how we cleaned, tokenized (inserted spaces between words) and pre-processed the Japanese-language manifestos, ran Wordfish, and decided which end of the dimension represented the ideological right. The remainder of this section explains how we validated the positions recovered by the model. We used three strategies. First, we examined the position of the average candidate of each party. Figure 1 plots these averages, sorted from most ideologically left (smallest) to most ideologically right (largest), with the lines around the dots representing 95% confidence intervals. Several aspects of this figure suggest that the model recovered substantively-meaningful estimates. The average JCP candidate is located to the left of all other parties in all elections. The average LDP candidate is located to the right of the average socialist candidate in all elections, where socialist candidates ran from the JSP in the 1986, 1990, and 1993 elections, from the SDP and New Socialist Party (NSP) in the 1996 election, and from the SDP thereafter. The average LDP candidate is located to the right of the average DPJ candidate in all elections in which both parties ran. The confidence intervals around the average LDP and NLC position overlap in 1986 and a difference-in-means test confirmed that their means were indistinguishable. They merged a month after the election. Strikingly, the ordering of parties in 2003 exactly matches their ordering in a 2003 survey in which experts were asked to locate the parties on a dimension they were told was left-right (Laver and Benoit, 2005).

Second, we examined the correlation between our estimates and those obtained from other

6The other five were the newspaper advertisement, postcards, flyers, speeches, and televised policy broadcast.
Figure 1: Locations of the average candidate of each party on a left-right ideological dimension in elections to Japan’s HOR, 1986-2009. The lines around the dots represent 95% confidence intervals. The left is represented by smaller numbers.

data. The University of Tokyo and one of Japan’s largest newspapers, the Asahi Shimbun, have conducted several waves of the Asahi-Todai Elite Survey (ATES), which asks candidates
contesting HOR elections their positions on a battery of policy issues. In the 2003 and 2005 HOR elections, candidates were asked to locate themselves on a ten-point ideological scale, in which they were told 1 represented the most “progressive” (left) position and 10 represented the most “conservative” (right). These surveys boast high response rates: in 2003 it was 95% (1,104 of a total of 1,159 candidates), and in 2005 it was 91% (1,034 of a total of 1,131 candidates). In 2003, the correlation between the positions candidates reported in this survey and those estimated with Wordfish was positive and highly significant: Pearson’s \( r = .81 \) \((n=904)\).\(^7\) For 2005, the correlation between the positions candidates reported in the survey and those estimated with Wordfish was also positive and highly significant: Pearson’s \( r = .80 \) \((n=853)\).\(^8\)

Third, we read manifestos located at the right and left to evaluate whether the meaning of the dimension coheres with work on the nature of ideological competition in Japan. These have drawn two main conclusions. First, Curtis (1999, 29-30) describes how “violent ideological conflict” between conservatives committed to overturning the postwar order and progressives committed to furthering democratization gave way to a less-polarized political system in the 1970s in which conservatives were “committed to a policy of making cautious, incremental adjustments in the status quo” and progressives remained committed to reorganizing Japan’s political and economic system but had abandoned their most-extreme positions. Second, Proksch, Slapin and Thies (2011) and Laver and Benoit (2005) show that conservatives and progressives differ little on economics, but substantially on social, foreign, and environmental policy. Consistent with both, we found that the dimension was one of support versus opposition to the establishment, and the issues distinguishing the ends tended to concern social and foreign policy, not economics.

Manifestos on the right spoke of traditional values, the hometown, the family unit, established career paths, mainstream life choices, the agencies of the state, law and order, and the status quo in foreign policy. For example, candidates extolled the virtues of working together as a group and lamented the disappearance of warm, local communities were everyone had a role to play and respected others. They promised to pursue freedom in moderation, restore Japan’s spiritual backbone, realize a proud society built on deep bonds between people, encourage young people to remain in the hometown, encourage the buying and selling of locally-made

\(^7\)Of the 994 serious candidates who produced a manifesto in 2003, 90 did not answer the ideology question. The correlation was calculated from the remaining 904 candidates.

\(^8\)Of the 966 serious candidates who produced a manifesto in 2005, 113 did not answer the ideology question. The correlation was calculated from the remaining 853 candidates.
products, increase the health of youngsters through physical sports such as baseball and soccer, and further strengthen the U.S.-Japan alliance. In contrast, manifestos on the left spoke of challenging the establishment, protecting the rights of the individual, and upending the status quo, including in foreign policy. For example, candidates promised to get rid of discrimination, realize a gender-equal society, safeguard human rights, emphasize exams less and the growth and development of children more, stop building nuclear power plants, stop wasteful spending on public works, give rural areas the right to govern and fund themselves, correct unfairness in the tax system, abolish the U.S-Japan alliance, get rid of U.S-bases in Japan, and pursue an independent foreign policy. To summarize, it appears that Wordfish has located the manifestos on a substantively meaningful ideological dimension.

4 Results

We merged our validated estimates of candidate ideological positions with election data on these candidates and conducted the following tests.

4.1 Dispersion in Districts

To examine Hypothesis 1, we calculated the dispersion in candidate positions in all districts in all elections using all candidates prior to electoral reform and candidates from majority-seeking parties after reform. Our estimates were thus created using the universe of 2,520 candidates who ran in the last three elections under the old system and the 2,862 candidates who ran from the three large parties – the LDP, NFP, and DPJ – in the first five elections under the new system. Following Ezrow (2007), we use variance to measure dispersion, defined as the mean of each position’s squared difference from the mean position. We found that the mean within-district dispersion was 2.45 in 1986 (n=129 districts), 1.89 in 1990 (n=129), 1.87 in 1993 (n=129), 0.14 in 1996 (n=254), 0.16 in 2000 (n=225), 0.27 in 2003 (n=246), 0.24 in 2005 (n=280), and 1.43 in 2009 (n=263). While the decline from 1.87 in 1993 to 0.14 in 1996 suggests that electoral reform had the negative impact on within-district dispersion we had anticipated, mean dispersion also

