

Turnout Twist: Higher Voter Turnout in Lower-Level Elections

by

Yusaku Horiuchi

Submitted to the Department of Political Science
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in Political Science

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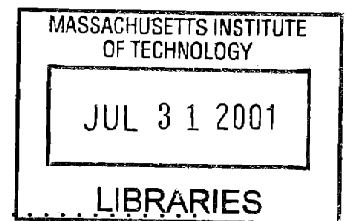
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Author

Department of Political Science

May 4, 2001

Certified by.

.....

Stephen Ansolabehere
Professor of Political Science
Thesis Supervisor

Accepted by ...

Barry R. Posen
Professor of Political Science
Chairman, Graduate Program Committee

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Abstract

American and European political scientists have claimed that subnational elections record lower voter turnout than national elections in most democracies. Contrary to this conventional wisdom, Japanese municipal elections often record considerably *higher* voter turnout than national elections, particularly in small towns and villages. Why is Japan different from most other democracies? Is Japan the only exception? What explains such exceptionally high local turnout in rural Japan? Under what conditions do lower-level elections produce higher voter turnout? By examining these questions, this dissertation aims to improve our understanding of *incentives* affecting electoral participation both at national and subnational levels.

First, I show that Japan is not the only exception. There are some other important cases of *higher voter turnout in lower-level elections*, which I define as the “turnout twist” phenomenon. They can be found in Australia, Canada, Finland, France, India, Italy, Northern Ireland, Spain, and Switzerland. Second, I hypothesize that relative voter turnout in subnational vs. national elections is determined by the relative magnitudes of *how much is at stake* and *how much votes count* (“vote significance”) in these elections. In lower-level elections, electoral outcomes may less significantly affect public policies, but citizens may be able to affect the electoral outcomes more significantly by voting. Therefore, if the effect of vote significance outweighs the effect of stake, “turnout twist” is a logically possible consequence. I statistically test this model using cross-national data, cross-municipality Japanese data, and individual-level survey data from Japan. The results show that the model has impressive explanatory power. Finally, based on findings from my field research, I show that the electoral system used in Japanese municipal assembly elections (i.e., the single non-transferable vote system with an at-large district) produces very small vote margins between candidates, and thus gives a strong incentive to both voters and candidates to think hard about how much votes count.

Thesis Supervisor: Stephen Ansolabehere
Title: Professor of Political Science

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Chapter 1

Introduction

1.1 Puzzle

This research project was launched in a classroom when Professor Stephen Ansolabehere, an instructor of a graduate seminar on electoral politics, introduced the following conventional wisdom in the political science literature. “The lower the level of government, the lower the level of voter turnout. In the United States, for example, voter turnout in state legislative elections is lower than in Presidential or Congressional elections, but city council elections record even lower turnout than state elections. This pattern is commonly observed in most other democracies.” I reflexively raised my hand and said, “That is not the case in Japan. Japanese local elections often record *higher* voter turnout than national elections.” My prior belief as a native of Japan clearly contradicted what Professor Ansolabehere just introduced.

Immediately after the class, to persuade my skeptical professor, I started searching for empirical data of voter turnout in Japanese national and subnational elections, and found two interesting web pages on Internet. The first page showed prefecture-level average voter turnout rates in all kinds of elections recently held in Shizuoka Prefecture in Japan (Shizuoka-ken Senkyo Kanri Inkai N.d.). The data supported my prior belief. The voter turnout rate was 61.45% in the 1996 Lower House (House of

Representatives) election and 44.77% in the 1995 Upper House (House of Councillors) election. At the local level, the average voter turnout rate was 69.67% in city assembly elections and 86.48% in town and village assembly elections. The municipal assembly elections, particularly in small towns and villages, attracted significantly *more* voters than the national elections. The second page showed voter turnout rates in various types of elections concurrently held on October 20, 1996 in the Town of Nagato in Nagano Prefecture (Nagano-ken Nagato-chō N.d.). Again, the data updated my prior belief. The proportion of the number of *effective* votes (i.e., the number of votes excluding invalid votes, such as blank votes) to the number of eligible voters¹ was 84.53% in the Lower House election (a single-member district portion),² 87.64% in the Nagano gubernatorial election, and 89.58% in the Nagato town assembly election. Therefore, in Nagato, the lower the level of government, the *higher* the percentage of effective votes.

To verify whether or not these cases in Shizuoka and Nagano Prefectures were typical of Japanese turnout patterns, I went to the Harvard library to search for more data, and found detailed municipality-level electoral data from Tochigi Prefecture (Tochigi-ken Senkyo Kanri Iinkai 1988). The data, which include the results of subnational elections held between 1983 to 1987, supported my prior belief again. The average voter turnout was 72.32% in prefectural assembly elections, but 89.44% in municipal assembly elections. The lower the level of subnational government, the higher the level of participation.

Many questions followed after these preliminary inquiries. Is Japan the only ex-

¹Since all Japanese citizens over twenty years old are automatically registered to vote, the number of *eligible* voters is almost equivalent to the number of registered voters and the voting-age population.

²The 1996 Lower House election was held under a new electoral system: a combination of the single-member district (SMD) system and the proportional representation (PR) system. Under this system, each voter has two ballots: one for SMD and another for PR.

ception to the conventional pattern? Why is Japan (and some others, if any) so different from other democracies? How have scholars of Japanese politics explained such an unconventional Japanese turnout pattern? Why do American and European political scientists often believe that lower-level elections produce lower voter turnout? Is there any theoretical model explaining *both* the conventional and unconventional patterns? Why is the level of voter turnout different according to the level of government? What is the critically important factor producing notably high municipal turnout in rural Japan? What policy and theoretical implications can we draw from Japanese local elections? After passing the qualification examinations, which were held a month after the memorable session in the seminar, I decided to explore these questions in my doctoral dissertation, and asked Professor Ansolabehere to be the chair of my dissertation committee.

1.2 Overview

This project has proceeded with the following stages: collecting data, proposing a model, testing the model, and drawing implications. This section provides an overview of the findings and arguments in each of these stages.

1.2.1 Data

I commenced this research project by collecting as much voter turnout data as possible, including data introduced in the existing literature, official data published in various countries' statistical yearbooks and election reports, machine-readable data available from the Harvard-MIT Data Center, data downloadable from various web pages, and so on. Through such an extensive data collecting effort, I found the following.

First, Japan is indeed an exception. Namely, the lowest-level legislative elections

(i.e., municipal assembly elections) often record significantly *higher* voter turnout than the highest-level legislative elections (i.e., the elections for the House of Representatives). This pattern, however, holds only in small rural towns and villages, but not in large urban cities.

Second, I also found that Japan is not the *only* exception. In Australia, state assembly elections often recorded higher voter turnout than Commonwealth elections before voting became compulsory in 1924. Canadian provincial elections have often brought more voters to the polls than federal elections in some provinces, such as Newfoundland, Prince Edward Island, and Quebec. In Åland, a small but highly autonomous province in Finland, municipal elections have consistently recorded higher turnout than national parliamentary elections. In France, communal elections often produce higher voter turnout than national parliamentary elections, particularly in small communes. Many Indian state assembly elections often produce considerably higher turnout than federal Lower House elections. In some cities in southern Italy, the 1990 local elections recorded higher voter turnout than the 1992 national elections. The first election to the new Northern Ireland Assembly, which was held in 1998, recorded significantly higher turnout than the 1997 United Kingdom parliamentary elections. In small municipalities in Spain, the 1987 local elections produced higher turnout than two national elections held before and after the local elections. In relatively small Swiss communes, communal elections record higher turnout than national elections, particularly under a proportional representation system.

In short, there are enough examples for us to doubt the universality of the conventional wisdom. The empirical data show that *lower-level elections record higher voter turnout* in various democracies, at least in some parts of these democracies. In this dissertation, I define such an unconventional voter turnout as the “turnout twist” phenomenon.

1.2.2 A Model

Why do political scientists often believe that lower-level subnational elections produce lower voter turnout? How have scholars, if any, explained the “turnout twist” patterns observed in Japan and some other democracies?

There are two existing explanations. First, in most countries, lower-level elections produce lower voter turnout, simply because there is less at stake. In other words, people pay much less attention to who gets elected in lower-level elections, because who gets elected in these elections does not affect policy outcomes and citizens’ daily lives. Second, in a few exceptional countries, such as France and Japan, subnational elections record remarkably higher voter turnout, because of their unique cultural backgrounds.

I would argue that neither of these existing models is fully convincing. Scholars supporting the less-at-stake model only highlight American and European cases for which the model seems to give an explanation, while ignoring counter-intuitive cases or treating them as “exceptions.” The cultural model also treats some cases (e.g., France and Japan) as “exceptions” without carefully examining why they are different from other democracies. As far as I know, no scholar has yet proposed a cross-nationally applicable model, which can give a consistent explanation for both the conventional pattern (i.e., higher turnout in higher-level elections) and the unconventional “turnout twist” pattern (i.e., higher turnout in *lower-level* elections).

In this dissertation, I propose such a widely applicable model. Based on the rational-choice theoretical framework, I hypothesize that the *relative* level of voter turnout in subnational vs. national elections is a function of not only *how much is at stake* but also *how much citizens’ votes count* in elections. As many scholars believe, there may be less at stake in subnational elections. Citizens’ votes, however, may count more in subnational elections, because there are a greater number of subnational-level elected officials *per capita*. Namely, in smaller-unit subnational

elections, voters may perceive that there is a greater chance of their ballots affecting electoral outcomes, because each politician is elected by a much smaller number of voters. Therefore, if the effect of “vote significance” (i.e., how much votes count in elections) outweighs the effect of “stake” (i.e., how much electoral outcomes affect policy outcomes), then “turnout twist” is a logically possible consequence. Whether lower-level elections record higher turnout or lower turnout is jointly determined by the relative magnitudes of these two variables.

1.2.3 Empirical Tests

I test this model using various types of quantitative and qualitative data. First, I use cross-national data from sixteen OECD (Organization for Economic Co-operation and Development) countries. Cross-national regression analyses show that the observable indicators measuring how much is at stake (i.e., the size of government expenditure or tax revenue) and how much votes count (i.e., the number of elected representatives per capita) significantly affect the relative level of voter turnout in subnational vs. national elections. And the Japanese case can be correctly predicted within the model: Compared with other countries, the sizes of government expenditure and tax revenue at subnational levels (relative to those at the national level) are quite large in Japan.

Second, to explain intra-country variations in relative voter turnout within Japan, I use cross-municipal data sampled from Saga and Fukuoka Prefectures. The regression results show that the observable indicators of the two explanatory variables in the theoretical model are significantly correlated with relative voter turnout in municipal assembly vs. national Lower House elections in Japan. The post-estimation analyses show that among these indicators used in regressions, the relative number of elected representatives per capita, which has a very strong negative correlation with the municipality size, is particularly important in predicting “turnout twist” within

Japan. Since the apportionment of seats in both national and subnational elections is determined by laws, I argue that the “turnout twist” phenomenon within Japan is, at least partly, *legally determined*.

Third, I use individual-level survey data from Japan to examine whether Japanese voters truly consider how much votes count and how much is at stake when they decide to vote or abstain. Regression results show that the *differential* voting frequency between municipal and national elections are significantly influenced by the size of municipality where a respondent resides, a respondent’s subjective evaluation of how much his/her vote counts in elections, and a respondent’s subjective evaluation of how much electoral results can change policy outcomes. Thus the theoretical model fits data quite well.

Finally, I use data collected from my field research in a small Japanese town. The purpose of the field research is to answer the following questions. Is the number of representatives per capita, the critically important variable explaining the “turnout twist” phenomenon, a *valid* indicator of the theoretical concept: how much votes count in elections? What is the true mechanism behind the statistically very strong correlation between the number of representatives per capita and voter turnout in Japan?

Some scholars of Japanese politics have claimed that the larger the number of representatives per capita, the closer the personal connections (*Kankei*) between politicians and voters, hence the higher the sense of obligation in voters to vote for a particular candidate. They also argued that such dense and tight social ties in rural Japan is a product of Japanese cultural traditions that place an emphasis on social collectivity, solidarity, hierarchy, and harmony.

Based on findings from my field work, I argue that dense social connections are indeed important, but they are not sufficient to explain high municipal turnout in rural Japan. What is more important, which has been ignored in the existing explanation,

is the effects of an electoral system used in Japanese municipal assembly elections: the single non-transferable vote system with an at-large district (SNTV-ALD). This system has a “mechanical effect” to produce extremely small vote margins between candidates, *particularly when the number of seats per capita is large*. It also has a “psychological effect” to make candidates and voters consider how much an additional vote counts. Since even a single ballot can change electoral outcomes, it also makes them seriously *use* personal networks to mobilize votes, to collect information, and to cast ballots most effectively. These two effects result in very high municipal voter turnout, particularly in towns and villages with a large number of representatives per capita.

1.2.4 Implications

The findings in this dissertation suggest some important empirical, theoretical, and policy implications. First, they show that the “conventional wisdom” in the United States and Great Britain (and some other European countries) is not necessarily the universal truth in all the other countries. This dissertation, which shows many examples contradicting such “conventional wisdom,” suggests that we must direct more attention to other understudied democracies in the world to improve our understanding of how democracy works.

Second, this dissertation shows that a study of *relative* voter turnout is quite suggestive and fruitful to understand *why* people vote. Such a study examines how *relative* changes or differences in explanatory factors, *holding everything else constant*, affect *relative* changes or differences in voter turnout. Only this “quasi-experimental” approach can present meaningful policy implications, because policies are aimed to result in a relative increase in voter turnout. To put it differently, most existing approaches are not very suggestive. A commonly used approach, which *indirectly* explains *why* people vote based on empirical findings of *who* votes and *when*, can

only present impractical/uncontrollable policies, such as to improve citizen's civic-mindness and to tighten social networks. A standard rational-choice approach, which compares the cost of voting vs. the expected benefit of voting *in a given election*, attempts to answer a practically meaningless question of whether voting is rational for each individual in each election. To vote or not to vote in a given election is not the question policy makers are interested in.

Third, this dissertation suggests that voter turnout can be increased by designing a political-economic system that raises citizens' perceived levels of how much is at stake and how much votes count in elections. More concretely, based on findings from quantitative and qualitative studies of the Japanese case, I propose the introduction of the SNTV-ALD system to countries with problematically low voter turnout, particularly at local levels. As I explained, this system produces extremely small vote margins between candidates, and gives strong incentives to candidates and voters to get involved in elections, particularly in small-unit elections.

The bottom line is that *voter turnout is a product of candidates and voters responding to incentives*. The counter-intuitive "turnout twist" phenomenon observed in Japan is nothing surprising. It is not a product of Japan's unique cultural traditions. Rather, it is a result of Japanese citizens responding to *incentives* produced by various institutions. No matter how traditional a society is, incentives always affect behavior.

1.3 Methodology

As I explained, to test a theoretical model, I use various types of data, including cross-national data, cross-municipal Japanese data, individual-level survey data from Japan, and findings from my field work in Japan. Each type of data has methodological advantages and disadvantages. Let me explain how I use these data to make a synthetic inference.

I begin empirical tests of the model by conducting a cross-national data analysis. Such an analysis shows why subnational elections record *lower* voter turnout than national elections in most countries, but *higher* voter turnout in Japan and some other countries including France and Canada. It also allows us to examine whether Japan, France and Canada are “outliers,” which cannot be systematically explained within a model.

