# Political Consequences of Structural Change: Explaining the LDP's Decline

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## Abstract

What explains the 2009 electoral loss by Japan's Liberal Democratic Party (LDP) and more generally, Japan's changing political landscape? While the LDP's loss to the Democratic Party of Japan (DPJ) was large in vote count and impact, creating the first non-LDP government in the post-war period, the LDP's popularity had been in gradual decline over several elections. Despite its advantageous position as the incumbent party in power and the continued absence of a strong opposition party, the LDP lost crucial votes even in districts long under their control. Such electoral results suggest a long-term, amplifying structural change that has shifted the political preferences of Japanese voters. We seek to explain the LDP's decline over the past several elections by exploring many of the ongoing structural changes in Japan and their influence on political outcomes.

Key words: LDP, structural change, Japan elections

## 1. Why did the LDP lose?

Last August (2009), in what was perhaps the most memorable Lower House election in the post-war period, Japan's ruling Liberal Democratic Party (LDP) suffered a catastrophic loss to the opposition party, the Democratic Party of Japan (DPJ). For the first time since it first came to power in 1955, the LPD was no longer the ruling party, handing over the political reigns to the victorious but inexperienced DPJ. What explains this 2009 electoral loss by the LDP and more generally, Japan's changing political landscape?

Undoubtedly, the LDP suffered a large and significant electoral loss last August, losing 155 seats in single member districts and 22 seats in the proportional representation seats, winning a total of only 119 seats. Meanwhile, the opposition party, the DPJ, won 195 new seats for a total of 308 seats, handing the LDP the worst electoral loss in its history. However, while there is no question as to the magnitude of this loss and its significance for both the LDP and Japanese politics more broadly, the LDP had been losing votes in every election for nearly two decades. Since going into coalition rule for the first time in 1993, the LDP's popularity had been in decline.[1] Thus, rather than taking the 2009 LDP defeat as a complete surprise, we extend

our analysis back several elections in an attempt to better understand the LDP's electoral defeat.

Most importantly, the 2009 electoral loss of the LDP was significant in several important ways, not only for Japanese politics, but also for our understanding of political change more broadly. The LDP was one of the longest ruling parties under a democratic system; its politicians rode on the advantages of being an incumbent for several decades during the post-war era. Political science theories argue for the overwhelming advantages given an incumbent politician due to name recognition, access to resources, insider knowhow, and extensive political networks among other factors.[2] The electoral loss of the LDP in late August 2009 gives us a rare opportunity to understand how a party so long in power with all its incumbency advantages may still suffer such a significant electoral loss.

## 2. Possible explanations for LDP loss

Numerous academic theories have tried to explain the changes to Japanese politics in recent years. Perhaps the most rigorously studied and often cited cause is the 1994 change in electoral rules from a single non transferable vote system to a single member district system.[3] This change has stimulated some changes in political behavior; for example, it is said that politicians must now rely on their party line to carry them through electoral campaigns rather than their ability to bring pork home from Tokyo.[4]

Others point to Japan's troubled economy. Many sense that Japan's lengthy economic stagnation finally got people fed up with the LDP – the party long in power during the entire post-war period. Some in fact say that the 2009 LDP loss and DPJ win was not a vote for the DPJ but a vote for change – anything but the LDP – to bring faster economic recovery to a country long suffering from the post-bubble blues.

Yet another possible explanation is the "failure" of Prime Minister Koizumi's reforms. Although radical and popular during his time, many of the structural changes that Koizumi set in place have now been reversed. It is often said that Koizumi's efforts towards structural change in were too radical both for his own LDP party and for the broader economy. Many have resisted the changes he set in gear, and some (including his immediate successor Prime Minister Abe) have reverted back to the pre-Koizumi days. The un-privatization of the postal system is one such example.