---

9Focusing on large party candidates under the new system results in fewer than the universe of 300 districts because districts in which there was a single candidate from a large party drop out. In this and the subsequent tests, we also dropped the one district with an M of 1 in 1986 and 1990; the two districts in 1996 and 2005 in which one of the “non-frivolous” candidates did not produce a manifesto; and the district in 1996 in which a candidate had been mis-coded in the elections data.
declined between 1986 and 1993 and increased in 2009. To distinguish any possible effect of electoral reform from an effect of the passage of time, we ran the following regression, which tests for the presence of a structural break at the time of electoral reform and controls for other differences between districts:

\[
\text{dispersion}_{it} = \beta_0 + \beta_1 \text{electoral reform}_t + \beta_2 t + \beta_3 (\text{electoral reform}_t \times t) + Z_{it} + \epsilon_{it},
\]

where the outcome variable, \(\text{dispersion}_{it}\), is variance in candidate positions in district \(i\) in election \(t = 1, 2, ... 7, 8\) (pertaining to the 1986, 1990, ... 2005, 2009 HOR elections), \(\text{electoral reform}_t\) is a dummy variable indicating whether the observation is in the post-electoral reform period (i.e., if \(t \geq 4\)), \(Z_{it}\) are control variables pertaining to district \(i\) in election \(t\), and \(\epsilon_{it}\) is the error term. \(Z_{it}\) contains fixed effects for prefecture, electoral district, and the 2009 election. For reasons we elaborate upon below, 2009 was an unusual election. While the results hold with and without the 2009 dummy, including it increases model fit. In this regression, a significant coefficient on electoral reform would indicate that electoral reform had an impact on within-district dispersion even when the passage of time and other differences between districts are controlled for. A significant coefficient on electoral reform \(\times t\) would indicate that the passage of time had different effects on within-district dispersion before and after electoral reform.

The first two columns of Table 1 present the results of this regression, with and without the controls, with standard errors clustered by district. The coefficient on electoral reform and electoral reform \(\times t\) are significant in both models. As expected, electoral reform had a statistically significant negative impact on the dispersion of positions among candidates in a district, controlling for the passage of time and other district-level differences. The results also show that increases in time were associated with lower levels of within-district dispersion under the old electoral system and higher levels under the new. The figure on the left in Figure 10 presents a figure depicting the mean shift and differences-in-means tests.

The Online Appendix presents a figure depicting the mean shift and differences-in-means tests. Because electoral reform entailed the drawing of new district boundaries, the same district does not exist in both electoral systems. Instead, we have repeated observations of almost all the districts under the old system and then repeated observations of some of the new districts under the new (a large-scale redistricting occurred between 2000 and 2003, which means that many districts that existed in the 1996 and 2000 elections did not exist in the 2003, 2005, and 2009 elections, and vice versa). We calculated district fixed effects from the universe of electoral system-specific districts in the data.

Given that the dimension is support versus opposition to the establishment, the downward trend in dispersion from 1986 until 1993 means that candidates grew closer together in terms of the amount of change to the establishment they felt was necessary, and the upward trend from 1996 until 2005 means that candidates moved further apart on this dimension. While further analysis is needed, Section 5 provides evidence that this may have been due to the rise of political reform: as more conservative candidates addressed the issue and accepted a modicum of reform in
2 plots predicted values of the dependent variable with their 95% confidence intervals across the elections to illustrate the difference between the two electoral systems.\textsuperscript{13} Using the baseline regression specification, which regressed within-district dispersion on time, a Chow test returned a statistically significant result for a structural break at the time of electoral reform (the \( p \)-value on the Chow test statistic was \( <0.01 \)).\textsuperscript{14}

Table 1: Estimates from a structural break test. The dependent variable is the level of dispersion in candidate positions in a district for all districts across all eight HOR elections. In the first two columns, dispersion is calculated using all candidates under the old system and candidates from large parties under the new. The latter two columns present a robustness test, in which dispersion is calculated using competitive candidates under the old system and candidates from the three large parties under the new. Electoral reform had a statistically significant negative impact on dispersion in a district, controlling for the passage of time and other district-level differences.

<table>
<thead>
<tr>
<th></th>
<th>All candidates</th>
<th>Competitive candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interaction (+ controls)</td>
<td>Interaction (+ controls)</td>
</tr>
<tr>
<td>(Intercept)</td>
<td>2.65***</td>
<td>1.79***</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Time</td>
<td>-0.29***</td>
<td>-0.26***</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Electoral Reform</td>
<td>-3.79***</td>
<td>-2.93***</td>
</tr>
<tr>
<td></td>
<td>(0.16)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>Time ( \times ) Electoral Reform</td>
<td>0.56***</td>
<td>0.53***</td>
</tr>
<tr>
<td></td>
<td>(0.05)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Prefecture fixed effects</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>District fixed effects</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2009 dummy</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>( N )</td>
<td>1655</td>
<td>1652</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.46</td>
<td>0.23</td>
</tr>
<tr>
<td>adj. ( R^2 )</td>
<td>0.46</td>
<td>0.36</td>
</tr>
</tbody>
</table>

Standard errors clustered by district are in parentheses.

\( ^{\dagger} \text{significant at } p < .10; ^{*} p < .05; ^{**} p < .01; ^{***} p < .001 \)

We checked whether the higher levels of within-district dispersion under the old system are solely attributable to candidates with little chance of winning a seat articulating extreme positions. The theory expects that all candidates would have been more dispersed under the

\( 1990 \) and \( 1993 \) relative to \( 1986 \), within-district dispersion declined. After electoral reform, it may have been more straightforward for large party candidates to converge on the need for central government reform and reform of the bureaucracy, which they did in 1996, than on reforms that benefited the median voter at the expense of groups that had played a role in vote mobilization, such as farmers and special postmasters. This may explain why within-district dispersion increased over this period.

\( ^{13} \text{These predicted values were calculated from a regression that excluded fixed effects for prefecture and district to avoid aliased values. The Appendix includes this figure. } \)

\( ^{14} \text{A Chow test is an alternative means of testing for the presence of a structural break at a known break-point in the data (Chow, 1960). } \)
old system, not just those with little chance of winning. Given that votes tend to concentrate on the most competitive $M+1$ candidates in a district (Reed, 1991), we recalculated the dispersion in positions among candidates in a district for the three elections under the old system using only candidates who had been one of the top $M+1$ vote-getters in the district in the previous election. Of the 2,520 candidates who ran in the 1986, 1990, and 1993 elections, 1,590 fit this definition of “competitive”.\textsuperscript{15} We found that mean within-district dispersion was lower when recalculated using competitive candidates, but still higher than within-district dispersion in the first four elections under the new system. It was 1.40 in 1986 ($n=129$ districts, compared to 2.45 when it was calculated with all candidates); 1.52 in 1990 ($n=127$ districts, compared to 1.89 with all candidates), and 0.87 in 1993 ($n=128$, compared to 1.87 with all candidates).\textsuperscript{16} We conducted the same regression as above to test for the presence of a structural break at the time of electoral reform. The second two columns of Table 1 present the results of this regression, with and without the controls, with standard errors clustered by district.