The cross-national data analysis is, however, insufficient for the purpose of testing the validity of the model, because the number of observations is quite small, and because cross-national data ignore the fact that relative voter turnout in subnational vs. national elections often varies significantly *within countries*.

To explain such intra-country variations in relative voter turnout, I conduct country specific analyses with a focus on Japan. I choose Japan as a case, simply because my original puzzle stemmed from a conflict between my prior belief as a native of Japan and the conventional wisdom shared by American and European scholars. It is also because Japan is an example most clearly showing the intra-country variations in relative voter turnout in subnational vs. national elections. Namely, in Japan, lower-level municipal assembly elections almost always record *higher* voter turnout than national Lower House elections in small towns and villages. But in large urban cities, they almost always record *lower* voter turnout.

To explain such a puzzling turnout pattern observed in Japan, I first conduct quantitative analyses using data aggregated at municipality-level. The large number of observations, sampled from two prefectures in Japan, allows us to examine whether some observable indicators of theoretical explanatory variables significantly affect relative voter turnout in subnational vs. national elections. The cross-municipality data also shows why voter turnout patterns are different between urban and rural municipalities.

But there is an important problem of using such aggregated data, irrespective of

the level of aggregation. Namely, the *aggregated* data are not sufficient to test a theoretical model explaining an *individual-level* decision to vote or abstain in elections. To put it differently, the aggregated data, by themselves, do not suggest whether observable (aggregated) indicators are good indicators of conceptual, individual-level variables in a theoretical model. For example, one of the most important independent variables in my theoretical model is each individual's subjective evaluation of how much his/her vote counts in subnational vs. national elections. In aggregated data, I use the number of elected representatives per capita as a measure of how much votes count; however, this indicator may not mean what it is expected to mean.

Second, to compensate for these demerits of using aggregated data, I conduct quantitative analyses using an existing individual-level survey. Since this survey has some questions asking how often a respondent votes in national and subnational elections, it allows us to examine the determinants of voting frequency in national and subnational elections, as well as the *differential* voting frequency between national and subnational elections.

But this existing survey also has an important methodological difficulty; namely, most variables (i.e., questions), except the questions asking voting frequencies in various types of elections, are *individual-specific*. They include each respondent's general political attitudes towards, and subjective evaluations of, governments, elections, politicians, and politics. These questions, however, do not specify which type of election or which level of government is in question. For example, there is a question asking whether a respondent thinks his/her vote counts in elections, but this question does not specify whether "elections" refer to national, prefectural, or municipal elections. As in most other surveys, this survey also includes many questions asking each respondent's personal attributes, such as age, gender, educational level, income level, occupational status, etc. Needless to say, these attributes are also independent of election types and government levels. With such individual-specific data, we may

explore *what types* of respondents have a higher frequency of voting in national elections than in subnational elections, and vice versa. But we cannot directly examine *why* such respondents have different voting frequencies in national and subnational elections.

Therefore, neither the municipality-level aggregated data nor the individual-level survey data are, by themselves, sufficient. Both have methodological problems. But we should not place more emphasis on the demerits of these types of data than on their merits. The aggregated data have an advantage of including election-specific variables, and the survey data have an advantage of including each individual's subjective attitudes toward, and evaluations of, elections and governments. Thus, to understand why Japanese voters, at least some portions of them, have a higher incentive to vote in lower-level subnational elections than in national elections, I shall combine empirical findings from the aggregated and survey data analyses, and make a synthetic argument.

Finally, I also use qualitative data collected through my field work in a Japanese small town. During the 1999 municipal assembly election in this town, I closely followed a particular candidate's campaign behavior, interviewed a number of voters, and collected detailed data of candidates and of past elections. Such a single case study does not allow us to make any general statement about voting behavior in Japanese elections. It also does not allow us to fully examine the determinants of *relative* voter turnout in municipal vs. national elections, because I only observed electoral behavior in a single municipal assembly election. Nevertheless, this in-depth case study has some very important methodological advantages, which no other types of data have. First of all, it produces a vivid and plausible *story* of why voter turnout is often extremely high in Japan, particularly in small rural towns and villages. Second, observing individual-level behavior and accompanied outcomes (i.e., aggregated data) allows us to examine whether observable indicators in aggregated data are *good*

indicators for conceptual individual-level variables in a theoretical model. Finally, by observing how candidates and voters behave under given legal regulations and cultural constraints, the case-study allows us to examine how informal institutions (i.e., social networks and personal ties) and formal institutional settings (i.e., electoral and voting rules) shape electoral behavior and outcomes.

In sum, there is no single *best* type of data, which can sufficiently test a model explaining why people often have a higher incentive to vote in national than subnational elections, and vice versa. However, by taking a “mixed-methodology” approach with various types of data, ranging from cross-national data to detailed qualitative data from field work, we can give a *better* answer.

1.4 Terminology

The main dependent variable of this study is relative voter turnout in subnational vs. national elections. But what does “subnational” mean? Do “elections” include legislative elections or executive elections? Let me now define some of these confusing terms.

First, I use the term “subnational” to refer to any subnational levels under a central authority, including “state” or “provincial” for federal countries and lowest-level “municipal” for all countries.

Second, the term “local” refers to subdivisions under states/provinces for federal countries and all levels of subdivisions under a central authority for non-federal countries. This term is used in such a manner in *Government Finance Statistics Yearbook* (International Monetary Fund) and *National Accounts* (Organization for Economic Co-operation and Development), from which I took some data for cross-national regressions.

Finally, “elections” refer only to legislative elections. To focus on how the *levels* of governments affect the levels of voting participation, I do not examine voter turnout in

other *types* of elections at each government level, including presidential, gubernatorial or mayoral elections. It is worth comparing the determinants of voter turnout in both executive and legislative elections at various levels of governments. But I save such an extensive comparison for my future research.

1.5 Road Map

The organization of this dissertation is the following. In Chapter 2, I will introduce examples of the “turnout twist” phenomenon from various countries. In Chapter 3, I will propose a theoretical model and statistically test it using *quantitative* data. In Chapter 4, I will introduce *qualitative* findings from field research in a Japanese small town. In Chapter 5, I will summarize findings, discuss implications, and propose future research topics. This dissertation also has four appendices. Appendix A introduces the sources of data used in cross-national regressions. Appendix B introduces electoral systems used in French subnational elections, which I cannot fully explain in the main body of this dissertation. Appendix C introduces question-wording and coding of variables used in survey-data analyses. Appendix D introduces some interesting stories from Japanese newspapers, which show how even a *single* ballot can be decisive and controversial in Japanese municipal assembly elections.

Chapter 2

Turnout Twist: Higher Voter Turnout in Lower-Level Elections

2.1 Introduction

American and European political scientists have often claimed that lower-level subnational elections attract considerably fewer voters than national elections. Burnham (1965) showed that in the United States, there is a tendency of “the electorate to vote for ‘prestige’ offices but not for lower offices on the same ballot and at the same elections” (p. 9). Morlan (1984) found that local elections record lower turnout than national elections in all the countries he studied, which included Denmark, Finland, Ireland, the Netherlands, Norway, Sweden, Switzerland, West Germany, and the United States. Using individual-level survey data, Verba and Nie (1972) showed that turnout is lower in local elections in the United States, India, Nigeria, and Austria. Reif and Schmitt (1980) developed the concepts of “first-order” elections (i.e., national presidential elections in presidential systems and national parliamentary elections in parliamentary systems) and “second-order” elections (i.e., all the other types of elections, including subnational elections, mid-term elections, by-elections, and supranational European Parliamentary elections), and argued that one of the com-

monly observed patterns among the second-order elections is that they almost always record lower voter turnout than the first-order elections.¹ More recently, citing many other studies by American and European political scientists, Lijphart (1997), in his presidential address to the American Political Science Association, stated that lower voter turnout in lower-level second-order elections is a quite commonly observed problem for democracy.² Clearly, *lower voter turnout in lower-level elections* is recognized as one of the most robust stylized facts in the literature of political science.

As I introduced in Chapter 1, however, Japan seems to be an exception. Then is Japan the only exception? Do subnational elections always and uniformly bring fewer voters than national elections? The first stage of this dissertation project was concentrated on collecting as much data as possible to answer these questions. And I found that Japan is *not* the only exception; namely, there are some other important cases showing *higher voter turnout in lower-level elections*. Such an unconventional voter turnout pattern is defined as the “turnout twist” phenomenon.

In this chapter, I will show these examples of “turnout twist” phenomenon. Some of them were already introduced in the literature. Other examples, which are based on data from primary sources, will be introduced for the first time in the political science literature. To direct our attention to these unconventional and under-studied “turnout twist” cases, this chapter will not introduce examples of a conventional “higher turnout in higher elections” pattern. These conventional turnout cases and their data sources are summarized in Appendix A.

In each of the following sections, I will first briefly introduce basic information about national and subnational governments and elections (i.e., bicameral or unicam-

¹For the studies of the second-order elections, also see Reif (1985, 1997) and Norris (1997).

²Lijphart cited the following articles and books: Ansolabehere and Iyengar (1995), Botella (1994), Burnham (1965), Darcy and Vanderleeuw (1993), Denver (1995), Font and Víros (1995), Goldsmith and Newton (1986), Gosnell (1930), Hoffmann-Martinot (1994), Nieto (1994b), Miller (1994), Rallings and Thrasher (1990), Schultze (1995), and Teixeira (1992).

eral, whether subnational elections are held simultaneously with national elections, whether voting is compulsory, etc.). Unless otherwise noted, information about the structures of a national parliament is taken from the *CIA World Factbook 1999* (CIA 1999). Then I will present voter turnout data for national vs. subnational elections without giving any hypothetical explanation. In the next chapter, I will propose a generally applicable model explaining relative voter turnout in subnational vs. national elections, and test it empirically using various types of data.

2.2 Australian State Elections

Australia has six states (New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia) and two territories (Australian Capital Territory and Northern Territory). Most state governments consist of the Legislative Assembly and the Legislative Council (Australian Bureau of Statistics 1999). The Federal Parliament consists of the the Senate and the House of Representatives. All federal and state legislators are elected by popular vote. The federal and state elections are usually held separately, but both houses in each government usually hold their elections concurrently (Australian Bureau of Statistics 1999).

Table 2.1 shows the average voter turnout rates in federal and state elections for the two periods, 1890-1925 and 1975-1984. In recent years, voter turnout is regularly quite high, because voting is compulsory in both federal and state elections. The turnout differences between federal and state elections are small (around 2-5 percentage points), but *positive* in all states. Statistical tests show that these differences are significantly different from zero. These turnout differentials were, however, *negative* in most states *before* the compulsory voting system was introduced in federal elections in July 1924 (Hughes and Graham 1968).³

³The first federal election under the compulsory voting system was held on November 14, 1925

State	Period 1: 1890-1925			Period 2: 1975-1984		
	Federal	State	Diff.	Federal	State	Diff.
New South Wales	62.4	66.3	-3.9	94.8	92.4	2.4
Queensland	63.4	76.8	-13.4	94.0	90.7	3.4
South Australia	59.1	63.9	-4.8	95.3	93.4	1.9
Tasmania	60.0	64.8	-4.8	96.3	93.9	2.3
Victoria	67.5	61.8	5.7	95.6	93.3	2.2
Western Australia	55.8	60.7	-5.0	93.9	89.4	4.5

Note: The federal elections refer to elections for the members of the Senate and the House of Representatives, and the state elections refer to elections for the members of the Legislative Assembly and the Legislative Council. The data for Period 1 include federal and state elections before November 1925; namely, before the first federal election was held under the compulsory voting system. *Source:* Hughes and Graham (1968) and Hughes (1986).

Table 2.1: Voter Turnout in Federal and State Elections in Australia, 1890-1925 and 1975-1984. *The Australian federal elections recorded lower voter turnout than the state elections before voting became compulsory.*

2.3 Canadian Provincial Elections

The Canadian federal Parliament consists of the Senate and the House of Commons. All members of the Senate are selected on the advice of the prime minister and appointed by the governor general. Therefore, federal elections in Canada only refer to the elections for the members of the House of Commons. Under the federation, each of ten provinces (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan) and three territories (Northwest Territories, Nunavut, and Yukon) has a legislative assembly. All members are elected by popular vote. The provincial elections are held independently from the federal elections (Feigert 1989).

Table 2.2 shows the average voter turnout rates of all elections held during 1935-1999 and of three recent elections in the ten provinces (ordered by the size of the turnout differentials in the recent elections).⁴ In five out of the ten provinces (i.e., New Brunswick, Newfoundland, Prince Edward Island, Quebec, and Saskatchewan), the historical average voter turnout is *lower* in the federal elections than in the provincial elections.⁵ In three recent elections, only in Alberta and Ontario, the federal elections

(Hughes and Graham 1968). In Queensland, voting in state elections has been compulsory since the 1915 election (Hughes and Graham 1968). Namely, Queensland state elections introduced a compulsory voting system even *before* federal elections. Therefore, for Queensland, turnout data of all federal and state elections held after 1915 are excluded in calculating the average turnout rates for the period 1890-1925.

⁴The sources of voter turnout data are Feigert (1989), Scarrow (1962), Internet homepages of election offices across Canada (see Appendix A, Footnote 2), and data provided by Professor John Wilson, the Director of the Centre for Election Studies at University of Waterloo. The election results in two territories, Northwest Territories and Yukon, are unavailable. Nunavut became the third territory only in 1999 and no federal election has been held there as of writing this draft. The last three federal elections were held in 1987, 1993 and 1997. The years of provincial elections vary by province.

⁵Studlar (N.d.) recently also showed this “Canadian exceptionalism” using historical turnout

Province	Elections, 1935-99			Last Three Elections		
	Federal	Provincial	Diff.	Federal	Provincial	Diff.
Newfoundland	62.7	73.6	-10.9	59.1	76.1	-17.0
Prince Edward Island	82.9	83.6	-0.7	77.0	82.3	-5.3
New Brunswick	76.9	79.0	-2.1	73.0	76.9	-3.9
British Columbia	74.1	70.7	3.4	70.7	74.6	-3.9
Quebec	73.3	78.3	-5.0	75.2	78.3	-3.1
Nova Scotia	76.1	74.9	1.2	69.6	71.2	-1.6
Saskatchewan	77.8	80.2	-2.4	70.8	71.0	-0.2
Manitoba	73.0	65.6	7.4	68.9	68.8	0.1
Ontario	74.5	64.5	10.0	69.3	61.9	7.4
Alberta	69.6	63.2	6.4	66.2	55.9	10.3

Note: The federal elections refer to elections for the members of the House of Commons, and the provincial elections refer to provincial assembly elections. There is no voter turnout data for the provincial elections in Prince Edward Island before 1966 and New Brunswick before 1967. Newfoundland was admitted to Confederation in 1949. *Source:* Feigert (1989), Scarrow (1962), Internet homepages of election offices across Canada, and data provided by Professor John Wilson, the Director of the Centre for Election Studies at University of Waterloo.

Table 2.2: Voter Turnout in Federal and Provincial Elections in Canada, 1935-1999. *In most Canadian provinces, the federal elections produce lower voter turnout than the provincial elections.*

recorded significantly higher turnout. The average turnout rates in the federal and provincial elections were almost the same in Manitoba and Saskatchewan. In all of the remaining six provinces, the provincial elections brought more voters to the polls. The most extreme case is Newfoundland where the average turnout in recent elections is about 17 percentage points higher in the provincial elections than in the federal elections.