In contrast to academic explanations, the media and talking heads have focused on "the word

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1) The 2005 Lower House Election in which former Prime Minister Junichiro Koizumi's LDP won what is now dubbed the Postal Elections was a notable exception.
2) On incumbency advantage in Japan, see Hayama (1999), Scheiner (2005).
3) See Rosenbluth, Saito and Yamada (2010) in this volume.
4) See, for example, Reed, Scheiner and Thies (2009).

in the streets" or sentiments seemingly most often voiced by the general public which point to *kakusa* or growing economic inequalities. Major national newspapers including the Asahi Shinbun have carried several series of articles highlighting the growing economic divide between the high wage earners in Japan's urban centers and the lower wage earners or unemployed in the rural hinterlands. Still others focus on phenomena not often of concern to many voters until quite recently: the working poor, single mothers, and childhood poverty. One shocking report noted that roughly 14% of Japanese children grow up in poverty[5], one of the highest rates of childhood poverty among developed nations.[6] Most of these articles and news stories are anecdotal, highlighting the hardships suffered by individuals. More systematic data on the number of citizens living in poverty remains spotty, as evidenced by recent revelations on numerous elderly citizens gone "missing", but there appears to be a gut sense that something has gone wrong with Japan's self image of a small island country, largely middle class.

During the weeks leading up to an election and the weeks following, when talking heads and other experts make public comments on their predictions and assessments, they often point to the same limited sources of information. Most often used are cabinet approval rates and polling data showing declining party support which are timely and most readily accessible. However, such polls and data do not allow the media or scholars to understand the reason why they are witnessing changing political behavior. There is little explanation as to why there has been a sudden and steep decline in cabinet approval rates, as has been repeatedly the case for the last several prime ministers. These polls also fail to show why there has been a steady decline in LDP support, even in the rural areas, even though voters, commentators, and party leaders alike have been sensing this decline for well over a decade. What lies at the core of this voter discontent that became so obvious last fall?

Taking this inquiry one step further, this paper seeks to contribute to a greater understanding about voter behavior more generally by asking what motivates voters to vote against incumbents. Do voters really vote for or against a party or their local candidate based on the behavior of ruling cabinet members? If not, why would we look to cabinet approval rates and gathered from polling data to predict or understand voting behavior? Do voters vote more locally based on individual needs and interests?

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5) Child poverty rate is defined as the share of all children living in households with an equivalised income of less than 50% of the median. Japan's median household income is roughly 4,500,000 yen.

6) OECD Economic Survey of Japan, 2006.

## 3. The data

### a. Declining support for the LDP

We attempt to understand the decline in the support for the LDP during the post-bubble years by looking at the changes in the percentage of votes cast for LDP politicians at the national and prefectural levels. We measure support for the LDP as the percentage of votes cast for LDP politicians in any given election in each electoral district. We also measure the change in support for the LPD by looking at the difference in the percentage of votes cast for LDP politicians across consecutive elections in each electoral district.