\textsuperscript{15}In 1986, 559 of 800 candidates were “competitive”; in 1990, it was 516 of 854 candidates; and in 1993, it was 515 out of 866 candidates.

\textsuperscript{16}Concentrating our analysis on competitive candidates results in fewer districts because districts containing only one competitive candidate drop out.
Just as before, the coefficients on both electoral reform and electoral reform $\times t$ are significant in both models. This means that even after dispersion is recalculated using competitive candidates under the old system, electoral reform was found to have a statistically significant negative effect on dispersion, controlling for the passage of time and other district-level differences. Just as before, increases in time were associated with lower levels of within-district dispersion under the old system and higher levels under the new. The figure on the right in Figure 2 plots predicted values of the dependent variable with their 95% confidence intervals across each election to illustrate the difference between the two systems. A Chow test of the baseline regression specification returned a statistically significant result for a structural break at the time of electoral reform (the $p$-value on the Chow test statistic was $<0.01$). We can rule out the concern that the higher levels of dispersion under the old system were solely due to the inclusion of noncompetitive candidates.

These tests used variance to measure dispersion.\textsuperscript{17} The Online Appendix presents an alternative test using absolute distances between the positions of pairs of candidates in the same district. In a regression, $M$ (district magnitude) is found to exert a positive, statistically significant impact on the absolute distances between the highest and second-highest vote getter in a district and the $M$th and $M+1$ vote getter in a district, respectively. We also found that the variance in absolute distances between the highest and second-highest vote getter in a district is greater under the old system, when $M$ varied across district, than it is under the new, when it is constant across districts.

Finally, we leveraged variation in the incentives of different candidates after electoral reform to conduct a within-electoral system test. We calculated the dispersion in candidate positions in all districts in all elections under the new system using three categories of candidate: the 2,862 candidates running from the three large parties (the subject of the previous analysis); the 2,947 candidates running from either a large party or a small party allied to a large party; and the 4,672 candidates running from all parties presenting a list in the PR tier. Table 2 reports the mean level of dispersion in a district in each election under the new system using each category. There were no electoral alliances in 1996, so the values in the second and third columns in 1996 are identical.

\textsuperscript{17}We note that this is not problematic even though districts contained more candidates under the old system because variance does not increase with the size of the sample.
There are two findings. First, dispersion is always highest when it is calculated with candidates from all parties presenting a list in PR (the first column) than it is when calculated with candidates from the three large parties (the second column) or candidates from the three large parties and their small party allies (the third column). In each election, differences-in-means tests revealed statistically significant differences in mean dispersion between the first and second columns ($p$-value of $<0.01$) and the first and third columns (for elections since 2000) ($p$-value of $<0.01$). Second, dispersion is almost identical when it is calculated using candidates from the three large parties (the second column) and candidates from those parties plus their allies (the third column). In each election since 2000, differences-in-means tests showed no statistically significant difference in mean dispersion between the second and third columns. This supports our claim that candidates in the latter two categories are trying to win their districts, so converge. The former category contains candidates who have incentives to diverge because they are really campaigning in PR, which explains why dispersion is larger when it includes these candidates.

### 4.2 Dispersion in Parties

To examine Hypothesis 2, we calculated the dispersion in positions among candidates of the same party for almost all the parties that fielded candidates in these eight elections.\(^{18}\) We continued to use variance to measure dispersion. We found that the mean within-party dispersion was 0.54 in 1986 ($n=7$ parties), 0.81 in 1990 ($n=7$), 0.28 in 1993 ($n=9$), 0.13 in 1996 ($n=7$), 0.14 in 2000 ($n=7$), 0.13 in 2003 ($n=6$), 0.16 in 2005 ($n=7$), and 0.25 in 2009 ($n=7$). While the decline from 0.28 in 1993 to 0.13 in 1996 suggests that electoral reform had the negative impact on within-party dispersion we had anticipated, these means also reveal that within-party dispersion varied under the old electoral system.\(^{19}\) To distinguish any possible effect of electoral reform from an effect of the passage of time and control for other differences between parties, we ran the same

---

\(^{18}\)The only parties not included in this analysis were the Liberal Alliance, which fielded candidates in 1996, 2000, and 2003 and saw one candidate elected in 2000 and 2003, and the Happiness Realization Party, which ran candidates in 2009 and saw no candidates elected. Because these were minor parties, we only had manifestos for their candidates if they captured more than 10,000 votes, so left them out of the analysis. A complete list of the parties included are in 1986: the LDP, JCP, SDP, Komeito, DSP, SDL, and NLC; in 1990: LDP, JCP, SDP, Komeito, DSP, SDL, and Progressives; in 1993: LDP, JCP, SDP, Komeito, DSP, SDL, Sakigake, Japan New Party (JNP), and Shinseito; in 1996: LDP, DPJ, NFP, JCP, SDP, New Socialist Party, and Sakigake; 2000: LDP, DPJ, JCP, SDP, Conservatives, Liberals, and Komeito; 2003: LDP, DPJ, SDP, JCP, Komeito, and Conservatives; 2005: LDP, DPJ, Komeito, SDP, JCP, People’s New Party (PNP), and New Party Japan; and 2009: LDP, DPJ, Komeito, SDP, JCP, PNP, and Your Party.

\(^{19}\)The Online Appendix presents a figure depicting the mean shift and differences-in-means tests.
Table 2: Dispersion in a district when it is calculated using all candidates from parties presenting lists in PR (the first column), candidates of the three large parties (the second column), and candidates of the three large parties plus their small party allies (the third column) in HOR elections, 1996-2009. Dispersion is always higher in the first column relative to the latter two, which are virtually identical. Candidates who are trying to win their districts (the second and third columns), are converging, while candidates who are trying to boost their PR vote share (the first column) are diverging.