2.4 Finnish Municipal Elections

The Finnish national government has a unicameral Parliament (*Eduskunta*), and all members are elected by popular vote. Subnational elections include provincial elections in Åland, one of the six provinces under the central authority, and 455 municipal council elections. Most municipal councillors are elected concurrently but independently from the national elections. Only in Åland, municipal council elections are held a year before the unified municipal elections.

Table 2.3 shows voter turnout in recent Parliamentary elections (in 1991, 1995, and 1995) and municipal elections (1988, 1992, and 1996) by 15 constituencies for Parliamentary elections. There are two points to which we should direct our attention. First, in all constituencies except Helsinki and Åland, voter turnout rates in the 1991 and 1995 Parliamentary elections were approximately the same as those in the 1988 and 1992 municipal elections. For these elections (excluding data from Helsinki and Åland), the differences in the average turnout rates are *not* statistically different from zero. The 1996 municipal elections, however, recorded considerably low voter turnout than other elections in most constituencies. Second, in Helsinki, the average voter turnout is 8.6 percentage points higher in the national elections. On the other hand, in Åland, it is 10.7 percentage points *higher* in the municipal elections. Åland, which

data for Canadian federal and provincial elections.

Constituency	National				Municipal				Diff.
	1991	1995	1999	Ave.	1988	1992	1996	Ave.	
Helsinki	70.6	72.7	70.3	71.2	63.3	66.4	58.1	62.6	8.6
Uusimaa	70.7	71.9	68.2	70.3	67.3	69.5	59.9	65.6	4.7
Varsinais-Suomi	73.1	74.1	68.8	72.0	73.3	73.4	63.4	70.0	2.0
Satakunta	74.1	74.1	69.2	72.5	75.0	75.0	64.0	71.3	1.1
Häme	71.0	71.7	66.5	69.7	70.2	70.9	60.8	67.3	2.4
Pirkanmaa	71.9	72.7	68.9	71.2	70.7	72.7	61.7	68.4	2.8
Kymi	71.0	70.6	66.7	69.4	69.9	70.3	60.0	66.7	2.7
Mikkeli	68.7	67.9	64.4	67.0	69.9	68.7	59.9	66.2	0.8
North Karelia	68.9	69.4	66.6	68.3	68.6	68.9	57.9	65.1	3.2
Kuopio	69.3	67.2	64.2	66.9	69.0	67.5	58.3	64.9	2.0
Central Finland	73.1	71.4	67.5	70.7	72.6	70.3	60.9	67.9	2.7
Vasa	78.6	75.9	73.3	75.9	77.3	75.9	69.0	74.1	1.9
Oulu	72.9	70.5	67.4	70.3	71.2	70.4	60.1	67.2	3.0
Lapland	76.0	72.1	69.7	72.6	75.4	73.9	65.2	71.5	1.1
Åland	50.8	52.1	54.8	52.6	64.9	62.7	62.2	63.3	-10.7
Average	72.1	71.9	68.3	70.8	70.5	70.9	61.3	67.6	3.2

Note: The national elections refer to elections for the members of the unicameral Parliament. The last column indicates the difference in the average voter turnout between Parliamentary and municipal elections. In Åland, municipal council elections were held in 1987, 1991, and 1995; namely, a year before unified municipal elections. *Source:* Statistics Finland (N.d.)

Table 2.3: Voter Turnout in National and Municipal Elections in Finland, 1988-1999. *In Åland, the municipal elections record higher voter turnout than the Parliamentary elections.*

consists of a number of small islands between Sweden and Finland and has a highly autonomous local authority (Harloff and IULA 1987, Nakamura 1996), is clearly an exception.

2.5 French Communal Elections

The French national Parliament (*Parlement*) consists of the Senate (*Senat*) and the National Assembly (*Assemblée Nationale*). All members of the National Assembly are elected by popular vote, but all members of the Senate are indirectly elected by an electoral college. Under the central authority, France is divided into 22 regions and 96 departments, under which there are 36,763 municipalities (Norton 1994, Table 2.1). All municipalities concurrently hold their elections every six years. National and local elections are held separately.

Voter turnout in recent national elections was 78.5% in 1986, 66.2% in 1988, 68.9% in 1993, and 68.0% in 1997 (IDEA N.d.). Voter turnout in the nationwide municipal elections (the first-ballot) was 78.4% in 1983, 72.8% in 1989, and 69.4% in 1995 (Dominique, Dusseau, Rama, and Renaut 1995). Therefore, the French municipal elections have recorded almost the same, or slightly *higher*, voter turnout than the national elections.

The national average figures, however, could be misleading, because the level of participation in the municipal elections significantly varies by the size of municipality. Kesselman (1966) showed that the smaller the municipality, the lower the voter turnout in national elections, but the *higher* the voter turnout in municipal elections. As a result, as shown in Table 2.4, national elections attract more voters than municipal elections in large and urban municipalities, but *fewer* voters in small and rural municipalities. Tarrow (1977) also found that French municipal elections record *higher* voter turnout in relatively small municipalities. Since approximately 90% of French municipalities have less than 2,000 inhabitants (Norton 1994, p. 142), Kessel-

Source	Municipality Size	National	Municipal	Difference
Kesselman (1966, p. 968)	Below 400	76.9	83.0	-6.1
	401-700	77.2	82.5	-5.3
	701-2,000	80.4	82.0	-1.6
	Over 2,000	80.4	76.5	3.9
Tarrow (1977, p. 215)	0-3,000	77	85	-8
	3,000-10,000	76	81	-5
	10,000-50,000	75	75	0

Note: The national elections refer to elections for the members of the National Assembly, and the municipal elections refer to municipal council elections.

Table 2.4: Voter Turnout in National and Municipal Elections in France. *The French municipal elections attract more voters than the national elections in small municipalities (i.e., communes).*

man and Tarrow's findings imply that in France, municipal elections record higher voter turnout than national elections in most municipalities.

Then why are the national average voter turnout rates almost the same in both national and municipal elections? This is because large and urban cities (including the three largest cities, Paris, Marseilles, and Lyon) produce considerably low voter turnout in municipal elections. For example, in Paris where 20% of all French citizens reside, only about 50% of eligible voters went to the polls in the 1995 municipal election (*Agence France Presse*, June 18, 1995). Hence, "the turnout patterns of most French communes are masked by turnout patterns in large cities" (Kesselman 1966, p. 966).

2.6 Indian State Elections

The Indian federal Parliament (*Sansad*) consists of the Council of States (*Rajya Sabha*) and the People's Assembly (*Lok Sabha*). All of the 545 members of the People's Assembly, except two political appointees, are elected by popular vote, and most of the 250 members of the Council of States are chosen by the members of the state and territorial assemblies, called *Vidhan Sabha* (Butler, Lahiri and Roy 1995).

In India, as shown in Table 2.5, many of the twenty-six states (including Delhi) have attracted significantly more voters in state assembly elections than in federal elections. In seven states, the historical average voter turnout is more than 10 percentage points *higher* in state assembly elections. In three recent elections, only three states (Assam, Bihar, and West Bengal) recorded higher turnout in federal elections.⁶ In Jammu and Kashmir, the difference in the average voter turnout rates is more than 30 percentage points. Clearly, Indian state elections quite significantly bring more

⁶The three recent elections include the general (federal) elections in 1989, 1991 and 1996, and the state elections held before 1996. The results of more recent elections are available from India Today (N.d.).

State + Delhi	Elections, 1952-98			Last Three Elections		
	Federal	State	Diff.	Federal	State	Diff.
Andhra Pradesh	60.9	68.8	-8.0	64.9	68.8	-3.9
Arunachal Pradesh	60.7	73.7	-13.0	55.2	75.2	-20.0
Assam	60.0	61.0	-1.0	76.9	62.2	14.7
Bihar	53.9	53.0	0.9	60.0	59.4	0.6
Delhi	61.3	59.8	1.5	51.1	57.2	-6.1
Goa	60.7	69.1	-8.4	52.3	71.2	-18.9
Gujarat	54.4	56.4	-2.1	44.8	54.4	-9.6
Haryana	68.0	67.4	0.5	66.9	69.0	-2.1
Himachal Pradesh	51.3	58.2	-6.9	59.6	69.8	-10.1
Jammu and Kashmir	52.6	69.0	-16.3	40.3	71.9	-31.7
Karnataka	59.9	64.8	-4.9	60.8	67.4	-6.6
Kerala	71.8	76.8	-5.0	74.6	75.8	-1.2
Madhya Pradesh	50.8	50.1	0.7	51.2	54.3	-3.0
Maharashtra	57.5	59.8	-2.3	53.7	61.9	-8.2
Manipur	65.5	82.8	-17.3	72.2	88.7	-16.5
Meghalaya	56.7	70.1	-13.4	55.7	76.5	-20.8
Mizoram	61.0	73.3	-12.3	63.4	78.7	-15.3
Nagaland	65.3	80.9	-15.6	80.0	86.4	-6.4
Orissa	46.6	46.6	0.0	57.4	60.0	-2.5
Punjab	59.7	61.2	-1.5	49.6	51.6	-2.0
Rajasthan	51.6	52.2	-0.5	49.0	57.1	-8.0
Sikkim	63.4	74.6	-11.1	70.4	77.7	-7.3
Tamil Nadu	65.4	69.4	-4.0	65.9	68.9	-3.0
Tripura	71.2	78.3	-7.1	76.8	82.9	-6.2
Uttar Pradesh	50.2	52.0	-1.8	49.0	51.4	-2.4
West Bengal	66.7	66.2	0.5	79.7	77.4	2.3

Note: The national elections refer to elections for the members of the People's Assembly (*Lok Sabha*), and the state elections refer to elections for the members of the state and territorial assemblies (*Vidhan Sabha*). Delhi is one of seven territories of India. The other six territories (Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep, and Pondicherry) are not included in this table. Source: Butler, Lahiri and Roy (1995) and India Today (N.d.)

Table 2.5: Voter Turnout in Federal and State Elections in India, 1952-1998. *In India, the state assembly elections often attract more voters than the federal elections.*

voters to the polls than federal elections.

2.7 Italian Local Elections

The legislative branch of the Italian government, the Parliament (*Parlamento*), consists of the Senate (*Senato della Repubblica*) and the Chamber of Deputies (*Camera dei Deputati*). All members of the Parliament, except 11 appointed senators, are elected by popular vote. Both houses usually hold their elections concurrently. Under the central authority, there are three levels of administrative subdivisions: regions, provinces, and communes, each of which has a legislative body with elected representatives. Most local elections are usually held at the same time (Corbetta and Parisi 1995, p. 153), but independently from national elections.

In Italy, voting is not compulsory, but failure to vote is entered on a citizen's Certificate of Good Conduct. This rule produces high voter turnout in all levels of elections, and makes the differential turnout very small. Voter turnout in national elections is, on average, slightly higher than turnout in subnational elections (Corbetta and Parisi 1995). As in France, however, the aggregated figures could be misleading. Table 2.6 shows voter turnout in national and local elections in fourteen cities in Italy (De Mucci 1994). It shows that local elections produced lower turnout in all cities in Northern Italy. But in Argrigento and Catania in Sicily (i.e., Southern Italy) and Terni in Central Italy, voter turnout was *higher* in local elections. Voter turnout in subnational elections also varies according to the level of elections. Generally, the lower-level local elections, communal elections, produce the *highest* subnational voter turnout (De Mucci 1994). In 1985 and 1990, the communal elections have produced *more* valid votes than two national elections held before and after the communal elections (De Mucci 1994).⁷

⁷All of these data cited in this section are those from the pre-reform period. The local government

	City	National	Local	Difference
North	Novara	90.2	87.9	2.3
	Torino	89.4	85.3	4.1
	Vercelli	92.7	91.7	1.0
	Milano	88.6	84.8	3.8
	Pavia	93.4	91.3	2.1
	Belluno	89.4	83.7	5.7
	Pordenone	92.7	87.9	4.8
Center	Ravenna	94.6	93.7	0.9
	Grosseto	93.7	91.7	2.0
	Siena	93.7	90.9	2.8
	Terni	91.6	93.7	-2.1
	Ancona	91.7	88.6	3.1
Sicily	Argrigento	79.1	82.1	-3.0
	Catania	81.9	84.2	-2.3

Note: The national elections (in 1992) refer to elections of the members of both houses of the Parliament, and the local elections (in 1990) refer to the nationwide unified elections, including regional, provincial, and communal elections. *Source:* De Mucci (1994)

Table 2.6: Voter Turnout in National and Local Elections in Italy, 1990 and 1992. *In Sicily, the 1990 local elections recorded higher voter turnout than the 1992 national elections.*

2.8 Japanese Municipal Elections

The Japanese national Diet consists of the House of Councillors (Upper House) and the House of Representatives (Lower House). The Lower House is considered to be the highest office in Japan, because the Japanese Constitution gives prior authority to the Lower House in some important areas, such as the designation of the prime minister, the submission of the national budget, and the conclusion of treaties (Theen and Wilson 1996). All members of the Diet are elected by popular vote. Only in 1980 and 1986 did both houses hold their general elections simultaneously. Under the central authority, there are 47 prefectural and 3,229 municipal governments (Jichishō N.d.). Each subnational government has a unicameral legislative body and all legislators are elected by popular vote. Approximately half of the municipal assemblies and most prefectural assemblies hold elections concurrently every four years. The remaining elections are held independently during off-years. These local elections are usually held independently from the national elections.

The post-war average voter turnout is 71.6% in the Lower House elections, 63.8% in the Upper House elections, 71.1% in the prefectural assembly elections, and 74.6% in the municipal assembly elections (Akarui Senkyo Suishin Kyōkai N.d.).⁸ The lower-level national elections, the Upper House elections, recorded lower turnout than any other legislative elections in Japan. The prefectural elections recorded almost the same average voter turnout as the Lower House elections. What is most striking is that the lowest-level legislative elections, the municipal assembly elections, recorded *higher* voter turnout any other types of legislative elections.

Similar to most other cases, however, the national average figures are misleading,

structures and electoral rules have drastically changed since 1993, but I have not obtained detailed turnout data from the post-reform period as of writing this draft.

⁸The turnout data for the prefectural and municipal assembly elections exclude elections held during off-years.

because the level of voter turnout is significantly correlated with the size of municipality. Table 2.7 shows such correlation in aggregate and survey data. The municipality-level aggregate data, which include 158 municipalities in Saga and Fukuoka Prefectures, clearly indicate that the smaller the municipality, the higher the voter turnout.⁹ The decline of turnout with respect to the population size is, however, significantly larger in the municipal elections than in the Lower House elections. As a result, while the Lower House elections attract more voters than the municipal assembly elections in large cities, they attract considerably *fewer* voters in small towns and villages. More concretely, while the average national turnout is higher than the average local turnout by 4.4 percentage points in large cities with a population of more than (or equal to) 100,000, it is *lower* by 14.4 percentage points in small towns and villages with less than 10,000 residents.

The nationwide individual-level survey data show similar patterns. For both Lower House elections and municipal assembly elections, the average voter turnout, proxied by the average vote frequency, is negatively correlated with the municipality size.¹⁰ More importantly, the average vote frequency is higher for the national elections than for the municipal elections only in the largest cities. For respondents to this survey, city/town/village assembly elections are, on average, more attractive than the highest-level, the first-order Lower House elections.