While we are interested in understanding the stunning defeat of the LDP during the 2009 lower house elections, the decline in LDP popularity has been a much more gradual and prolonged process. Thus we measure support for the LDP beginning with the 2005 and 2009 lower house elections and the 1999, 2003 and 2007 prefectural assembly elections.
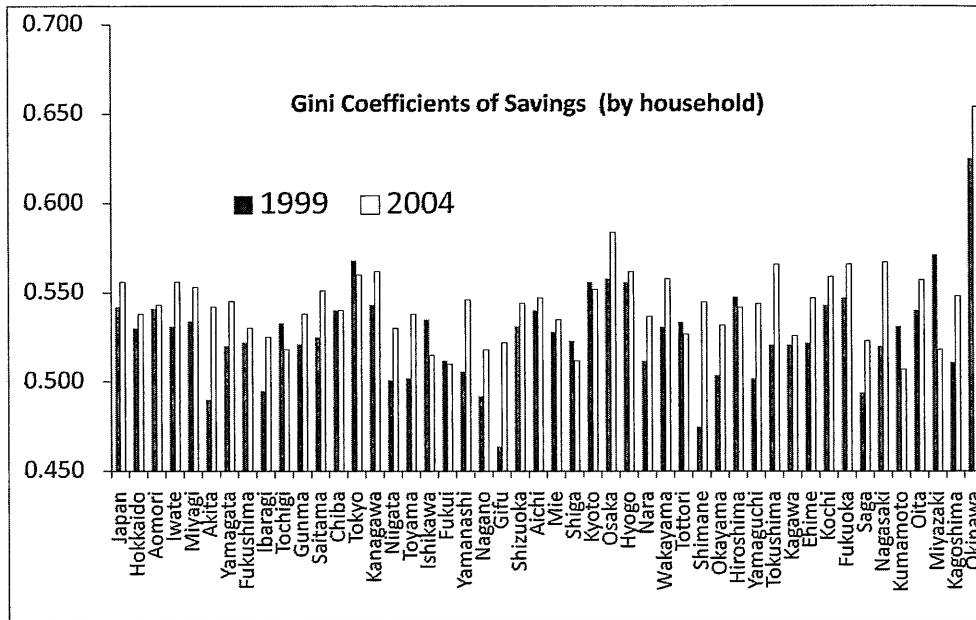
### b. What explains the decline in LDP votes?

Given the media coverage on the increasing concern over income inequalities and regional differences, we first attempt to understand to what extent these concerns are reflected in the domestic economy, and in turn, in the decline in electoral support for the LDP. The first challenge is to understand the mechanism at work relating income inequality to electoral support for the LDP. When and how do voters become sensitive to income inequality? Does political disillusion occur when a voter's income level becomes significantly lower than his or her immediate neighbors? Or are voters more sensitive to differences in income levels across a wider geographic space, making rural voters sensitive to the growing divide between their income levels and those of their urban counterparts? Or are voters more sensitive to changes in their perceptions of income inequality over time, allowing them to compare differences in income levels today to that of ten or twenty years prior? These questions each point to several distinct ways of measuring income inequality and how we may relate this to changes in voter behavior.

In this paper, we first measure income inequality using the Gini coefficient on all 47 prefectures in Japan. The Gini coefficient is an often used measure of income inequality that captures differences in income at one point in time across geographic space. Thus if we believe that voters are sensitive to perceived income inequalities regardless of the geographic distance or lack of shared regional characteristics between regions, the Gini coefficient may be a suitable measure.

What is of particular interest especially in the case of Japan is the need to also take into account savings disparities when we discuss growing economic inequalities. We use the

Graph 1. Savings and Economic Disparity in Japan

**Gini Coefficients of Savings (by household)**

■ 1999    □ 2004

Sources: National Survey of Family Income and Expenditure, Family Income and Expenditure Survey

National Survey of Family Income and Expenditure to examine the levels and changes to the household income and savings levels in 1999 and 2004 (see Graph 1). If we look at the spread of income alone, between 1999 and 2004, inequalities have declined, but if we take savings into account, then inequality increases over time. In particular, between 1999 and 2004, Tokyo sees a decline in inequality over time, but in all other prefectures there is an increase in inequality. If we look at income alone, because Japan is a rapidly aging society, we see an overall decline as older people retire and see a drop in their incomes. But if we take savings into account, because older people tend to have higher savings the average rate of savings goes up. Japan now has many younger people who cannot afford to save much for the future. As Japan's retired population with high rates of savings increases, inequality between them and younger' generations, especially those left out of the job market, also increases.

We also attempt to test the effects of larger social and economic trends in Japan that have received much attention by both the media and scholars in recent years. Japan's aging society tops this list, due to its demographic as well as its economic implications. Japan is experiencing a confluence of several problems at once: lengthening longevity, low birth rates, and a declining population, all of which combine to create a general sense of malaise among voters. We measure the influence of an ageing voter population on electoral outcomes and LDP popularity by looking at the proportion of the population over the age of 65. The LDP has long been supported by voters in rural areas where the average age of voters is relatively high. As Japan's overall population becomes older, with aging trends more acute in rural areas, have older voters

remained loyal to the LDP? Or might we see the opposite trend where older voters who have long supported the LDP turn away from their party in droves, disappointed in their performance and inability to provide for their needs as they once could?