<table>
<thead>
<tr>
<th>Year</th>
<th>All Candidates</th>
<th>Candidates of Large Parties</th>
<th>Candidates of Large Parties and their Allies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( (n=4,672) )</td>
<td>( (n=2,862) )</td>
<td>( (n=2,947) )</td>
</tr>
<tr>
<td>1996</td>
<td>2.25</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(298 districts)</td>
<td>(254 districts)</td>
<td>(254 districts)</td>
</tr>
<tr>
<td>2000</td>
<td>2.26</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>(298 districts)</td>
<td>(225 districts)</td>
<td>(234 districts)</td>
</tr>
<tr>
<td>2003</td>
<td>2.43</td>
<td>0.27</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>(298 districts)</td>
<td>(246 districts)</td>
<td>(256 districts)</td>
</tr>
<tr>
<td>2005</td>
<td>2.43</td>
<td>0.24</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>(298 districts)</td>
<td>(280 districts)</td>
<td>(288 districts)</td>
</tr>
<tr>
<td>2009</td>
<td>1.93</td>
<td>1.43</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>(298 districts)</td>
<td>(263 districts)</td>
<td>(295 districts)</td>
</tr>
</tbody>
</table>

regression as above, where the outcome variable, dispersion\(_{it}\), is variance in positions among candidates in party \( i \) in election \( t = 1, 2, ..., 7, 8 \) (pertaining to 1986, 1990, ... 2005, 2009), electoral reform\(_{it}\) is a dummy variable indicating whether the observation is in the post-electoral reform period (i.e., if \( t \geq 4 \)), \( Z_{it} \) are control variables pertaining to party \( i \) in election \( t \), and \( \epsilon_{it} \) is the error term. \( Z_{it} \) contains party fixed effects.

Table 3 presents the results of this regression, with and without the fixed effects, with standard errors clustered by party. The coefficient on electoral reform and electoral reform \( \times \) \( t \) are significant in both models. As expected, electoral reform had a statistically significant negative impact on the dispersion of positions among candidates of the same party, controlling for the passage of time and other party-level differences. The first model shows that increases in
time were associated with higher levels of dispersion under the new electoral system and lower levels of dispersion under the old (the coefficient on time is only statistically significant at the 0.1 level in the model with fixed effects). Figure 3 plots predicted values of the dependent variable with their 95% confidence intervals across each election to illustrate the difference between the two systems.\textsuperscript{20} Using the simplest regression specification, which regressed within-party dispersion on time, a Chow test returned a statistically significant result for a structural break at the time of electoral reform (the \( p \)-value on the Chow test statistic was <0.01).

Table 3: Estimates from a structural break test. The dependent variable is the level of dispersion among candidates of the same party for all parties fielding candidates in these eight HOR elections. Electoral reform had a statistically significant negative impact on dispersion within a party, controlling for the passage of time and other party-level differences.

<table>
<thead>
<tr>
<th>Interaction</th>
<th>(with controls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>0.82***</td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
</tr>
<tr>
<td>Time</td>
<td>−0.14*</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
</tr>
<tr>
<td>Electoral Reform</td>
<td>−0.82***</td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
</tr>
<tr>
<td>Time ( \times ) Electoral Reform</td>
<td>0.17**</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
</tr>
<tr>
<td>Party fixed effects</td>
<td>✓</td>
</tr>
<tr>
<td>( N )</td>
<td>57</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.51</td>
</tr>
<tr>
<td>adj. ( R^2 )</td>
<td>0.48</td>
</tr>
</tbody>
</table>

\( \hat{\sigma}_e^2 \) standard errors clustered by party are in parentheses.

\( ^* \) significant at \( p < .10; ^{**} p < .05;^{***} p < .01;^{****} p < .001 \)

We checked whether the lower levels of within-party dispersion under the new system are solely attributable to new parties running candidates. It would be stronger evidence of the power of electoral rules if parties that had competed under both systems became more unified under the new. To evaluate this, we examined dispersion within the LDP. We found that dispersion in LDP candidate positions was 0.45 in 1986 (\( n=323 \) candidates), 0.67 in 1990 (\( n=334 \)), 0.22 in 1993 (\( n=284 \)), 0.09 in 1996 (\( n=287 \)), 0.11 in 2000 (\( n=271 \)), 0.10 in 2003 (\( n=277 \)), 0.12 in 2005 (\( n=290 \)), and 0.13 in 2009 (\( n=289 \)). While dispersion in LDP candidate positions fluctuated in elections under the old system, with 1993 exhibiting markedly less dispersion than 1986 or 1990, it is lower and more constant under the new.\textsuperscript{21} This suggests that the effects of electoral

\textsuperscript{20} As above, these predicted values were calculated from a regression that excluded party fixed effects.

\textsuperscript{21} The Online Appendix presents a figure depicting the variance in each election.
Within-party dispersion is lower under the new system.

We also checked whether the lower levels of within-LDP dispersion under the new system are solely attributable to new LDP candidates or whether LDP candidates who had competed under both sets of rules became more similar to their co-partisans under the new. To examine this, we identified the 64 LDP candidate pairs who had fought against each other in the same district in 1993 and who also fought in 1996, necessarily in different districts. If most of these pairs positioned themselves closer to each other in 1996 than in 1993, an election in which within-LDP dispersion was already lower than it had been previously, then we can conclude that the decline in within-LDP dispersion is not solely attributable to new candidates. For each of these 64 LDP candidate pairs, we calculated the absolute distances between their positions in the 1993 and 1996 elections. We found that 73% (or 47) of these pairs positioned themselves closer together in 1996 than in 1993. A difference in means test revealed a statistically significant difference in mean absolute distance between their positions in 1993 (0.51, \( n=64 \) candidate pairs) and mean absolute distance between their positions in 1996 (0.28, \( n=64 \)) (\( p \)-value <0.001). This suggests that the effects of electoral reform are not limited to new candidates.

As an illustration of how this decline played out in one prefecture, we focus on the three LDP candidates who ran in Okayama 1st in 1993: Aisawa Ichiro, Hiranuma Takeo, and Kumashiro

---

22The other two parties that survived the electoral reform to run in 1996 were the JCP and Sakigake. Because neither of these parties ran candidates against each other in 1993, our analysis focuses on candidate pairs from the LDP.
Akihiko. This district had an $M$ of five. All three LDP candidates won a seat: Aisawa placed second, Hiranuma placed third, and Kumashiro placed fifth. The upper-most section of Figure 4 draws the location of the positions adopted by these candidates in 1993. The absolute distance between the positions of Hiranuma (1.35) and Aisawa (0.46) was 0.89, that between the positions of Hiranuma and Kumashiro (1.14) was 0.21, and that between the positions of Aisawa and Kumashiro was 0.68. In 1994, the boundaries of Okayama 1st and 2nd districts were redrawn to create five new SMDs. In 1996, Aisawa gained the LDP nomination in Okayama 1st, Kumashiro gained it in Okayama 2nd, and Hiranuma gained it in Okayama 3rd. All three candidates won again in 1996. Aisawa and Hiramuna ran against candidates from the NFP and the JCP, respectively, while Kumashiro fought against candidates from the DPJ and JCP. The lower three sections of Figure 4 draw the location of the positions adopted by these candidates in 1996. The decline in absolute distances is apparent. The distance between the positions of Hiranuma (0.98) and Aisawa (0.95) was 0.03, the distance between the positions of Hiranuma and Kumashiro (0.86) was 0.12, and the distance between the positions of Aisawa and Kumashiro was 0.08. All three candidate pairs positioned themselves closer together in 1996 than in 1993.