⁹The aggregate turnout data shown in Table 2.7 are the averages for all general elections held during the data sampling period, 1987-1998. During this period, three Lower House elections were held. In most of the 158 municipalities, municipal assembly elections (excluding by-elections) were also held three times during this period.

¹⁰The individuals who voted for the first time in the last election before the survey, and those who did not have the right to vote until the last election, are dropped from analyses. Those who answered “I don’t know” are also dropped.

Data	Municipality Size	National	Municipal	Difference
Aggregate	Below 10,000	77.9	92.3	-14.4
Data	10,000-19,999	75.4	88.3	-12.9
	20,000-49,999	71.7	80.5	-8.8
	50,000-99,999	69.1	72.3	-3.2
	100,000+	63.1	58.7	4.4
Survey	Towns and Villages	91.4	93.8	-2.4
Data	Cities, pop. < 100,000	89.0	91.9	-2.9
	Cities, pop. $\geq$ 100,000	83.8	84.3	-0.5
	10 Large Cities	80.1	78.2	1.9
	23 Tokyo Special Wards	77.6	75.4	2.2

Note: The national elections refer to elections for the members of the House of Representatives, and the municipal elections refer to municipal assembly elections. The aggregate data, which include 158 municipalities in Saga and Fukuoka Prefectures, present the average turnout rates in elections held during 1987-1998. *Source:* The official reports of election results published by Saga and Fukuoka Prefectures (various years). The nationwide individual-level survey data present the average frequency of voting, which is coded as follows: 100 if always voted, 75 if usually voted, 50 if sometimes voted, 25 if rarely voted, and 0 if never voted. The ten large cities designated by ordinance (*Seirei Shitei Toshi*) include Sapporo, Yokohama, Kawasaki, Nagoya, Kyōto, Ōsaka, Kōbe, Hiroshima, Kitakyūshū, and Fukuoka. *Source:* Senkyo ni Kansuru Zenkoku Ishiki Chōsa (*Akarui Senkyo Suishin Kyōkai*, 1987).

Table 2.7: Voter Turnout in National and Municipal Elections in Japan. *The Japanese municipal elections record higher turnout than the national elections, particularly in small towns and villages.*

2.9 Northern Ireland Parliamentary Election

Northern Ireland is a part of the United Kingdom and has 18 seats in the Westminster Parliament, but it also has its own Northern Ireland Assembly, which was established in 1998 as a part of the Belfast Agreement commonly referred to as the Good Friday Agreement.¹¹ Unlike England, Wales and Scotland, Northern Irish voters have elected their representatives to the Northern Ireland regional government in 1973, 1975, 1982, 1996, and 1998. The last two elections are particularly important. The 1996 election, the so-called Forum election, was to elect delegates to the peace talks and to the Northern Ireland Forum, and five delegates were elected from each of the 18 Westminster Parliament constituencies. The 1998 election was the first election to the new Northern Ireland Assembly, and six members were elected from the same 18 constituencies. The New Assembly now has full legislative and executive authority in most substantive areas.

Table 2.8 shows voter turnout in the 1996 Forum election, the 1997 Westminster (national) election, and the 1998 Northern Ireland Assembly election. All elections used the same constituencies. The 1996 Forum election recorded lower turnout than the 1997 Westminster election in almost all constituencies. But the 1998 Northern Ireland Assembly election recorded higher turnout than the 1997 election in most constituencies.

2.10 Spanish Municipal Elections

The National Assembly (*Las Cortes Generales*) consists of the Senate (*Senado*) and the Congress of Deputies (*Congreso de los Diputados*). All 350 members of the Congress of Deputies are elected by popular vote. Of 256 members of the Senate, 208 are directly elected by popular vote and the rest of the members are appointed

¹¹For the history of the Northern Ireland regional assembly, see Northern Ireland Assembly (N.d.).

Constituencies	1996	1997	1998	Difference	
	Regional	National	Regional	N97-R96	N97-R98
East Antrim	57.51	58.26	60.87	0.75	-2.61
East Belfast	61.68	63.21	66.64	1.53	-3.43
East Londonderry	62.93	64.77	66.52	1.84	-1.75
Fermanagh and South Tyrone	75.56	74.75	79.41	-0.81	-4.66
Foyle	67.85	70.71	72.01	2.86	-1.30
Lagan Valley	62.04	62.21	65.69	0.17	-3.48
Mid Ulster	76.01	86.12	84.38	10.11	1.74
Newry and Armagh	70.37	75.40	77.28	5.03	-1.88
North Antrim	61.96	63.78	69.03	1.82	-5.25
North Belfast	61.80	64.19	67.26	2.39	-3.07
North Down	57.71	58.02	60.17	0.31	-2.15
South Antrim	57.76	57.91	64.24	0.15	-6.33
South Belfast	59.18	62.24	67.42	3.06	-5.18
South Down	67.72	70.84	73.69	3.12	-2.85
Strangford	57.99	59.47	61.59	1.48	-2.12
Upper Bann	65.40	67.88	72.30	2.48	-4.42
West Belfast	68.23	74.27	70.47	6.04	3.80
West Tyrone	71.38	79.55	79.40	8.17	0.15
Average	64.62	67.42	69.91	2.81	-2.49

Note: The national (Westminster) elections refer to the members of the House of Commons. The 1996 regional election elected delegates to the peace talks and to the Northern Ireland Forum, and the 1998 regional election was the first election to the Northern Ireland Assembly established by the so-called Good Friday Agreement. Source: Whyte (N.d.)

Table 2.8: Voter Turnout in National and Regional Elections in Northern Ireland, 1996-1998. *The 1998 Northern Ireland Assembly elections attracted more voters than the 1997 Westminster elections.*

by regional legislatures. The members of both houses serve four years. Almost always both houses hold elections. Under the central authority, there are 17 regions (or autonomous communities), 50 provinces, and approximately 8,000 municipalities (Nakamura 1996, p. 161). Each region and municipality has a legislative body with representatives elected by popular vote, but the members of provincial assemblies are elected by municipal legislators (Nakamura 1996, p. 161). All municipal elections are held concurrently with regional elections every four years, except in four regions including Catalonia and Andalusia (Justel 1995, p. 45, Font and Virós 1995, p. 14).

The average voter turnout for the period 1979-1991 is 65% in local elections and 74% in national elections (Justel 1995, p. 45). Thus, on average, national elections attract more voters than local elections. Similar to most other countries, relative voter turnout varies within in the country. Table 2.9 shows that in large municipalities with more than 50,000 inhabitants, the average voter turnout in national elections was 74.4%, whereas the average turnout in local elections was 62.7%. In small municipalities, however, the average turnout was 74.1% in national elections and 70.6% in local elections. The difference is quite small in small municipalities. More importantly, in these relatively small municipalities, the 1987 local election recorded *higher* voter turnout than two national elections held before and after that election.

2.11 Swiss Communal Elections

The bicameral Federal Assembly (*Bundesversammlung, Assemblée Federale, or Assemblea Federale*) consists of the Council of States and the National Council. All member of the National Council are elected by popular vote. The members of the Council of States are elected from each canton (i.e., state), which determines the electoral rules, terms, and election dates. Under the Swiss federation, there are 26 cantons (i.e., 20 cantons and 3×2 half-cantons) and 3,022 communes (Nakamura 1996). Twenty-one cantons have a legislative assembly with popularly elected representa-

Year	Municipality Size < 50,000			Municipality Size $\geq$ 50,000		
	National	Local	Difference	National	Local	Difference
1982	77.3			81.7		
1983		69.8	7.5		65.5	16.2
1986	70.3			70.5		
1987		72.1	-1.8		66.4	4.1
1989	70.7			68.8		
1991		69.8	0.9		56.3	12.5
1993	78.1			76.5		
Average	74.1	70.6	3.5	74.4	62.7	11.7

Note: The national elections refer to elections to both houses of the Parliament. The local elections refer to regional and municipal elections, which are held simultaneously except in four regions. The difference in 1983, 1986, and 1991 indicates the difference between turnout in the previous national election and turnout in the corresponding local elections.

Source: Justel (1995)

Table 2.9: Voter Turnout in National and Local Elections in Spain, 1977-1993. *In Spain, the smaller the municipality size, the smaller the differential turnout between national and local elections.*

tives. In the rest of the cantons, a legislative organ is an assembly meeting (i.e., like a town meeting in New England) with elected *executives*. Thus, they do not have elected *legislators*. In communes, executives are elected by popular vote in all communes, but legislators are elected only in large communes (Nakamura 1996). Ladner and Milner (1999) wrote that about 17% of communities have a popularly elected legislative body.

One of the lowest voter turnout rates in national elections among democratic countries can be found in Switzerland (Franklin 1996, Table 8.1). In recent elections to the National Council, voter turnout (the number of voters to the number of registration) was 47.5% in 1987, 46.0% in 1991, 42.2% in 1995, and 43.2% in 1999 (IDEA N.d.).¹² But Swiss citizens have a higher incentive to vote in *lower-level* elections, at least in executive elections.¹³ Table 2.10 shows voter turnout in national and municipal (i.e., communal) elections by the size of communes and by the type of electoral system.¹⁴ Voter turnout is *higher* in municipal elections than in national elections. This “turnout twist” pattern is particularly obvious in smaller communes and/or in

¹²Ladner and Milner (1999) argued, “Compared to other democratic societies, elections are of lesser importance in Switzerland, since the citizens can rationalize non-voting by the fact that undesirable government decisions can be revoked by recourse to referenda and issues neglected by politicians can be brought forward through initiatives” (p. 238).

¹³This dissertation focuses on differential voter turnout in *legislative* elections depending on the level of government. Accordingly, all of the turnout data introduced thus far in this chapter are for legislative elections. For Switzerland, however, the only subnational-level turnout data available were those for executive elections, introduced in Ladner and Milner (1999). Nevertheless, here I introduce their data, because they show quite interesting patterns, which should be further examined in future research.

¹⁴Elections to the National Council are proportional, and elections to the Council of States a majority system. Ladner and Milner treat elections in five cantons that have one seat in the National Council as elections under a substantially majority system. Most communal executive elections use majority systems, but “Nearly 30 per cent of the Swiss communes elect their executive in a proportional system” (Ladner and Miler 1999, p. 241).

Size of Commune	Electoral System	National	Municipal	Difference
2000-4999	Majority	46	50	-4
	PR	53	68	-15
5000-9999	Majority	43	43	0
	PR	50	60	-10
Over 10,000	Majority	43	42	1
	PR	47	50	-3

Note: The national elections refer to elections for the members of the two houses in the Federal Assembly, and the municipal elections refer to elections for communal executives. PR stands for proportional representation. *Source:* Ladner and Milner (1999)

Table 2.10: Voter Turnout in Federal and Municipal Elections in Switzerland. *In relatively small Swiss communes, the municipal elections record higher turnout than the national elections, particularly under the PR system.*

communes electing their executives using a proportional system.

2.12 Summary

This chapter showed that there are enough examples for us to doubt the universality of the conventional wisdom that maintains that Lower-level subnational elections always attract fewer voters than higher-level national elections. These examples of what I defined as the “turnout twist” phenomenon can be found not only in Japan but also in Australia, Canada, Finland, France, India, Italy, Northern Ireland, Spain, and Switzerland.

In the next chapter, I will propose a model explaining variations in relative voter turnout in subnational vs. national elections, and test it using various quantitative data, including cross-national data, cross-municipal Japanese data, and individual-level survey data from Japan. In the last chapter of this dissertation, I will briefly discuss the determinants of “turnout twist” in countries other than Japan. But a fuller examination of each country must be left for other scholars to study in the future. I hope this chapter, which introduced many under-studied examples of counter-intuitive turnout patterns, will pave the way for the development of studies of the “turnout twist” phenomenon.

Chapter 3

A Rational Choice Model of Relative Voter Turnout

3.1 Introduction

Chapter 2 showed that contrary to the conventional wisdom, lower-level subnational elections do *not* always record lower voter turnout than national elections. In some democracies, such as France, Canada, and Japan, subnational elections often bring *more* voters to the polls. I defined such an unconventional voter turnout pattern as the “turnout twist” phenomenon. Then the question is: *How do we explain “turnout twist”?*

This chapter gives an answer to this question. First, after discussing the limitations of some existing explanations, I will propose a theoretical model based on the rational-choice framework. This model assumes that the relative level of voter turnout in subnational vs. national elections is a function of not only *how much is at stake* but also *how much citizens’ votes count* (defined as “vote significance”) in these elections. I will argue that this model can give a logically consistent explanation to both the conventional and unconventional turnout patterns. Then, in Section 3.3 to Section 3.5, I will test the validity of the proposed model using various types of data,

including cross-national data from OECD countries, cross-municipal data from Saga and Fukuoka Prefectures in Japan, and nationwide individual-level survey data from Japan. The regression analyses will suggest that the model has a high explanatory power and correctly predicts the “turnout twist” cases. The last section summarizes findings.

3.2 Explanations

How do we explain the unconventional “turnout twist” phenomenon? Why do American and European political scientists often believe that lower-level elections should produce lower voter turnout? In the following, I will first argue that no scholar has presented a consistent explanation of why subnational elections produce lower voter turnout in some cases *but not in others*. Then I will propose an alternative explanation. I hypothesize that relative voter turnout in subnational vs. national elections is a function of *how much is at stake* and *how much citizens’ votes count* in these elections.

3.2.1 Existing Explanations

There are two simple explanations. First, in most democracies, lower-level elections produce lower turnout simply because less is at stake. Second, in a few exceptional countries, such as France and Japan, subnational elections record remarkably high voter turnout because of their unique traditional and cultural backgrounds. Let me begin by introducing the first one.

Why do second-order elections record lower turnout than first-order national elections in most countries?¹ Reif and Schmitt (1980) gave quite a simple answer: “Since

¹As I introduced in Chapter 2, Reif and Schmitt (1980) defined first-order elections as national presidential elections in presidential systems and national parliamentary elections in parliamentary systems, and second-order elections as all the other elections including subnational elections.

less is at stake in secondary elections, fewer voters may consider them sufficiently important to cast ballots" (p. 9). They argued that since politicians, party activists, and journalists all attribute a lesser significance to the second-order elections, "fewer voters may even learn that elections are being held" (p. 9).

Campbell (1966) presented a similar explanation of a famous "surge-and-decline" voter turnout pattern observed in American elections. He explained that turnout is almost always higher in presidential-election years than in midterm years, because "peripheral voters" do not bother to go to the polls in "low-stimulus" midterm elections. Then what makes one election more stimulative than another? Borrowing the concept of the expected party differential introduced by Downs (1957), Campbell argued that the level of stimulation in elections is a function of "the importance the electorate attaches to the choice between the various party-candidate alternatives which it is offered" (p. 41). In other words, he explained, the midterm elections are low-stimulus, because who gets elected in midterms does not result in significantly different policy outcomes.

American and European scholars have often cited these works and claimed that citizens do not bother to participate in elections for lower-level offices, simply because there is less at stake.² Then why do subnational elections often record higher voter turnout in Japan, Canada, France, India, and some other countries? Is there *more* at stake in these countries? Does the relative level of stake truly affect relative voter turnout? Is there any other systematic factor, other than stake in elections, which explains why the level of voter turnout is different according to the level of governments? No scholars supporting the less-at-stake explanation have empirically examined these questions. More importantly, they have often highlighted only American and European cases for which the model seems to give an explanation, while

²For example, see Lijphart (1997), Corbetta and Parisi (1995), and van der Eijk, Franklin, and Marsh (1996).

ignoring the counter-intuitive cases or treating them as “exceptions.”