We next step back to examine some basic economic and social characteristics of each locality which were previously associated with LDP support to see how they now relate to declining LDP vote share. As discussed in the introduction, prior to the bursting of the economic bubble in the early 1990s, the LDP thrived on distributing wealth from the center, both as formulaically distributed fiscal expenditures and as pork, especially in the form of politically determined public works projects. We thus begin by looking at the relationship between fiscal transfers from the national government to localities, and how this may or may no longer correlate to support for the LDP. We measure fiscal transfers in four ways: the local allocation tax grant, the national treasury disbursement, investment expenses, and self financial resources. Investment expenses refers to investments made in long term capital assets such as infrastructure, but also includes investments made for recovery from disasters or for mitigating unemployment. For the local allocation tax grant, the national treasury disbursement and investment expenses, we divide the amounts distributed to each electoral district by the district population to calculate per person yen amounts. For the self financial resources, we divide this by the total fiscal income of the electoral district to calculate the percentage share of self financial resources in each electoral district.

Another possible explanatory factor is the industrial structure of a locality. Farmers and small and medium enterprises have historically been strong supporters of the LDP. Thus, areas with a heavy primary sector component to their industrial structure have tended to vote for LPD candidates. What has happened to this relationship? Has the great reduction in the number of farmers in recent years failed to maintain support for the LDP especially in rural areas? Has the decline in public works related to agriculture such as land development and irrigation turned farmers away from the LDP? Or have the opposition party DPJ's tactics in luring farmers to their camp through promises such as the guarantee of minimum livelihood succeeded in turning LDP supporters into DPJ voters?

We measure the industrial structure of the electoral districts of interest in two ways. We first rely on census data and use the proportion of the working population employed in each sector. We begin by using large industrial groupings of primary, secondary and tertiary sectors. We then examine smaller categories of industrial groups known to have particular political leanings such as agriculture, construction, and finance and insurance. Admittedly, while these measures capture the importance of specific industries or industry groups in each electoral district, they fail to capture change over time, and relative proportions among various industries within an electoral district. We acknowledge this deficiency and attempt to capture such movements using more dynamic measures as discussed below.

Before giving the results of the analysis and our overall findings, we note some limitations of our data. First, while Japan has extensive and detailed data on various social and economic

indicators at the national level, sub-national level data, especially that beyond the prefectural level remains scarce and non standardized. Much of the data on measures such as industrial structure are not comparable across prefectures. We continue to make efforts on this end to find comparable data at the sub-national level, but for now, our analysis of the prefectural assembly level support for the LDP remains somewhat restricted.

Second, with respect to the measures for support for the LDP, as we are interested in understanding declining electoral support, we are limited to using data from actual elections which are held every four years in principal but sometimes not in reality. The lower house has had elections in 2000, 2003, 2005 and 2009 while the prefectural assemblies have had elections in 1999, 2003 and 2007 with a handful of prefectures holding elections on off years.

Third, while national level data on our independent variables are largely available, the years for which the data are collected can be irregular. For example, the National Survey of Family Income and Expenditure conducts a family income and expenditure survey every five years. Currently, data are available for 1999 and 2004 with the 2009 data soon to be made available. However, these years do not match either the lower house election years or the prefectural assembly election years. The Family Income and Expenditure Survey, on the other hand, was held in 2008 and 2009, but the sampling size was relatively small. We must also take into account the effects of time lag between social and economic changes and the potential electoral reactions.