Finally, Hypothesis 2 expects that within-party dispersion is larger under the old system because of intra-party competition. We can directly test this by examining the relationship between dispersion in the positions of LDP candidates in a district and the intensity of intra-party competition in that district. We calculated the dispersion in LDP candidate positions in the 339 districts in which more than one LDP candidate ran in the three elections under the old system, and regressed this on an index capturing the number of LDP candidates in that district relative to $M$, the number of seats available. This index ranges from a low of 0.33 (for districts with an $M$ of six with two LDP candidates running) to a high of 1 (for districts in which the number of LDP candidates matched the number of seats available). Table 4 presents the results, with and without fixed effects for prefecture and district. Model 1 shows that increases in intra-party competition have a positive, significant effect on dispersion in LDP candidate positions in a district. Model 2 shows that even when prefecture- and district-level differences are controlled for, the coefficient on intra-party competition retains its significance at the 0.1 level. That districts with more LDP candidates relative to the number of seats available had more dispersion in LDP candidate positions is evidence that parties were more divided under
Figure 4: Locations of the three LDP candidates who ran in Okayama 1st ($M=5$) in 1993 (upper-most section) and locations of the same candidates who ran in Okayama 1st, 2nd, and 3rd Districts ($M=1$, respectively) in 1996 (lower three sections). Their positions are closer in 1996 than in 1993.
the old system because of intra-party competition.\textsuperscript{23}

Table 4: Estimates from a regression of dispersion in LDP candidate positions in a district on the intensity of intraparty competition in that district for elections to Japan’s HOR, 1986-1993. Intraparty competition has a positive, significant impact on dispersion (Model 1). When prefecture- and district-level differences are controlled for, the coefficient retains its significance at the 0.1 level (Model 2).

<table>
<thead>
<tr>
<th>District-level Dispersion in LDP (with controls) Candidate Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Intra-Party Competition</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Prefecture fixed effects</td>
</tr>
<tr>
<td>District fixed effects</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>$R^2$</td>
</tr>
<tr>
<td>adj. $R^2$</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
\textsuperscript{†} significant at $p < .10$; \textsuperscript{*} $p < .05$; \textsuperscript{**} $p < .01$; \textsuperscript{***} $p < .001$

As an example, we turn to Kagoshima 1st in 1990. In this district, four candidates contested two seats. Two candidates were from the LDP (resulting in an intra-party competition score of 1), one was from the JSP, and one was from the JCP. The LDP’s Nikaido Susumu wrote a manifesto that located him at 0.44, close to the median LDP position. He told voters that while education needed to pass on Japan’s traditions and culture, it also needed to cherish the individual personalities of each child and ensure that Japanese children were internationalized. He spoke of the need to improve conditions for working women by setting up more creches and day cares, and of the need for political reform, including money politics and factional politics. Nikaido placed first by about 20,000 votes. At 2.94, the LDP’s Yamanaka Sadanori’s manifesto was located on the extreme right. It emphasized his role in obtaining things for the district, including roads, schools, airports, resorts, a depopulation law, and customs infrastructure so that Shibushi Bay could become an entry point to Japan. The message was that if elected, Yamanaka would do more of the same. Yamanaka ended up placing third, 28 votes behind the JSP’s Arikawa Seiji. Arikawa’s manifesto was located left of center, at -0.94. He told

\textsuperscript{23}Given that LDP candidates had access to other means of differentiating themselves, including bailiwicks in different geographic areas of the district (Hirano, 2006) and committee memberships (McCubbins and Rosenbluth, 1995), it is possible that the relationship between intraparty competition and ideological dispersion would be stronger if we were controlling for these other differentiation strategies.
voters the time had come to entrust governance to the opposition, which had demonstrated its lawmaking ability after capturing a majority in the 1989 Upper House election. He called for an end to LDP rule and the money and graft that had gone along with it, and promised to abolish the consumption tax. JCP candidate Shibatate Toshiaki was a distant fourth. At -0.40, his manifesto was located between the center and Arikawa’s position. Whereas Shibatate shared Arikawa’s promise to abolish the consumption tax, he told voters that the defeat of the consumption tax bill in the Upper House meant that politics had started to reflect the will of the people and he would make sure that continued. He promised to cut military spending, restrain political donations, and address government policies that were having negative impacts on the prefecture.

4.3 The 2009 DPJ Landslide

The above section revealed that within-district and within-party dispersion were higher in 2009 than in the previous four elections under the new system. The 2009 election resulted in a landslide victory for the DPJ. It won 308 seats to the LDP’s 119. While the LDP had temporarily lost control of government for ten months when it fell 33 seats short of a majority in 1993, 2009 was the first election since 1958 in which it failed to capture a plurality. Heralded as the “most significant political transformation since the LDP’s formation and assumption of power in 1955” (Kushida and Lipsy, 2013, 3), it was brought about by reform-minded voters becoming disenchanted with successive LDP governments for prioritizing the “wrong” issues and disillusioned with the party’s role in the loss of millions of pension records (Rosenbluth and Thies, 2010). Even though it was comprised of a “motley collection” of politicians, who held radically-different views on issues such as the necessity of U.S. bases in Japan (e.g. Yomiuri Shimbun, 2009c,b), the DPJ was able to capitalize on voter mood by adopting a “liberal manifesto” that highlighted its differences from the governing LDP (Sawa, 2013).

While Hypothesis 1 expects that candidates trying to win their SMDs will converge on the positions of their opponents, it is reasonable to expect that candidates who anticipate relatively easy electoral victories will be under less pressure to do so, unless convergence happens to locate them closer to their “real” preferences. Evidence existed as early as a month before DPJ candidates would have been writing their manifestos for the August 30 election that their party
would emerge victorious.\textsuperscript{24} In early July, a survey conducted by the conservative-leaning Yomiuri Shimbun revealed that 41\% of respondents planned to vote for the DPJ in PR (compared to 24\% for the LDP); 41\% planned to vote for the DPJ candidate in their SMD (compared to 23\% for the LDP candidate); and when asked who they thought was a suitable Prime Minister, 46\% named DPJ leader Hatoyama Yukio (compared to 21\% who named the current LDP Prime Minister, Aso Taro) \cite{Yomiuri2009a}. Subsequent iterations of the same poll conducted on July 21-23, August 4-6, August 18-20, and August 25-27, respectively, yielded exceedingly similar estimates of the party’s lead \cite{Yomiuri2009b,Yomiuri2009c,Yomiuri2009d}. These poll results would have been bolstered by the party’s decisive victories in a string of local elections, including the Tokyo Metropolitan Assembly election in July, in which 40\% of ballots cast went to DPJ candidates (compared to only 25\% that went to LDP candidates). The media described these victories as a “barometer” for what was about to happen at the national level \cite[e.g.][]{DailyYomiuri2009}.