The cultural explanation is presented by scholars of Japanese and French politics. For the Japanese case, Flanagan (1980) explained that the exceptionally high voter turnout in Japanese small town/village assemblies is explained by local politicians’ powerful mobilization of citizens through extremely personalized social connections (*Kankei*). He argued that such personal connections are built upon the Japanese tradition that places a heavy emphasis on face-to-face communications, group solidarity, collectivity, homogeneity, and harmony.³

For the French case, Kesselman (1967) explained that mayors, who share a rhetoric that stresses the value of communal harmony, play a decisive role in keeping consensus and social unity within their commune. He wrote, “The consensus that prevails in most French communes is reminiscent of the harmony characteristic of most French families. ... Significantly, a French mayor frequently compares his commune to a family, and characterizes his own role as being that of the commune’s father” (p. 8-9). Similar to Flanagan, Kesselman essentially talked about the importance of social ties in promoting mobilization and participation, and argued that such social ties originate in traditional value systems.

Since Flanagan and Kesselman’s explanations are based on findings from their extensive field work in Japan and France, they are much more persuasive than the simple less-at-stake explanation. Yet they are not fully convincing because their one-country studies do not sufficiently explain why national elections produce higher turnout in most Western democracies and why France and Japan are so different. To a greater or lesser extent, social networks should promote mobilization and participation in other democracies as well. Then why is turnout in subnational elections so low in some countries? Is there anything else that makes Japan and France different from other Western democracies? Neither Flanagan nor Kesselman attempted to answer

³Flanagan’s explanation will be more completely introduced in Chapter 4.

these questions. Their explanations also do not suggest a plausible explanation for the “turnout twist” cases in other democracies. Similar to the less-at-stake explanation, the cultural explanation assumes that France and Japan are “exceptions” because of exceptional cultural and traditional backgrounds.

In sum, as far as I know, no scholar has ever proposed and tested a cross-nationally applicable model that can explain *both* the conventional turnout pattern (i.e., higher turnout in higher-level elections) and the unconventional “turnout twist” pattern (i.e., higher turnout in *lower*-level elections).

3.2.2 An Alternative Explanation

Why do lower-level elections record lower turnout in some cases but not in others? Some classic models of political behavior, though they do not directly answer this question, give some hints to answer this question. Let me begin by introducing these classic models. Then I will formally present my explanation.

Implications from classic models

In *Size and Democracy*, Dahl and Tufte (1973) introduced the concepts of system capacity, which indicates to what extent “the polity has the capacity to respond fully to the collective preferences of its citizens” (p. 20), and citizen effectiveness, which indicates to what extent “citizens acting responsibly and competently fully control the decisions of the polity” (p. 20). Using these concepts, they hypothesized that the level of civic participation in politics is higher when system capacity and/or citizen effectiveness is greater. They argued that a large democracy has a greater system capacity than a small democracy but citizens can often more effectively control policy decisions in a small democracy. The argument regarding citizen effectiveness is similar to the argument presented by Olson (1965) in *The Logic of Collective Action*. Similar to Dahl and Tufte, Olson claimed that individuals in a small group have a higher

incentive to take actions for collective purposes, as compared to individuals in a large group.

Dahl and Tufte's model is quite similar to the rational choice model first presented by Downs (1957) in *An Economic Theory of Democracy*. The rational choice model posits, "[E]very rational man decides whether to vote just as he makes all other decisions: if the returns outweigh the costs, he votes; if not, he abstains" (Downs 1957, p. 260). According to Downs, the return of voting is a product of the expected probability that one's vote can change electoral outcomes (labeled as the P term) and the benefit of electing one's preferred party/candidate instead of others (labeled as the B term). Obviously, citizen effectiveness is conceptually equivalent to the P term in the rational choice model, because the most popular method to control what a government does is to change electoral outcomes by voting. System capacity is also conceptually similar to the B term, because citizens are concerned more about who gets elected when a government's capacity to respond to citizens' needs is larger.

So what do these classic models suggest? First, they let us realize that the standard less-at-stake explanation only focuses on one of the two variables in the classic models. That is *how much is at stake* in elections, which is the B term in the rational choice model and system capacity in Dahl and Tufte's model. Second, the classic models suggest that voters are concerned about not only how much is at stake but also *how much their votes count* in elections. Third, according to the classic models, votes count more in smaller-unit elections. Thus, they suggest that there is a possibility that lower-level, smaller-unit subnational elections produce *higher* voter turnout than higher-level, larger-unit national elections. Finally, and most importantly, the classic models imply that the counter-intuitive "turnout twist" phenomenon is not the product of traditional culture but of citizens responding to incentives instituted by political systems.

An Explanation of “Turnout Twist”

Based on the classic models, therefore, I hypothesize that relative voter turnout in subnational vs. national elections is determined jointly by two variables: how much is at stake and how much votes count in subnational vs. national elections. Let me explain each variable in detail, and show the condition to produce the “turnout twist” phenomenon.

First, how do we measure how much is at stake in elections? I assume that citizens are concerned more about who wins in elections and what they do after elections (i.e., more is at stake), when a government spends more money or when citizens pay more tax to a government. Under this assumption, I measure this variable by the size of government expenditure or tax revenue. Generally, but not always (as I will show later), the government expenditure and tax revenue are larger for a national government than for subnational governments. Therefore, as many scholars supporting the less-at-stake model have claimed, there is typically less at stake in subnational elections.

But there is another variable in the model, which indicates how much citizens’ votes count in elections. In many empirical studies of voter turnout in a particular type of election (most typically, national parliamentary elections), this variable is often measured by the degree of closeness in elections.⁴ In explaining the turnout *difference* by the level of government, however, the most effective measure for how much votes count seems to be the number of popularly elected representatives per capita. Namely, the smaller the number of votes necessary for each candidate to win a seat, the higher the candidate’s expectation that an additional effort to mobilize votes significantly changes their winning chance, and the higher the voter’s expectation that

⁴For example, see Cox (1988), Cox and Munger (1989), Cox, Rosenbluth, and Thies (1998), Matsusaka (1993), and Matsusaka and Palda (1993).

an additional ballot significantly changes electoral outcomes.⁵ This measure is almost always larger in subnational elections than in national elections, simply because there are more subnational politicians than national politicians in most, if not all, countries. Therefore, votes count more in subnational elections.

Whether or not subnational elections record higher turnout than national elections is determined by these two variables. Figure 3-1 shows this point. The subscript L refers to subnational elections and N national elections. The vertical axis indicates how much is at stake (“stake”) in these two levels of elections. As I explained, there is typically more at stake in national elections. Therefore, B_N should be located higher than B_L . The horizontal axis indicates how much citizens’ votes count in elections (“vote significance”). Since votes count more in subnational elections, P_L should be located on the right-hand side of P_N . The curves on this figure are indifference curves, which indicate the level of utility of voting. All points on the same curve yield the same level of utility. But the higher the location of the curve, the higher the utility of voting, because the utility of voting should be higher if the B and P terms both increase.

Now, assume that the levels of stake and vote significance in national elections are (P_N, B_N) . Also assume that the level of stake in subnational elections is B_L . Then, if the level of vote significance in subnational elections is P_L , national elections and subnational elections yield the same level of utility for voters, because N and L are on the same indifference curve, U . But, if the level of vote significance in subnational

⁵Many American scholars have argued that the size of the electorate matters in determining how much votes count in elections. “[T]he reward a man obtains for voting depends upon ... how many other citizens he thinks will vote” (Downs 1957, p. 270). “The larger the citizen body, the weaker the sense of individual effectiveness (the greater the sense of powerlessness), hence the weaker the incentive to participate, hence the less the participation” (Dahl and Tufte 1973, p. 43). “Two equally close contests, one for a town’s mayor, the other for president, should be expected to have very different P terms [i.e., the probability of casting the decisive votes]. A large P term, therefore, reflects closeness of the expected vote and size of the electorate” (Aldrich 1993, p. 252).

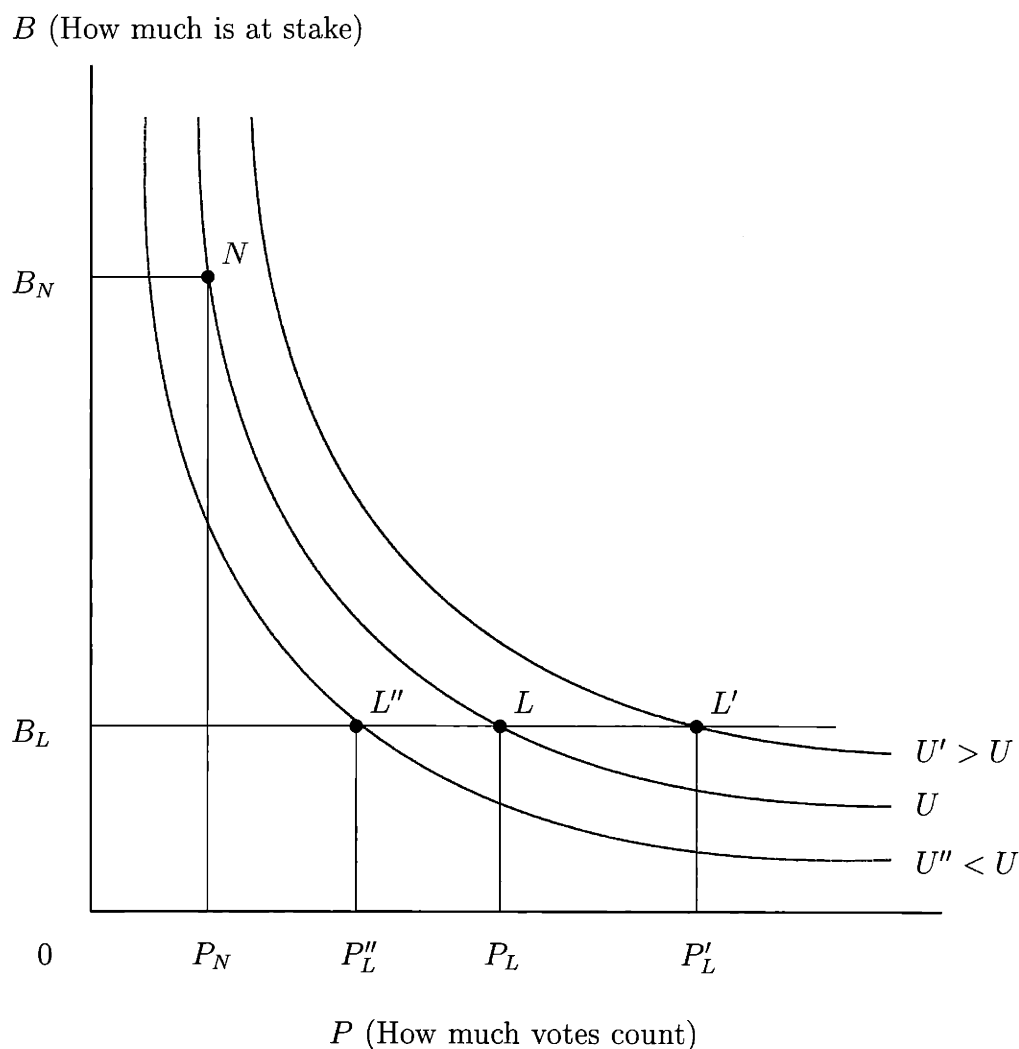


Figure 3-1: A Graphical Explanation of Turnout Twist. Typically, there is more at stake in national elections than in subnational elections (i.e., $B_N > B_L$), but votes count more in subnational elections (i.e., $P_N < P_L$). Thus subnational elections may produce higher voter turnout (i.e., higher utility of voting) than national elections if the degree of “how much citizens’ votes count” is sufficiently larger in subnational elections.

elections is P'_L , voters have a higher utility of voting in subnational elections than in national elections, because L' is on a higher indifference curve, U' . On the other hand, if the level of vote significance in subnational elections is P''_L , voting in subnational elections yields a lower utility than voting in national elections.

In short, whether subnational elections record higher turnout than national elections is determined by the *relative* magnitude of these two variables. As scholars have assumed, there may be less at stake in lower-level elections. But even under this generally accepted assumption, lower-level elections could produce *higher* voter turnout when votes count much more in lower-level elections. It is important to emphasize that this model gives a consistent explanation to both the conventional and unconventional turnout patterns.

A formal model of relative voter turnout

Now, let me formalize the model and introduce a functional form for empirical tests. I first define the following generally applicable model of voter turnout:

$$Y_{ij} = A \cdot P_{ij}^\alpha \cdot B_{ij}^\beta \cdot (W_i^\gamma \cdot Z_j^\delta) \quad (3.1)$$

Y_{ij} indicates voter turnout for unit i in election type j ($= L$ for subnational elections and N for national elections).⁶ It is a percentile variable in aggregate data and a dichotomous variable (i.e., voted or abstained) in survey data. The unit of analysis i could be anything depending on the types of data; for example, each country in cross-national data, each state in cross-state data, and each voter in individual-level survey data. P_{ij} indicates how much votes count, and B_{ij} indicates how much is at stake in elections. These two variables have both subscripts i and j , because they are different across units and election types.

⁶To avoid complexity, this model ignores *when* each election was held. For each unit i , the two types of elections are assumed to be held on the same day or during the period when all unit-specific variables do not significantly change.

Besides these two main variables, the model of voter turnout should include W_i and Z_j . W_i is a set of variables specific to the unit of analysis i but constant for all elections j . For example, the average level of incomes, the average years of schooling, the ethnic composition, the poverty rate, and other socio-economic variables are all constant regardless of elections. Thus W_i only has the subscript i but not j . On the other hand, Z_j indicates a set of variables specific to the election type but constant across units; for example, the length of electoral campaign period, which may be constant everywhere for a particular type of election but different by the types of elections. The Greek letters, $\alpha, \beta, \gamma, \delta$, show the marginal effect of each independent variable on voter turnout, Y_{ij} . For simplification, they are assumed to be constant.⁷ A is just a constant factor.

By taking the ratio of voter turnout in a subnational election to voter turnout in a national election, and then taking the natural logarithm, we can deduce the following model of *relative* voter turnout.⁸

$$\ln \left(\frac{Y_L}{Y_N} \right)_i = \theta_0 + \theta_1 \cdot \ln \left(\frac{P_L}{P_N} \right)_i + \theta_2 \cdot \ln \left(\frac{B_L}{B_N} \right)_i \quad (3.2)$$

⁷By taking the Cobb-Douglas function, the model assumes that the percent change in Y_{ij} with respect to a one percent change in an independent variable is constant. In other words, the model assumes the constant elasticity. For a complete explanation of the Cobb-Douglas function, see Chiang (1984, p. 414-416). An alternative functional form is a standard linear equation, such as $Y_{ij} = \beta_0 + \beta_1 P_{ij} + \beta_2 B_{ij} + \beta_3 W_i + \beta_4 Z_j$. This model assumes that the change in Y_{ij} per unit change in an independent variable is constant. Theoretically, there is no plausible reason to choose one model rather than another. Empirically, however, the constant-elasticity model often fits data better.