## 4. Correlation tables and what they suggest

We are first and foremost interested in what matters in determining voter support for the LDP. As such, we carefully examine correlation values between each of the possible explanatory variables and the phenomenon of interest: declining electoral support for the LDP. First, the correlation between the percentage of votes garnered by the LDP and economic inequality reveals a consistently negative relationship for the lower house elections. (Table 1.) We use Gini coefficients at the household level for both income and savings as measures of economic inequality. In the lower house elections of 2000 and 2005, higher Gini coefficients led to greater loss of vote shares for the LDP. That is, those electoral districts that saw greater inequality saw a decline in LDP vote shares. This effect was larger in 2000 than in 2005 when then Prime

Table 1. Correlation coefficients between the percentage of LDP votes and Gini coefficients

| Prefecture-level Analysis | Year | Gin Coefficients of Annual Income (All households) | Gini Coefficients of Savings (All households) | Sample size |
|---|---|---|---|---|
| Lower House general election | 2000 | −0.140 | −0.420** | 47 |
| | 2005 | −0.125 | −0.376** | 47 |
| Prefectural assembly election | 1999 | 0.031 | −0.541** | 47 |
| | 2003 | 0.025 | −0.331* | 47 |

Minister Koizumi regained some popular support for the LDP. For the prefectural assembly elections, however, inequality in income had the opposite relationship: here, Gini coefficients for income were positively correlated to vote shares for the LDP. Numerous factors can account for this, one being that in local government elections, voters may be making electoral decisions on a more local set of issues than in national level elections. While they may see issues of inequality as a national level problem, when it comes to local elections, they may be voting on more locally specific issues such as neighborhood public safety or local road conditions. We must be careful to note, however, that strictly speaking, only the correlation coefficients on savings disparities were statistically significant. We speculate that income levels may be more volatile during this time, thus serving as a less meaningful measure of economic wellbeing. In contrast, savings levels are more predictable, and perhaps seen as more directly related to economic wellbeing; that is, if a family has to dig into their savings, then the economy must really be bad, as opposed to fluctuation in income which may be perceived as a more temporary and thus palatable decline in economic health.

Second, we examine the relationship between the percentage of votes garnered by the LDP and demographic characteristics of each electoral district. In our prefectural level analysis where we agglomerate the data to the prefectural level, there is a negative correlation between population size of the electoral district and the percentage of votes garnered by the LDP. (Table 2.) If population size is one indicator of urbanness, we consistently see less electoral support for the LDP in more urban electoral districts with larger populations. We then look at the percentage of the population over the age of 65 and see that there is a positive correlation between older voter populations and LDP support. Both of these trends appear to hold similarly at the lower house and prefectural assembly levels. We next attempt this same analysis at the electoral district level in 2005 and 2009 for the lower house elections and in 1999 and 2003 for the prefectural assembly elections. We also examine the factors behind the change in the level of electoral support for the LDP at the electoral district level. (Table 3.) Here, instead of using the population as a proxy for urbanness, we are able to use data measuring the area of densely inhabited districts. In all of these attempts, our results match the analysis conducted at the prefectural level, confirming our former findings.

Next, we examine the relationship between LDP support and fiscal transfers from the national government. (Table 4.) We obtained electoral district level data for both the lower house general elections and for the prefectural assembly elections. Overall, for both types of elections, for all years for which we have data, we find that the LDP had more electoral support where there were greater disbursements from the center. In particular, larger local allocation tax grants and larger investment expenses correlated positively with stronger support for the LDP. These findings are consistent with conventional wisdom about how the LDP has historically garnered electoral support. Interestingly, for the lower house elections, the correlation between the local allocation tax grants and LDP support was greater in 2009 than in 2005, the year that former Prime Minister Koizumi won his famous postal elections. However,

Table 2. Correlation coefficients between the percentage of LDP votes and demographic factors (prefectural level analysis)

| Prefecture-level Analysis | Year | Population | Percentage over age 65 | Sample size |
|---|---|---|---|---|
| Lower House general election | 1996 | −0.505** | 0.580** | 47 |
| | 2000 | −0.565** | 0.575** | 47 |
| | 2003 | −0.502** | 0.476** | 47 |
| | 2005 | −0.233 | 0.239 | 47 |
| | 2009 | −0.434** | 0.467** | 47 |
| Prefectural assembly election | 1999 | −0.356* | 0.384** | 47 |
| | 2003 | −0.277 | 0.160 | 47 |