We posit that the most likely explanation for the increase in within-district dispersion in 2009 is that DPJ candidates who were confident of victory and had left-leaning preferences located themselves further to the left, which would explain the increased distance between them and their same-district LDP opponents. The most likely explanation for the increase in within-party dispersion in 2009 is an increase in within-DPJ dispersion, as DPJ candidates confident of victory with left-leaning preferences located themselves further to the left, but their colleagues who were less-confident or who had right-leaning colleagues did not. We asked a DPJ politician why his party positioned itself further from the LDP in 2009 and his answer supports this:

\begin{quote}
“We tried to model ourselves on the LDP to get the public to see us as different from the old opposition parties. We wanted to paint the picture of us as a “responsible alternative”. But when it looked like we were about to get power, we thought we’d built ourselves up enough, succeeded in creating an image as “responsible”, so we should emphasize our differences with the LDP, you know, reveal our true colors”.\textsuperscript{25}
\end{quote}

In support of this, Figure 5 plots the positions of all 4,977 candidates who ran in the five elections after electoral reform. Lower numbers indicate the ideological left. The light (dark) gray rugs at the bottom of each plot identify the location of DPJ (LDP) candidates, with the black bands indicating the mean DPJ (LDP) candidate position. The figure shows that LDP and DPJ candidates positioned themselves closer together and had within-party variances that

\textsuperscript{24}Candidates are required to submit their manifesto to their local electoral commission by 5pm on the first day of the official campaign, which in this case was August 18.

\textsuperscript{25}Interview, HOR Member and DPJ Member Nagashima Akihisa, May 5, 2015, New York, NY.
were more similar until 2009, when they located themselves further apart and DPJ candidates exhibited larger variance in their positions. Juxtaposing their positions against the entire distribution of candidate positions in each election enables us to see that the relative location of LDP candidates is similar in all five elections, but the relative location of DPJ candidates is different in 2009. Whereas in the first four elections both parties occupied the center-right, with the mean DPJ position located to the immediate left of the mean LDP position, in 2009 the LDP continued to occupy a similar position whereas the DPJ located itself further on the left. This is evidence that the increase in within-district dispersion in 2009 is explained by the average DPJ candidate locating themselves further to the left.

Figure 5: The distribution of candidate positions in HOR elections, 1986-2009. Lower numbers indicate the ideological left. The light (dark) gray rugs at the bottom of each plot identify the location of DPJ (LDP) candidates, with the black bands indicating the mean DPJ (LDP) candidate position. The increase in within-district dispersion in 2009 appears to be the product of DPJ candidates locating themselves on the left, and the increase in within-party dispersion in 2009 appears to be the product of an increase in within-DPJ dispersion.

That the increase in within-party dispersion in 2009 is explained by an increase in DPJ can-
didate dispersion becomes clear when we examine dispersion in other parties. Six other parties contested the 2009 election. The variance in DPJ candidate positions (0.74, \(n=271\) candidates) was an order of magnitude larger than the variance in the LDP (0.13, \(n=289\) candidates), JCP (0.20, \(n=152\)), SDP (0.15, \(n=31\)), Komeito (0.06, \(n=8\)), Your Party (0.22, \(n=14\)), and PNP (0.23, \(n=9\)). It was also an order of magnitude larger than the variance in all other parties that had contested an election under the new system, including itself in previous elections. Altogether there are 34 observations of within-party dispersion under the new system. Excluding the DPJ in 2009, within-party dispersion ranged from a low of 0.06 for Komeito candidates in 2009 (\(n=8\) candidates) to a high of 0.27 for New Socialist Party candidates in 1996 (\(n=36\)). At 0.74, the dispersion in DPJ candidate positions in 2009 was almost three times larger than the party with the next-largest dispersion. It was also larger than its own dispersion in previous elections, which was 0.10 in 1996 (\(n=143\) candidates), 0.16 in 2000 (\(n=242\)), 0.16 in 2003 (\(n=267\)), and 0.19 in 2005 (\(n=290\)).

To distinguish our claim that anticipation of a landslide changed the behavior of DPJ candidates from an alternative claim that anticipation of a landslide led the party to nominate different candidates, who then behaved differently, we analyzed the 178 DPJ candidates who ran in the same district in 2005 and 2009. We found that the variance in their positions also increased between the two elections, from 0.19 in 2005 to 0.72 in 2009, which was statistically indistinguishable from the variance in all 271 DPJ candidate positions in 2009. Of these 178 DPJ candidates, 142 fought against the same LDP opponent in 2005 and 2009. In 2005, the mean absolute distance between the candidates in these 142 pairs was 0.5, whereas it was 1.39 in 2009. This was statistically indistinguishable from the mean absolute distance between the candidates in all 263 LDP-DPJ candidate pairs in 2009, which was 1.43. This means that even though the DPJ nominated 74 new candidates in 2009, neither the increase in within-DPJ dispersion nor the increase in within-district dispersion is attributable to these candidates. The changed behavior of the 142 DPJ candidates who contested the same district against the same LDP foes in both elections is discernible in Figure 6. This plots the positions of all 1,787 candidates who competed in the 2005 and 2009 elections. The light (dark) gray rugs at the bottom of each plot identify the location of these 142 DPJ (LDP) candidates, with the black bands indicating the mean DPJ (LDP) candidate position. It reveals that the same DPJ candidates positioned themselves further away from co-partisans and same-district LDP opponents in 2009. While the
relative location of their 142 LDP foes remained similar in both elections, the relative location of DPJ candidates was located further to the left in 2009.

Figure 6: The distribution of candidate positions in HOR elections, 1986-2009. Lower numbers indicate the ideological left. The light (dark) gray rugs at the bottom of each plot identify the location of the 142 DPJ (LDP) candidates who competed against the same LDP (DPJ) opponent in the same district in both elections, with the black bands indicating the mean DPJ (LDP) candidate position. The same DPJ candidates exhibited greater variance in their positions and greater distance from their LDP opponents in 2009 relative to 2005.