⁸The concept of relative voter turnout was originally introduced by Crain, Leavens, and Abbot (1987) to explain the turnout difference between U.S. House elections and Senate elections. Hanks and Grofman (1998) recently used this concept and explained the turnout difference between primaries and general elections (in gubernatorial and Senate elections in the United States). Both of these articles showed that the relative P term (i.e., relative closeness) significantly affects the relative voter turnout. I extend their models by adding the relative B term.

where

$$\theta_0 = \ln(Z_L/Z_N) \cdot \delta$$

$$\theta_1 = \alpha$$

$$\theta_2 = \beta$$

This is a standard linear model with an intercept parameter θ_0 and two slope parameters θ_1 and θ_2 . By taking the log-ratio, all unit-specific variables W_i and the constant factor A are dropped, and the effects of type-specific variables Z_j are summarized as a constant term, θ_0 . Therefore, the second equation shows that relative voter turnout is systematically explained *only* by the relative level of how much votes count and how much is at stake in subnational vs. national elections.

It should be emphasized that all variables constant for all elections are dropped in the model of relative voter turnout. These variables include the income and educational levels, the economic conditions, and the demographic and racial compositions, which are very commonly used in empirical studies of voter turnout.⁹ In fact, they are often highly correlated with voter turnout in each election; however, they do not, by themselves, contribute to explain why the level of participation differs according to election type. The model of relative voter turnout controls the effect of these socio-economic-demographic variables on turnout and enables us to concentrate on how election-specific variables (that also vary across units) affect voter turnout. Since many of these election-specific variables are influenced by institutional settings (e.g., electoral systems, voting rules, or government budgetary systems), the framework introduced here is an effective method to test the correlation between institutions

⁹Scholars have shown that socio-economic characteristics of voters (in individual-level survey data) or of geographical units (in aggregate data) have significant effects on electoral participation. For example, see Almond and Verba (1963), Leighley and Nagler (1992a, 1992b), Milbrath (1965), Milbrath and Goel (1977), Verba, Nie, and Kim (1978), Rosenstone and Hansen (1993), and Wolfinger and Rosenstone (1980).

and participation. It is also important to note that the effects of unobservable and unmeasurable cultural factors, which are independent of election types, are also properly controlled. These cultural factors may explain why people vote, but they cannot explain why the same individual often votes in one election but abstains in another.

It is also worth emphasizing that the proposed model excludes the two other variables usually included in the rational choice model of voter turnout. One is the cost of voting (labeled as the C term), such as transportation expenses and opportunity costs of losing opportunities to earn wages or to have leisure for other activities. Another variable is the benefit of voting *per se* (labeled as the D term), such as the benefit of avoiding the collapse of the democratic system (Downs 1957) and the satisfaction from fulfilling “civic duty” (Riker and Ordeshook 1968). These variables are dropped from the model of relative voter turnout because they can be generally assumed to be constant *regardless of election types*.¹⁰ By examining the *relative* level of voter turnout, we can ignore the measurable and unmeasurable effects of the C and D terms and focus on the effects of P and B terms on voter turnout.

In the following sections, I will test the validity of the proposed model using various types of data. First, I will use cross-national data to explain variations in relative voter turnout *across countries*. Second, using municipality-level aggregate data, I will explain variations in relative voter turnout *within Japan*. Finally, I will use individual-level survey data from Japan, and examine whether Japanese voters indeed consider stake and vote significance when they decide to vote or abstain.

¹⁰This assumption does not hold if the registration processes are different by election types, if polling hours are different by election types (Niemi 1976), or if voters receive side-payments or bribes (a kind of “selective benefit”) in exchange for votes from particular candidates or parties in particular elections (Schwartz 1987). It is worth examining how we can incorporate these special cases into the model of relative voter turnout; however, in this dissertation, I do not take these cases into consideration and simply assume that the C term and the D term are constant across election types.

3.3 Test 1: National-Level Analysis

As shown in Chapter 2, voter turnout is not uniformly higher in national elections than in subnational elections. In some democracies, such as Canada, France, and Japan, the relative level of participation is often *higher* in subnational elections. In this section, to explain such variations *across countries*, I use cross-national data from sixteen OECD countries: eleven non-federal countries (Denmark, Finland, France, Italy, Japan, Korea, Netherlands, Norway, Spain, Sweden, and United Kingdom) and five federal countries (Australia, Austria, Canada, Germany, and United States).¹¹ In the following, I will first introduce the dependent and independent variables for regressions. Second, I will present regression estimates. Third, by calculating fitted values based on the estimates, I will show that the model sufficiently explains cross-national variations and correctly predicts “turnout twist” cases.

3.3.1 Data

The voter turnout data used for regressions are the average voter turnout rates in elections held during the 1990s.¹² For federal countries, subnational elections are divided into two groups: state/provincial elections and local elections (i.e., all levels of legislative elections *under* state or provincial governments). For non-federal countries, I call all subnational elections local elections, as defined in Chapter 1. Thus, there are five observations for state/provincial elections (Australia, Austria, Canada, Germany, and the United States) and fifteen observations for local elections (Australia, Canada, Denmark, Finland, France, Germany, Italy, Japan, Korea, Netherlands, Nor-

¹¹The other OECD and non-OECD countries are excluded from analyses, because not all variables used for regression analysis are available.

¹²If detailed turnout data are unavailable, some rough judgments are made based on available pieces of information. For data sources, see Appendix A.

way, Spain, Sweden, United Kingdom, and United States).¹³

The dependent variable is the natural log of *Voter Turnout Ratio* defined as the ratio of voter turnout in subnational elections to voter turnout in national elections. When *Voter Turnout Ratio* is greater or equal to one, I call it the “turnout twist” phenomenon. Table 3.1 shows that there are three “turnout twist” cases, which include French local elections, Japanese local elections, and Canadian provincial elections.

As discussed in the previous section, there are two main independent variables: how much is at stake and how much citizens’ votes count in subnational vs. national elections. The relative level of stake in subnational vs. national elections is measured by the ratio of total government expenditure (hereinafter, *Total Expenditure Ratio*) or the ratio of total tax revenue (hereinafter, *Tax Revenue Ratio*) in subnational vs. national governments.¹⁴ In regression analyses, the natural logs of these variables are used as independent variables. Table 3.1 shows that a national government usually collects and spends more money than subnational governments in most countries (i.e., *Total Expenditure Ratio* < 1 and *Tax Revenue Ratio* < 1 for most countries). Hence, we may be able to state that there is more at stake in national elections in most countries, as the less-at-stake model has claimed. But there is an important exception: Japan. In Japan, subnational governments spend *more* money than the national government (i.e., *Total Expenditure Ratio* = 1.07). The Canadian provincial governments’ total expenditure is almost the same as the total expenditure by the Canadian federal government (i.e., *Total Expenditure Ratio* = 0.99). These facts may explain why subnational elections in Japan and Canada often record relatively high voter turnout.

¹³The local election data for Austria are unavailable.

¹⁴Except for Japan and Korea, the data source is IMF (1997). Since IMF reports incomplete data for Korea and Japan, I use “the total current disbursements and net saving” and “the total indirect and direct taxes,” reported in OECD (1998), for these countries.

Country	Voter Turnout			Total Expend. Ratio	Tax Revenue Ratio	Elected Reps. Ratio
	<i>L</i>	<i>N</i>	Ratio			

Local Elections, n=15

Australia	60	96	0.63 (18)	0.08 (20)	0.04 (18)	9.9 (16)
Canada	45	69	0.65 (17)	0.41 (11)	0.22 (11)	66.4 (9)
Denmark	71	84	0.85 (14)	0.79 (3)	0.46 (4)	28.3 (14)
Finland	66	71	0.93 (7)	0.57 (5)	0.37 (5)	62.4 (10)
France	69	68	1.01 (2)	0.21 (18)	0.12 (14)	881.7 (1)
Germany	65	80	0.81 (15)	0.27 (16)	0.08 (16)	233.2 (3)
Italy	82	85	0.96 (5)	0.26 (17)	0.07 (17)	117.5 (5)
Japan	60	59	1.02 (1)	1.07 (1)	0.65 (2)	83.8 (7)
Korea	58	68	0.85 (13)	0.57 (6)	0.31 (6)	14.0 (15)
Netherlands	64	79	0.81 (16)	0.33 (14)	0.04 (19)	72.3 (8)
Norway	67	77	0.87 (10)	0.48 (9)	0.25 (10)	85.3 (6)
Spain	66	76	0.87 (11)	0.43 (10)	0.15 (13)	123.6 (4)
Sweden	82	85	0.96 (4)	0.53 (7)	0.47 (3)	43.9 (11)
United Kingdom	45	75	0.60 (19)	0.29 (15)	0.04 (20)	38.1 (12)
United States	25	45	0.56 (20)	0.40 (13)	0.20 (12)	596.2 (2)

State/Provincial Elections, n=5

Australia*	92	96	0.96 (6)	0.60 (4)	0.25 (9)	2.8 (18)
Austria*	78	85	0.92 (8)	0.20 (19)	0.10 (15)	2.5 (19)
Canada*	69	69	1.00 (3)	0.99 (2)	0.79 (1)	2.3 (20)
Germany*	69	80	0.86 (12)	0.41 (12)	0.29 (8)	3.0 (17)
United States*	40	45	0.89 (9)	0.49 (8)	0.31 (7)	35.2 (13)

Note: *N* = national. *L* = subnational, which refers to *state* or *provincial* for rows with an asterisk and *local* (subdivisions under states or provinces for federal countries and all levels of subdivisions under a central authority for non-federal countries) for other rows. Ratios are subnational divided by national. “Expend.” stands for expenditure. “Reps.” stands for representatives. Ranks are in parentheses. *Source:* Appendix A.

Table 3.1: Relative Voter Turnout in Subnational vs. National Elections: Cross-National Data. *There are three cases of “turnout twist” phenomenon: French local elections, Japanese local elections, and Canadian provincial elections.*

Another variable is the ratio of the total number of popularly elected seats in subnational vs. national elections (hereinafter, *Elected Representatives Ratio*).¹⁵ In regressions, I use the natural log of *Elected Representatives Ratio*. Table 3.1 shows that *Elected Representatives Ratio* is greater than one in all countries, as expected. But it is by far the largest in France, where the total number of popularly elected seats is 882 times larger in local elections than in national elections. In France, there is a local councillor for almost every 100 citizens.¹⁶ This fact seems to explain why voter turnout is so high in French local elections. We should note that *Elected Representatives Ratio* is also quite large for local elections in the United States (i.e., *Elected Representatives Ratio* = 569.2). Then why is the relative level of voter turnout in local elections so low in the United States? I will discuss this point later, after showing some regression results.

3.3.2 Regressions

Table 3.2 presents regression estimates of relative voter turnout in subnational vs. national elections. Models 1 and 2 use *Total Expenditure Ratio*, and Models 3 and 4 use *Tax Revenue Ratio*, to measure how much is at stake. I do not include both of the variables in a single regression model to avoid a high multicollinearity problem. To control the fixed-effect of the levels of subnational elections on turnout, all models include a dummy variable for state/provincial elections (= 1 for state/provincial elec-

¹⁵In regressions using cross-national data, the population size is unrelated to estimates, because it is canceled out by taking the ratio of two seat-population ratios, both of which use the total population in a country as a denominator. To make it cross-nationally comparable, the number of seats in subnational elections excludes political appointees, indirectly elected seats, chief executives (e.g., governors and mayors), and special-purpose officials (e.g., school committees in the United States). For data sources, see Appendix A.

¹⁶For a more complete description of electoral systems and the number of representatives in French communal elections, see Appendix B.

Voter Turnout Ratio	Model 1	Model 2	Model 3	Model 4
Total Expenditure Ratio	0.116 (0.067)	0.121 ** (0.052)		
Tax Revenue Ratio			0.086 * (0.044)	0.096 *** (0.032)
Elected Representatives Ratio	0.012 (0.033)	0.081 ** (0.032)	0.013 (0.033)	0.085 ** (0.030)
State/Provincial Elections	0.142 (0.131)	0.396 *** (0.125)	0.119 (0.130)	0.382 *** (0.115)
United States		-0.436 *** (0.126)		-0.459 *** (0.117)
Constant	-0.293 (0.279)	-0.811 *** (0.262)	-0.229 (0.281)	-0.755 *** (0.244)
Number of observations	20	20	20	20
Adjusted R^2	0.108	0.471	0.143	0.549
(Mean Squared Errors) ^{1/2}	0.171	0.131	0.167	0.121

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ (two-tailed)

Note: The dependent variable is the natural log of *Voter Turnout Ratio* in subnational vs. national elections. *Total Expenditure Ratio*, *Tax Revenue Ratio*, and *Elected Representatives Ratio* are also in natural logs. State/Provincial Elections = 1 for state/provincial elections (i.e., countries with an asterisk in Table 3.1), = 0 otherwise. United States = 1 for the United States, = 0 otherwise. Standard errors are in parentheses. See Table 3.1 for all data used for regressions.

Table 3.2: OLS Regressions of Relative Voter Turnout: Cross-National Data. *When the effect of an outlier (i.e., the United States) is properly controlled, the model's explanatory power significantly improves.*

tions, = 0 for local elections). In addition, Model 2 and Model 4 include a dummy variable for the United States (= 1 for the United States, = 0 otherwise). I will discuss why I include this variable, later. The total number of observations is 20 in all models: 15 observations for local vs. national elections and 5 observations for state/provincial vs. national elections. All models are estimated by the simple ordinary least-square (OLS) method.

Model 1 shows that there is no variable that has a significant effect on the dependent variable. The estimated coefficients of Model 1 are, however, biased if there are some omitted independent variables. In my preliminary analyses, I added some other variables to Model 1. They include a dummy variable for federal countries (= 1 for Australia, Canada, Germany, and United States, = 0 otherwise), a dummy variable for presidential systems (= 1 for Finland, France, Korea, and United States, = 0 otherwise), a dummy variable for countries where voting is compulsory at least in national elections (= 1 for Australia and Italy, = 0 otherwise),¹⁷ a dummy variable for countries where voting is compulsory in national elections but not in local elections (= 1 for Australia, = 0 otherwise), a dummy variable for countries where national and subnational elections are held simultaneously (= 1 for Sweden, = 0 otherwise), a dummy variable for France (= 1 for France, = 0 otherwise), a dummy variable for Japan (= 1 for Japan, = 0 otherwise), and other country-specific dummy variables. Then I found that the single most effective variable that should be added to Model 1 is a dummy variable for the United States. As Model 2 shows, by adding the United States dummy variable to Model 1, all coefficients become highly significant. The *R* squared jumps from 0.108 to 0.471. Dummy variables for Japan, France, and Canada did not change the regression estimates significantly. These results imply that *Japan, France, and Canada are not the outliers of the model. Rather, the outlier is the United*

¹⁷Strictly speaking, voting is not compulsory in Italy; however, a record of abstention is entered on a citizen's "Certificate of Good Conduct."

States.¹⁸

Then why is the United States so exceptional? The coefficient estimate of *Total Expenditure Ratio* is almost the same between Model 1 and Model 2, while the estimate of *Elected Representatives Ratio* is more than tripled by adding the United States dummy. This suggests that the effect of *Elected Representatives Ratio* on the dependent variable is highly correlated with the effect of the United States dummy variable. In other words, the United States is exceptional in that it has so many local representatives but records such a low local voter turnout, as I have briefly discussed with Table 3.1. Then why is this so? It may relate to the fact that in most states in the United States, all levels of elections, *except local elections*, are held simultaneously every two years in November. This institutional arrangement to have most elections at the same time on the same ballot is quite unique to the United States. For this reason, compared to independently held local elections, November general elections may be much more attractive for media, politicians, party activists and voters. This puzzle remains a matter of debate, but a further inquiry into this puzzle is beyond the scope of this dissertation.