Source: Population Census

Table 3. Correlation coefficients between the percentage of LDP votes and demographic factors (electoral district level analysis)

| Electoral District-level Analysis | Year | Percentage of DID population | Percentage over age 65 | Sample size |
|---|---|---|---|---|
| Lower House general election | 2005 | −0.329** | 0.254** | 286 |
| | 2009 | −0.485** | 0.434** | 286 |
| | 2005-2009 | −0.218** | 0.242** | 286 |
| Prefectural assembly election | 1999 | −0.338** | 0.283** | 502 |
| | 2003 | −0.448** | 0.361** | 502 |
| | 1999-2003 | −0.112* | 0.106* | 502 |

Table 4. Correlation coefficients between the percentage of LDP votes and fiscal transfers from the national government

| Electoral District-level Analysis | Year | Local Allocation Tax Grant | National Treasury Disbursement | Sample size |
|---|---|---|---|---|
| Lower House general election | 2005 | 0.235** | 0.057 | 254 |
| | 2009 | 0.319** | 0.014 | 254 |
| | 05-09 | 0.219** | 0.111 | 254 |
| Prefectural assembly election | 1999 | 0.215** | 0.041 | 405 |
| | 2003 | 0.310** | -0.108* | 405 |
| | 99-03 | 0.115* | -0.008 | 405 |

| Electoral District-level Analysis | Year | Investment Expenses | Self Financial Resources | Sample size |
|---|---|---|---|---|
| Lower House general election | 2005 | 0.252** | -0.189** | 254 |
| | 2009 | 0.139* | -0.322** | 254 |
| | 05-09 | 0.143* | -0.181** | 254 |
| Prefectural assembly election | 1999 | 0.208** | -0.222** | 405 |
| | 2003 | 0.239** | -0.298** | 405 |
| | 99-03 | 0.044 | -0.123* | 405 |

Table 5. Correlation coefficients between the percentage of LDP votes and employment distribution by industry

| Electoral District-level Analysis | Year | Primary Industry | Secondary Industry | Tertiary Industry | Sample size |
|---|---|---|---|---|---|
| Lower House general election | 2005 | 0.277** | 0.112 | −0.230** | 286 |
| | 2009 | 0.418** | 0.189** | −0.355** | 286 |
| | 05-09 | 0.196** | 0.106 | −0.176** | 286 |
| Prefectural assembly election | 1999 | 0.232** | 0.174** | −0.282** | 502 |
| | 2003 | 0.349** | 0.164** | −0.335** | 502 |
| | 99-03 | 0.130** | -0.039 | -0.059 | 502 |

the correlation between investment expenses and LDP support decreased over these two elections.

The category "self financial resources" measures the capacity of a local government to collect its own funds. It includes fiscal income such as local taxes, usage fees, and administrative fees. We use this as a proxy for the strength of the local government to procure its own income, or as a measure of its fiscal independence.

Finally, we turn to the relationship between industrial structure and electoral support for the LDP. We find that as has long been the case, the relationship between the primary industry (agriculture, fisheries and forestry) and the LDP remains positive, while the relationship between the tertiary industry and the LDP remains negative. Interestingly, the effects are larger in 2009 than in 2005, despite the DPJs efforts to lure away the farming population in rural areas. Furthermore, this relationship holds at both the lower house general election level and at the prefectural assembly election level. We next looked at agriculture, construction and finance and insurance as specific examples of industries long known for supporting the LDP. We see continued strong support for the LDP in agriculture and construction, but in finance and insurance where the LDP led reforms of the 90s and 2000s have been unpopular, LDP support no longer exists.