To evaluate our claim that left-leaning DPJ candidates who were confident they would win located themselves further to the left in 2009, which explains the increase in within-district and within-party dispersion, we regressed the absolute distances between the positions of all 263 DPJ candidates and their same-district LDP opponents in 2009 on the number of elections the DPJ candidate had contested, whether her 2009 LDP opponent was competitive (defined as having won the same district in 2003 and 2005), and an interaction between these two variables. We included variables stipulating whether the DPJ candidate had formerly run as a socialist, LDP, or Liberal Party candidate, the DPJ candidate’s gender and age, the urbanness of the district, and the prefecture in which the district was located. The results, presented in the Online Appendix, show that being less certain of one’s victory (facing a competitive LDP candidate without any election experience) is associated with less distance from one’s LDP opponent, while having left-leaning preferences (being a former socialist) is associated with more. Running in Iwate and Fukushima prefectures, where the DPJ was widely expected to (and did) win all SMDs, was also associated with more distance from one’s opponent. Given that these distances are also a function of LDP candidate decisions about where to locate themselves, which we
cannot control for, that we still observe a relationship between electoral security, ideological leaning, and distance from one’s LDP opponent increases our confidence that it exists.

As an example, the DPJ candidate located closest to her same-district LDP opponent in 2009 was Nakanowatari Noriko, a young woman running in Aomori 2nd for the first time against a competitive LDP candidate, Eto Akinori. Nakanowatari was located at 1.13, whereas Eto was located at 1.15. She told voters that her driving force was creating a world in which children would grow up glad to have been born in Japan and glad to be Japanese. She promised to enhance food safety, ensure that Japanese children ate healthy food, increase self-sufficiency to reduce Japan’s reliance on imports, require food to be stamped with its place of origin, ensure the health of the agriculture industry from the perspective of consumers, farmers, and fishermen, reduce the need for small businesses to pay health insurance fees, and offload some of the central government’s tasks onto localities. By way of comparison, the DPJ candidate at the median of the distribution of DPJ positions in 2009 was Nakano Jo, a young man running for the third time in Saitama 14th. Nakano was located at -0.20. Nakano also faced a competitive LDP candidate. Beyond extolling the virtues of change, Nakano offered no personal creed. Instead, he concentrated on promises that the DPJ would implement, which included a child allowance, support for pregnant women, a better pension system, the abolishing of the latter-stage elderly health care system, the restructuring of health care, rules banning political donations from businesses, and a reduction in number of Members of Parliament. Like Nakanowatari, he discussed agriculture, but with a focus on “agriculture for the cities”. While more research is necessary, on balance this evidence suggests that the expectation of a relatively easy electoral victory in 2009 changed the behavior of DPJ candidates, and their changed behavior explains the unusual observations.

5 Alternative Explanations

In the seven years between the coming down of the Berlin Wall and the first election under the new system, Japan experienced an economic recession, new security threats, and changes in its party system. Could the convergence in candidate positions within districts or parties (or both) be a product of such variables? While our main results depend upon a before-and-after-electoral-reform comparison, which is vulnerable to charges that another variable may be
responsible, our analysis also included two within-electoral system tests. It is unlikely that a variable that changed around the time of electoral reform could account for variation in the dispersion of LDP candidate positions across districts under the old system, or variation in the dispersion of positions across different categories of candidates under the new system, yet our theory can.

Upon closer examination, we find that the results obtained from our before-and-after comparison are less vulnerable than they might first appear. This is because while variables such as new security threats might be sufficient to push candidates closer together if those candidates were already competing under the new system, it is unlikely they would have had this effect under the old. Here we take each result in turn and explain why it would have been difficult to obtain in the absence of electoral reform. First, a plausible alternative explanation for the decline in within-district dispersion is convergence in the preferences of large party supporters. Convergence could have been about, for example, how to deal with the North Korean missile threat. The problem with this is that two of the three large parties were not formed until after electoral reform. This requires us to tell a more-complicated story in which voters became unhappy with how the existing opposition parties were dealing with the issue and sought the formation of a second large party that would offer similar solutions to the LDP.

Insofar as voter unhappiness can be measured in vote shares, however, we must conclude that voters had been “unhappy” with Japan’s opposition parties for years, even decades. While new parties occasionally formed under Japan’s old electoral system, they never ran enough candidates to qualify as alternatives to the LDP (Curtis, 1988). The main reason for this was the relatively low vote shares required to win seats under the old system, which discouraged smaller opposition parties from joining forces (e.g. Kohno, 1997). The 1993 election in fact illustrates the constraints placed upon opposition parties by the electoral system: the JSP lost almost half its Members of Parliament, and the LDP suffered defections from members who accused it of being insufficiently committed to political reform. And yet none of the new opposition parties that formed in 1993 ran enough candidates to qualify as an alternative to the LDP. This suggests that no matter how unhappy voters were with the opposition, a second large opposition party was unlikely to form.

Further evidence against this alternative explanation can be found in the issues discussed in the manifestos. If voters were unhappy with how the opposition was dealing with the new
security threats, globalization, or economic recession, it is reasonable to expect that this would be reflected in what was discussed in 1993 and converged on in 1996. Using the validated topics uncovered with topic modeling of the same collection of manifestos in Catalinac (2015), we found that approximately 49% of the average candidate manifesto in 1993 concerned topics related to political reform (reducing corruption, issuing stricter fines, and electoral reform), 25% concerned discussion of private goods for the candidate’s district, less than 2% concerned Japan’s role in the global economy, and national security did not feature. Curtis (1999) also found that voter anger about the economy was largely missing in 1993. In 1996, 27% concerned topics related to political reform and 20% was devoted to private goods. National security increased to 0.5%, while Japan in the global economy dropped to 1%. In 1996, candidates from the three large parties appeared to converge on the need for reform in the areas of streamlining and reorganizing the central government, elevating the role of politicians relative to bureaucrats in the policymaking process, devolving power to the regions, and expanding redistribution. There is little evidence of a groundswell of concern about national security or the economy, which would be consistent with a claim that voters were so concerned they sought the formation of a second large party, which then converged on the LDP’s position.