Models 1 and 2 show some other important findings. First, the estimates of the dummy variable for state/provincial elections are positive, which implies that state/provincial elections, compared to local elections, have a fixed effect that increases relative voter turnout. Compared to local governments, state/provincial governments in federal countries may have more authority to control important areas of public policies, and such authority may not be fully captured simply by the size of government expenditure or tax revenue. Second, the estimates of the constant term are negative, which implies that national elections, compared to subnational elections,

¹⁸An alternative method for controlling the effect of an outlier is to drop the outlier from estimation. However, the coefficient estimates and their standard errors, when dropping the two observations for the United States, are almost the same as those in regressions with the United States dummy variable.

have a fixed effect that decreases relative voter turnout. This may relate to the effect of the mass media, which often cover more news and stories about national-level than subnational-level politics and elections. Note that these estimates are significantly different from zero only when the United States dummy variable is included. These two fixed-effect parameters also need further consideration.

The findings in Model 3 vs. Model 4 are essentially the same as those in Model 1 vs. Model 2. First, without the United States dummy variable, most variables have insignificant effects on the dependent variable. The only exception is *Tax Revenue Ratio*, which is significantly different from zero at 0.10 level. Second, by adding the United States dummy variable, all regression coefficients become significantly different from zero. Third, Model 4 (with the United States dummy) fits data much better than Model 3 (without the United States dummy). Fourth, the estimated coefficient of *Elected Representatives Ratio* significantly increases by adding the United States dummy. Finally, the estimates of the state/provincial election dummy variable are positive, whereas the estimates of the constant term are negative.

3.3.3 Predictions

The regression estimates suggest that the proposed theoretical model fits data quite well when the effect of an outlier (i.e., the United States) is properly controlled. But the marginal effect parameters in regressions, by themselves, do not directly show how well the model predicts the “turnout twist” cases and which of the main variables contributes to explain them.

To answer these questions, I first calculated, for each case, the confidence interval of the prediction using the parameter estimates of the best-fitted model (i.e., Model 4).¹⁹ The results are presented in Table 3.3. In observed data, there are three “turnout

¹⁹The prediction is based on the observed values of all variables and the regression coefficients. To make the results intuitive, I transformed the observed and predicted values of the dependent variable

County	Observed Turnout Ratio	Predicted Turnout Ratio	
<i>Local Elections, n=15</i>			
Australia	0.63	[0.53 , 0.72]	
Canada	0.65	[0.80 , 0.91]	+
Denmark	0.85	[0.77 , 0.95]	
Finland	0.93	[0.82 , 0.97]	
France	1.01	[0.85 , 1.18]	
Germany	0.81	[0.78 , 0.95]	
Italy	0.96	[0.74 , 0.87]	-
Japan	1.02	[0.87 , 1.08]	
Korea	0.85	[0.68 , 0.87]	
Netherlands	0.81	[0.66 , 0.81]	
Norway	0.87	[0.82 , 0.95]	
Spain	0.87	[0.81 , 0.93]	
Sweden	0.96	[0.81 , 0.98]	
United Kingdom	0.60	[0.61 , 0.76]	+
United States	0.56	[0.53 , 0.77]	
<i>State/Provincial Elections, n=5</i>			
Australia	0.96	[0.86 , 1.07]	
Austria	0.92	[0.77 , 0.99]	
Canada	1.00	[0.92 , 1.20]	
Germany	0.86	[0.88 , 1.10]	+
United States	0.89	[0.65 , 0.91]	

Note: The numbers in brackets show the 95% confidence interval of the prediction, which is based on the estimates of Model 4. The positive signs in the last column indicate that the observed *Voter Turnout Ratio* is smaller than the lower bound of the confidence interval; namely, the model overestimates the ratio. On the other hand, the negative sign indicates that the model underestimates the ratio.

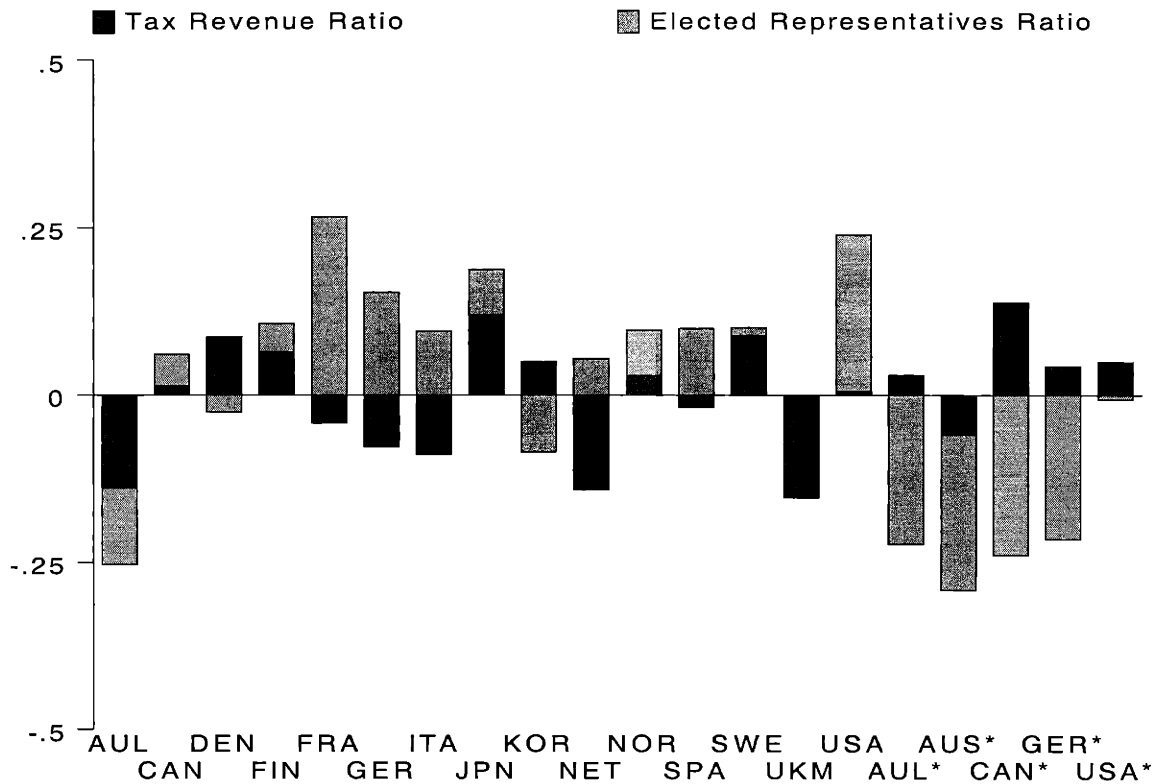
Table 3.3: Observed vs. Predicted Relative Voter Turnout: Cross-National Data.
The model correctly predicts the turnout twist in French local elections, Japanese local elections, and Canadian provincial elections.

twist” cases, including French local elections, Japanese local elections, and Canadian provincial elections. The confidence intervals of the predicted *Voter Turnout Ratio* for these cases correctly include the observed values. Thus, we can conclude that the model correctly predicts “turnout twist” in Japan, France, and Canada. Table 3.3 also shows that the model overestimates *Voter Turnout Ratio* for Canadian local elections, United Kingdom local elections, and German state elections. But the model underestimates the ratio for Italian local elections. These findings call for further improvement of the model by considering some other controlling variables. But I leave the discussion of these under/overestimated cases for my future research.

Second, for each observation, I examined how much each of the two main independent variables (i.e., *Tax Revenue Ratio* and *Elected Representatives Ratio* in Model 4) contributes to explain the variance in the predicted *Voter Turnout Ratio*. This can be done by calculating the total estimated effect of each variable, which is defined as the estimated marginal effect multiplied by the differences from the mean of each independent variable.²⁰ The results are shown in Figure 3-2. The relatively large number of elected local politicians in France and the United States produce relatively high local vs. national voter turnout, as the highly positive light-shaded bars for these two cases show. In Japanese local elections and Canadian provincial elections, the total effect of *Tax Revenue Ratio* has a greater effect on the dependent variable, as

(in logs) into the simple *Voter Turnout Ratio* by taking an exponent. The confidence interval of the prediction for each observation is computed using the program called *Clarify* developed by Tomz, Wittenberg, and King (1999). For a description of this program, see King, Tomz, and Wittenberg (2000).

²⁰Let x_1 , x_2 , x_3 , and x_4 be the mean differences for *Tax Revenue Ratio*, *Elected Representatives Ratio*, the state/provincial elections dummy, and the United States dummy. Also let b_1 , b_2 , b_3 , and b_4 be the effect parameters of respective independent variables in Model 4. Then the total effects are defined as b_1x_1 , b_2x_2 , b_3x_3 , and b_4x_4 , where $b_1 = 0.096$, $b_2 = 0.085$, $b_3 = 0.382$, and $b_4 = -0.459$. To avoid making the graph complicated, Figure 3-2 only displays the total effects of the two main independent variables.



Note: The dark-shaded bars indicate the total effects of *Tax Revenue Ratio* (i.e., b_1x_1), and the light-shaded bars indicate the total effects of *Elected Representatives Ratio* (i.e., b_2x_2), on the dependent variable. $b_1 = 0.096$ and $b_2 = 0.085$ are the estimates of the marginal effect parameters from Model 4. x_1 and x_2 are the mean differences of independent variables. The countries are identified by the first three characters of their English names, except that AUL means Australia, JPN Japan, UKM United Kingdom, and USA United States. The country codes with an asterisk indicate state/provincial elections. See Table 3.1 for a list of countries.

Figure 3-2: Total Effects of Main Independent Variables: Cross-National Data. *The relatively large number of elected local politicians in France and United States produce relatively high local vs. national voter turnout. In Japanese local elections and Canadian provincial elections, the total effect of Tax Revenue Ratio has a greater effect on the dependent variable.*

the positive dark-shaded bars show. These results are according to my expectation, which I stated earlier when introducing cross-national data in Table 3.1.

In sum, the model correctly predicts the examples of the “turnout twist” phenomenon, and gives an explanation of why Canadian, Japanese, and French subnational elections often bring more voters to the polls than national elections.

3.4 Test 2: Municipality-Level Analysis

The previous section showed that the model can explain the variations in relative voter turnout *across countries*. In this section, I focus on one of the most notable examples of the “turnout twist” phenomenon *within a country*; namely, Japanese municipal vs. national elections.²¹

In what follows, as in the previous section, I will first introduce dependent and independent variables used for cross-municipality analysis. Then, by conducting some regressions and interpreting the results, I show that the proposed model can also explain variations in relative voter turnout in Japan and predict the “turnout twist” across municipalities.

²¹As explained earlier, there are two types of national elections in Japan: one for the Lower House and another for the Upper House. The subnational elections include not only municipal assembly elections, but also prefectural assembly elections, gubernatorial elections, and mayoral elections. In this section, I focus only on the Lower House elections (i.e., the highest-level legislative elections) and the municipal assembly elections (i.e., the lowest-level legislative elections). Fuller study of the turnout difference between other types of national and subnational elections lies outside the scope of the dissertation.

3.4.1 Data

The data are sampled from two prefectures in Japan: Saga and Fukuoka.²² Saga is an example of rural prefectures in Japan, while Fukuoka is an example of urban prefectures. These two prefectures include 158 municipalities (cities, wards, towns, or villages) ranging from very small rural villages (e.g., Ōshima with a population of about 1,000) to very large urban cities/wards (e.g., Yahata-Nishi with a population of 250,000).²³

The data sampling period is between January 1987 and December 1998. During this period, a total of 477 municipal assembly elections (excluding 96 by-elections but including 35 uncontested general elections) were held in these 158 municipalities. Approximately two-thirds of them (i.e., 309 out of 477 elections) were held concurrently with nationwide local elections (*Tōitsu Chihō Senkyo*) held in April 1987, 1991, and 1995. All the other municipal assembly elections were held during off-years. During the same data sampling period, three Lower House elections were held in February 1990, May 1993, and October 1996. Except for one election (held in the Village of Aka in 1993), no municipal assembly elections were held concurrently with the Lower House elections.

These Lower House and municipal elections in the sampled data set are divided into the following three groups (periods): Period 1, elections held between 1987 and

²²In Japan, no organization, not even the Ministry of Home Affairs (*Jichishō*), systematically collects the electoral results of all 3,229 municipal assembly elections in Japan. They are only available in the official reports of election results (*Senkyo Kekka Shirabe*) publicized annually by each prefecture's Election Administration Commission. Since it is too costly to collect the electoral data of all municipalities from all prefectural Election Administration Commissions, I only focus on these two prefectures in this dissertation.

²³Fukuoka Prefecture has two of the twelve largest urban cities in Japan (*Seirei Shitei Toshi*, cities designated by ordinance). They are the City of Kita-Kyūshū and the City of Fukuoka. Yahata-Nishi is one of the wards (i.e., subdivisions of a city) in the City of Kita-Kyūshū.

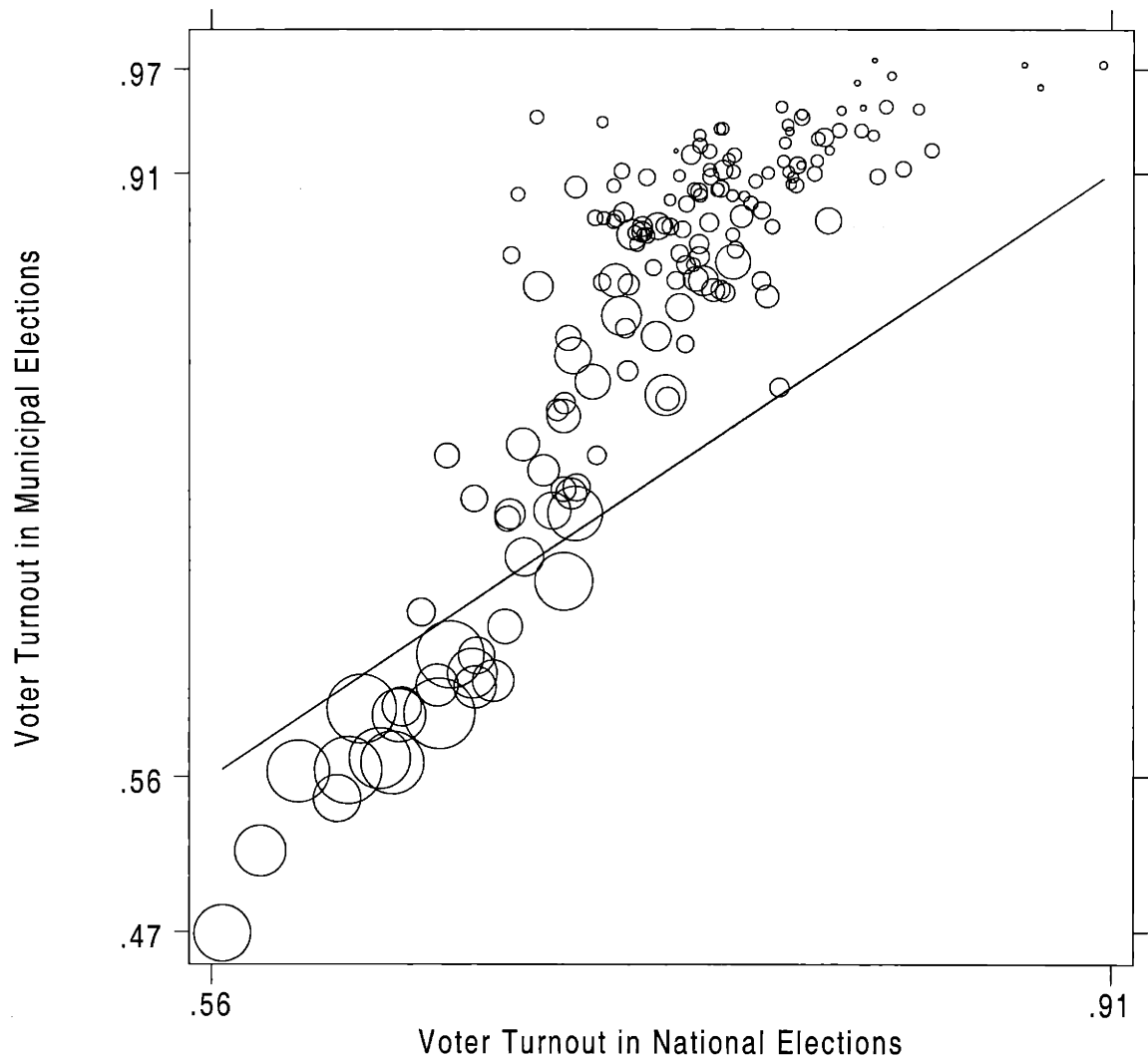
1990; Period 2, elections held between 1991 and 1994; and Period 3, elections held between 1995 and 1998. Almost all municipalities had one Lower House and one municipal election in each of the three periods.²⁴ A pair of the Lower House and municipal assembly elections in each municipality in each period is treated as a single observation.