## 5. What we can say (so far) with the data we have

Thus far, our data and analysis reveal the following trends. First, simply put, our findings show that economics matter. Several different types of economic indicators are significantly correlated with declining voter support for the LDP. On the other hand, those industries and sectors that have long supported the LDP still appear to vote for the LDP. While there has been much talk about the weakening of the LDP's once reliable vote collecting machines, voting behavior appears to remain largely unchanged. Our data cannot show whether or not organizations such as JA (Japan Agricultural Cooperatives) remain influential or if they have now been replaced by other organizations or if vote collecting machines have disappeared all together and the data simply show a lag effect. At the very least, we find little evidence of a collapse in the rural and agricultural vote for the LDP.

Second, despite our perception of the 2009 lower house elections as being exceptional, the decline in LDP popularity has been gradual, and the social and economic trends that are correlated to this decline have also been consistent and gradual. As such, while the 2009 elections may have been the turning point for Japan's post-war one party rule, it was neither a reversal in trends nor a wholly unexpected outcome.

Finally, if in fact the 2009 elections were a continuation of a much longer decline, and no sudden dramatic changes took place in the economic and social landscape of Japan, then the culmination of several ongoing trends appears to have sealed the fate for the LDP. While we cannot dismiss

the fact that the LDP lost its position as the ruling party for the first time, the loss came not as a sudden fall, but at a time when many of Japan's ills including declining birthrates, long term structural unemployment, and an almost two decade long deflationary economy joined forces to vote in a new ruling party.


## 6. Future research and limitations

One of the largest obstacles to matching electoral data with social and economic indicators, even in a country like Japan where data is relatively easy to access, is the lack of comparable data across time and space. First and foremost, Japan has undergone a large scale redistricting of its towns and villages (*shikuchoson*), with 44% of its local governments merging between the years 1999 and 2006. Such administrative district changes have made it extremely challenging to create comparative data spanning multiple decades.

Second, economic data, especially data concerning the domestic flow of goods and services, remains incomparable across prefectures. In order to capture the fluidity of industrial structures, and to test the relevance of one type of industrial structure over another, we need to use input-output tables and skyline analysis. Input-output tables allow us to calculate the flow of goods and services in a particular geographic area, giving a dynamic measure of an electoral district's industrial structure. Skyline analysis takes this one step further by painting a picture of the industrial structure of a given locality, taking into account relative proportions of economic activity in each industry or sector within a particular geographic space. For example, input-output tables and skyline analysis allow us to capture the phenomenon of hollowing out, where Japan has lost many of its manufacturing jobs to neighboring countries with lower costs of labor by illustrating change over time and the overall shape of the locality's industrial structure. Until very recently, input-output tables and the like at the sub-national level remained rare, with each prefecture using their own standards and methods for calculating such numbers if at all. Standardization efforts continue, and we hope to carry out more nuanced sub-national level analysis as such data becomes available.

Third, by using lower house and prefectural assembly electoral districts as the unit of analysis, we run into problems of "special cases" where veteran statesmen or unique situations give rise to irregular electoral outcomes. One way to get around this problem may be to use proportional representation blocks (PR blocks) as our unit of analysis, thereby aggregating several electoral districts but retaining regional distinction.[7] The above noted problem of incomparable economic data across prefectures make this solution somewhat challenging, but tests of the effects of key economic indicators should be possible.

Finally, elections occur irregularly, especially at the national level, while census data and other

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7) Thanks to Shigeo Hirano for this suggestion.

economic indicators come every five years at most. Matching the relevant electoral data to social and economic indicators while taking into account time lag possibilities remains challenging. How local conditions adapt to changing national regulations, or how shifting industrial structures influence voter sentiment is probably inconsistent, and varies greatly over time and space. Moreover, we do not yet have a good understanding of how much time lag should be calculated into the analysis. The surprising electoral results of 2009 themselves speak to the unpredictability of this time lag; we still have little understanding of exactly what it takes to throw a ruling party out of power, much less one that has been in power for multiple decades.