A plausible alternative explanation for the convergence of candidates on their co-partisans, on the other hand, is a homogenization of the preferences of party supporters. However, a homogenization of party supporter preferences would not have been sufficient to push candidates closer to their co-partisans under the old system because those candidates would still have needed ways to differentiate themselves. According to Myerson (1993, 856), candidates facing intra-party competition will “create favored minorities, even in situations where all voters are initially the same”. It is more likely that candidates facing party supporters with homogeneous preferences under the old system would have responded by attempting to carve out new shades of disagreement in these preferences. For evidence of this, we can again turn to 1993, when the entire electorate appeared to favor political reform. Reflecting their incentives to differentiate rather than converge, right- and left-leaning LDP candidates defined the problem differently and proposed different solutions. LDP candidates on the left, for example, told voters that seasoned politicians had destroyed politics in their pursuit of special interests, and proposed solutions such as stripping politicians convicted of wrongdoing of the right to run again, allowing the government to seize their assets, introducing term limits to prevent power accumulation, and
reforming the electoral system. LDP candidates on the right, on the other hand, told voters that the problem was one of declining trust in politics and electoral reform was not the solution and merely introduced new problems. They spoke of the need for politicians and parties to regret what they had done, engage in self-reform, remember the need to act ethically, and always put their country and hometown above themselves.

Figure 4 introduced the three LDP candidates who contested Okayama 1st in 1993 and the new Okayama 1st, 2nd, and 3rd districts in 1996. Despite being located relatively close together in 1993 (between the median (1.01) and third quartile (1.35) of the LDP candidate distribution), shades of disagreement in their positions on political reform were apparent. Hiranuma (located at 1.35) told voters that the changes happening in Japan and elsewhere meant that they ought to prioritize political stability, and recognizing that, he planned to remain in the party, where he had already been campaigning for reform, and rebuild it from within. Kumashiro (1.14) told voters that the LDP needed to develop “new political feelings” and as a newcomer, he was well-positioned to help it do that. He promised to realize elections that cost less and impose larger fines on politicians who broke the law. Aisawa (0.46) wrote a shorter, snappier manifesto with the headline “Declaration of the New Group of Reformers!” , in which he promised to use his youth and passion to bring about political and party reform. Their manifestos also embodied differences in other areas: Hiranuma spoke of the need to realize a more harmonious society and protect traditional Japanese mountain villages; Kumashiro bemoaned the fact that women were not having and raising children, which he attributed to Japan’s excessive focus on economic growth; and Aisawa promised to create a society in which the elderly and disabled would be able to work. We can conclude that it is unlikely that a homogenization of party supporter preferences would have pushed co-partisans closer together in the absence of electoral reform.

6 Conclusion

We have at least three findings of interest and several avenues of future research to suggest. Our first finding is that candidates converge in SMDs and diverge in MMDs. We obtained this result by leveraging variation in district magnitude across the two electoral systems Japan used over the course of this study and within the mixed member system it has used since 1994. Specifically, we found that under Japan’s old system, candidates positioned themselves relatively far from
their opponents in the district. Under the new system, large party candidates and their small party allies, who have incentives to try to win their districts, position themselves close together, while candidates of unallied small parties, who have incentives to use their SMD campaigns to increase their party’s PR vote share, position themselves far apart. An important takeaway is that evidence of non-convergence where convergence is due should not be grounds for dismissing the validity of spatial theories. Whereas it might look like candidates in SMDs are adopting different stances on the pertinent issues of the day, their stances would likely be further apart if they were competing in MMDs.

Our second finding is that candidates converge on their co-partisans in systems without intraparty competition and diverge in systems with intraparty competition. We obtained this result by leveraging variation in intraparty competition across Japan’s two electoral systems and variation in the intensity of intraparty competition faced by LDP candidates under Japan’s old electoral system. Specifically, we found that candidates locate themselves closer to co-partisans after electoral reform than before, and LDP candidates who faced more intense intraparty competition under the old system located themselves further from their same-district co-partisans than their peers who faced less intense intraparty competition. This is evidence that electoral systems and specifically, the presence or absence of intraparty competition, affects the ideological cohesion of parties. It is also the first evidence to date that LDP candidates competing in the same district under the old electoral system used ideology to differentiate themselves. While previous work sought evidence of differentiation in their committee memberships (e.g. McCubbins and Rosenbluth, 1995; Krauss and Pekkanen, 2010), their results suggest that candidates may have also employed other means. Our results suggest that LDP candidates likely employed some combination of differentiation based on pork provided through committees and differentiation based on ideology. We leave this for future research.

Our third finding is that candidates behaved differently in 2009. The 2009 election produced a landslide victory for the DPJ. We posited that the pressure to converge is alleviated in elections expected to produce landslides. Being a strategy to maximize votes, it need not be employed when candidates anticipate relatively easy electoral victories. We found preliminary evidence that DPJ candidates who were confident of victory and had left-leaning preferences located themselves further to the left of their LDP opponents, while their colleagues who were less confident and held right-leaning preferences did not. As a result, the average DPJ candidate
was located further from her LDP opponent in 2009 and further from her co-partisans. For Japan scholars, this means that the government formed after the 2009 election was based on a lack of ideological consensus relative to those formed after previous elections under this electoral system. This provides a hypothesis for why the legislative record of the first non-LDP government in fifty four years fell short of expectations, a legacy that continues to have consequences for the party today. More generally, that the anticipation of a relatively easy electoral victory could lead to such changes in positioning raises the possibility that it may also influence other aspects of candidate behavior. Scholars looking to test general theories about electoral competition with a single election would do well to remember this.

Future research should focus on several questions. First, while we have concentrated on the dispersion in candidate positions, future research should examine the locations of those positions. Examining how candidate locations may or may not have changed over time would enable us to empirically evaluate claims that Japanese politicians have shifted to the ideological right in recent years (e.g. Winkler, 2013). If such a shift was found, we could tease out the relative effects of Japan’s electoral reform, which some scholarship suggest should incline governments to the ideological right (Iversen and Soskice, 2006), from exogenous shocks such as the rise of China and economic recession. Second, because the vast majority of candidates contesting elections under the new system are from large parties, we may conclude that Japan’s electoral reform had the effect of narrowing the ideological gap between those parties. Scholars interested in polarization should use the case of Japan to examine whether this decline in ideological polarization has been associated with changes in, for example, the importance of valence considerations such as integrity and competence (e.g. Clark and Leiter, 2013), voter attitudes toward parties, politics, or issues (e.g. Hetherington, 2001), and the diversity of views represented in the news media (e.g. Baum, 2012). Finally, future research should also examine the relationship between the positions of candidates and parties and the voters they represent. While surveys have found that candidates are more extreme than both voters and party supporters (Taniguchi, 2006), whether this holds when positions are estimated with material generated for the purpose of winning an election should be examined.
References