The dependent variable, *Relative Voter Turnout*, is the log-ratio of a voter turnout rate in a municipal assembly election to a voter turnout rate in a national Lower House election in municipality $i (= 1, 2, \dots, 158)$ in Period $t (= 1, 2, 3)$.²⁵ Figure 3-3 shows voter turnout in municipal assembly elections and national Lower House elections. The area of symbols is proportional to each municipality's total population. It clearly shows that in large cities, voter turnout in municipal elections is lower than turnout in national elections (i.e., below the 45 degree line). But it is *higher* in small towns and villages. This is what I call the "turnout twist" phenomenon within Japan.

As discussed earlier, I hypothesize that *Relative Voter Turnout* is a function of the relative level of how much is at stake and how much votes count in municipal vs. national elections. With municipality-level data, it is difficult to measure how much is at stake in *national* elections, because the municipality-level data relevant to government budgets and policies are mostly for municipal governments. Here, I assume that the national-level stake is constant across all municipalities, and that the relative B term, $\ln(B_L/\bar{B}_N)$, changes in proportion to changes in the local-level

²⁴There are three exceptions. In the Town of Kotake, two town assembly elections were held during Period 1. In the Town of Soeda and the City of Imari, two town/city assembly elections were held during Period 2. These three municipalities dissolved their assemblies before the four-year term ended. Regarding these exceptional cases, I dropped off-year elections from analysis. This process has no significant effect on any of the regression results.

²⁵The data used for regressions exclude all uncontested assembly elections. Accordingly, the effective number of observations is 146 in Period 1, 141 in Period 2, and 152 in Period 3; that is, 92.0% of all general municipal assembly elections held during the data sampling period.



Note: The data include all 158 municipalities in Fukuoka and Saga Prefectures. The area of symbols is proportional to each municipality's average population size for the period 1989-1998. The turnout rates are the averages of municipal (municipal assembly) and national (Lower House) elections held during 1989-1998.

Figure 3-3: Turnout Twist in Japanese Elections: Cross-Municipal Data. *Municipal elections produce lower turnout than national elections in large cities but higher turnout in small towns and villages.*

stake, B_L , which is measured by the two variables, *Local Government Expenditure* and *Local Tax*. *Local Government Expenditure* is the natural logarithm of the total municipal government expenditure (*Saishutsu Kessan Sogaku*) divided by the total personal income subject to taxation (*Kazei Taishō Shotoku Gaku*). The *Local Tax* is the natural logarithm of the total municipal tax (*Chihō Zei*) divided by the total personal income subject to taxation.²⁶ As I discussed earlier, I assume that citizens are concerned more about who wins in elections and what they do after elections, if a government spends more money and/or if citizens pay more taxes to a government.

In explaining the difference in voter turnout between lower-level and higher-level legislative elections, the most effective measure for how much citizens' votes count seems to be the number of elected representatives per capita, as I have already discussed. Hence, as in the cross-national regressions, for the relative P term, I include a variable labeled *Elected Representatives per capita*: the log-ratio of the number of popularly elected representatives per capita in the municipal assembly vs. the Lower House elections.²⁷

In addition, I use another measure for how much votes count. That is *Closeness*: the log-ratio of the closeness in the municipal assembly vs. the Lower House elec-

²⁶Both variables take the average values during each period. I standardize them not by the population size but by the income level, simply because the latter standardization better fits the data. In my preliminary analyses, I also used some other measures of the local-level stake, but none of them has a higher explanatory power than these two variables. The data source is Shakai Jinkō Tōkei Taikei (*Social and Demographic Statistical Survey, trans.*, machine-readable files) compiled and distributed by Tōkei Jyōhō Kaihatsu Kenkyū Sentā.

²⁷Except for the 1996 Lower House election, which was held under the new electoral system (a combination of the single-member district system and the proportional representation system), all national and municipal elections in the sampled data used the single non-transferable vote (SNTV) system with multimember districts (MMD). The number of seats was 4 to 6 in the 1990 and 1993 Lower House elections and 5 to 40 in the municipal assembly elections. In Japanese municipal assembly elections, a municipality as a whole constitutes an electoral district. In the Lower House elections, this variable is constant across municipalities in a given electoral district.

tions.²⁸ The closeness is measured by the vote margin between the last winner and the top loser divided by the district population per seat.²⁹ As I introduced earlier, scholars have argued that when a race is close, candidates make harder efforts to mobilize voters and voters think they have a greater influence on electoral outcomes. In short, both candidates and voters think votes count (matter) more significantly in closer elections.

Besides these main explanatory variables measuring how much is at stake and how much votes count, I include the following dummy variables to control the effects of the type and timing of municipal assembly elections: *Double Local Election* = 1 if a municipal assembly election was held with a mayoral election, and = 0 otherwise; *Unified Local Election* = 1 if a municipal assembly election was held with nationwide local elections, = 0 otherwise; and *Post-National-Election Local Elections* = 1 if a municipal assembly election was held *after* a Lower House election, = 0 otherwise.³⁰ The first two dummy variables are expected to have a positive impact on the relative voter turnout, because turnout is often higher when more than one election are held simultaneously. The third variable is expected to have a negative coefficient, because there is a tendency of declining voter turnout in recent Japanese elections regardless of the types of elections.

²⁸I did not include this variable in the cross-national regressions, simply because it is difficult to measure the degree of closeness using data aggregated at the national level.

²⁹A slightly different measure of the closeness was used in Cox, Rosenbluth and Thies (1998). Similar to the relative number of elected representatives per capita, the closeness in the Lower House elections is constant across municipalities in a given electoral district.

³⁰In each of the three data-sampling periods, the nationwide local elections (April 1987, April 1991, and April 1995) were held *before* the Lower House elections (February 1990, May 1994, and October 1996). Hence, all municipal elections with one for this dummy variable were held during off-years.

3.4.2 Regressions

Using the variables introduced in the previous subsection, I conducted a weighted least-square (WLS) regression analysis for each period.³¹ The weighted least-square regressions are more desirable than the ordinary least-square (OLS) regressions, because the dependent variable is based on *proportional variables* (i.e., voter turnout rates) and the number of individuals making up each aggregate observation is widely different.³² To make an inference about individual-level voting behaviors using aggregate data with diverse population sizes, we should weight the observations by the municipality size.³³ The three independent regressions are more appropriate (but less efficient) than a single panel-data regression, because the effect parameters of independent variables may *not* be constant across periods. In particular, the parameters in Period 3 can be different from those in Periods 1 and 2, because Period 3 covers the first Lower House election after the drastic electoral reform.

Table 3.4 shows regression estimates. The two variables measuring the relative level of how much is at stake (i.e., *Local Government Expenditure* and *Local Tax*) have a positive effect in all periods, as expected from the more-at-stake argument. The variables for the relative level of how much votes count (i.e., *Elected Representatives per capita* and *Closeness*) also have a positive effect on the relative voter turnout. These effects are significantly different from zero in at least two of the three periods. These estimates suggest that the proposed model can explain not only the variations

³¹I used STATA's `regress` command with an analytical weight option [`aw=pop`], where `pop` is the number of electors (i.e., the voting-age adult population) in each municipality in each period.

³²For the same reason, the WLS may be more accurate for cross-national analyses as well. In my preliminary analyses, I conducted the WLS cross-national regressions, but the WLS estimates were not very different from the OLS estimates.

³³More technically, the weighted least-square regressions correct the problem of heteroskedasticity. See Johnston (1984, p.293-304) for details.

Relative Voter Turnout	Period 1 1987-1990	Period 2 1991-1994	Period 3 1995-1998
Local Government Expenditure	0.072 *** (0.009)	0.043 *** (0.015)	0.016 (0.022)
Local Tax	0.053 ** (0.021)	0.054 * (0.031)	0.028 (0.044)
Elected Representatives per capita	0.043 *** (0.005)	0.097 *** (0.007)	0.139 *** (0.010)
Closeness	0.002 (0.002)	0.008 ** (0.003)	0.016 *** (0.004)
Double Local Election	0.022 ** (0.011)	0.025 (0.016)	0.076 *** (0.026)
Unified Local Election	0.002 (0.007)	0.007 (0.011)	-0.040 * (0.024)
Post-National-Election Local Election	-0.052 *** (0.018)	0.014 (0.022)	-0.010 (0.027)
Constant	0.044 (0.031)	-0.233 *** (0.053)	-0.505 *** (0.071)
Number of observations	146	141	152
Adjusted R^2	0.657	0.799	0.815
(Mean Squared Error) ²	0.034	0.053	0.078

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ (two-tailed)

Note: The dependent variable (Relative Voter Turnout) is the log-ratio of voter turnout in municipal assembly elections vs. Lower House elections. The estimates are based on *weighted* least-square regressions, in which the weight is the number of electors (i.e., the voting-age adult population) in each municipality. Standard errors are in parentheses.

Table 3.4: WLS Regressions of Relative Voter Turnout: Cross-Municipal Japanese Data. *The variables measuring how much is at stake and how much votes count are significantly positive in at least two of the three data sampling periods.*

across countries but also the variations within Japan.

Table 3.4 shows some other interesting findings. First, the effect of *Double Local Elections* is positive and significant (Periods 1 and 3). As expected, the level of participation in municipal elections is higher when both mayoral and assembly elections are held simultaneously. Second, the effect of *Unified Local Election* is positive but insignificant in Periods 1 and 2, while significantly *negative* in Period 3. Such a negative effect is inconsistent with our theoretical expectation. Why did off-year municipal elections in Period 3, *ceteris paribus*, record *higher* turnout than unified elections? This is open to question. Third, the effect of *Post-National-Election Local Election* is negative (Periods 1 and 3) and significant (Period 1 only). Local elections held *after* the Lower House elections tend to bring fewer voters to the polls. Fourth, the constant term is negative and significant (Periods 2 and 3). As in the cross-national regression estimates, the negative constant term implies that the Lower House elections, compared to the municipal assembly elections, have a fixed effect that lowers the relative voter turnout. Finally, and most interestingly, the effects of the variables measuring how much is at stake have been declining over the data sampling periods. The effect of *Local Government Expenditure* is 0.072 in Period 1, 0.043 in Period 2, and 0.016 in Period 3. The effect of *Local Tax* is 0.053 in Period 1, 0.054 in Period 2, and 0.028 in Period 3. But the effects of the variables measuring how much votes count have been growing. The effect of *Elected Representatives per capita* is 0.043 in Period 1, 0.097 in Period 2, and 0.139 in Period 3. The effect of *Closeness* is 0.002 in Period 1, 0.008 in Period 2, and 0.016 in Period 3. These estimates may suggest that Japanese voters, when deciding whether to vote, have become *less* concerned about how much is at stake but *more* sensitive to how much votes count in elections. Then why is this so? Does this finding relate to the electoral reform in the Lower House elections? How has the re-alignment of political parties in the 1990s affected these changing effect parameters? These are very important questions for understanding

recent changes in Japanese politics, but I want to leave further inquiry for my future research.

3.4.3 Predictions

Table 3.4 shows that all variables measuring how much is at stake and how much votes count have an expected (positive) effect on the relative level of voter turnout in municipal vs. national elections. Yet the estimates of the *marginal effect* parameters do not directly show how well this model can explain why municipal assembly elections produce *lower* voter turnout than the Lower House elections in large cities, but *higher* turnout in small towns and villages. In other words, why does the relative voter turnout in municipal vs. national elections *decrease* as the municipality size *increases*? To answer these questions, we have to examine how much the four main explanatory variables (hereinafter called “main variables”) are negatively correlated with the municipality size. Any variable that has a strong positive correlation with the relative voter turnout, as well as a strong negative correlation with the municipality size, is the key to understanding the “turnout twist” in Japanese elections.

Table 3.5 shows the percent change in each main variable with respect to a one percent change in the municipality size.³⁴ The *Elected Representatives per capita* clearly has the largest and the most significant correlation with the municipality size; namely, a one percent change in the municipality size results in approximately 0.8 percent *decrease* in *Elected Representatives per capita*, and its effect is highly significant. Table 3.4 shows that this variable has a highly significant effect on the relative voter turnout in all three periods, and the size of the effect is the largest

³⁴The data shown are the estimates of a slope parameter β in the following OLS regression model: $\ln y = \alpha + \beta \cdot \ln x + \epsilon$, where $\ln y$ is one of the main independent variables of the regressions in Table 3.4, $\ln x$ is the natural logarithm of the number of electors in each municipality, and ϵ is a random disturbance term.

	Period 1 1987-1990	Period 2 1991-1994	Period 3 1995-1998
Local Government Expenditure	-0.266 (-8.020)	-0.296 (-9.682)	-0.280 (-9.663)
Local Tax	0.112 (6.230)	0.102 (5.313)	0.106 (5.848)
Elected Representatives per capita	-0.852 (-27.689)	-0.847 (-29.438)	-0.848 (-34.298)
Closeness	0.010 (0.074)	0.685 (5.303)	0.198 (1.883)

Note: The data shown in this table are the estimates of a slope parameter β in the following OLS regression model: $\ln y = \alpha + \beta \cdot \ln x + \epsilon$, where $\ln y$ is an independent variable of the regressions in Table 3.4 (i.e., one of the variables in the first column of this table), $\ln x$ is the natural log of the number of electors in each municipality, and ϵ is a random disturbance term. Since both the dependent and independent variables are in natural log, the slope parameter indicates the *elasticity* of x on y ; that is, the percentage change in y with respect to a one percent change in x . Student's t-values are in parentheses.

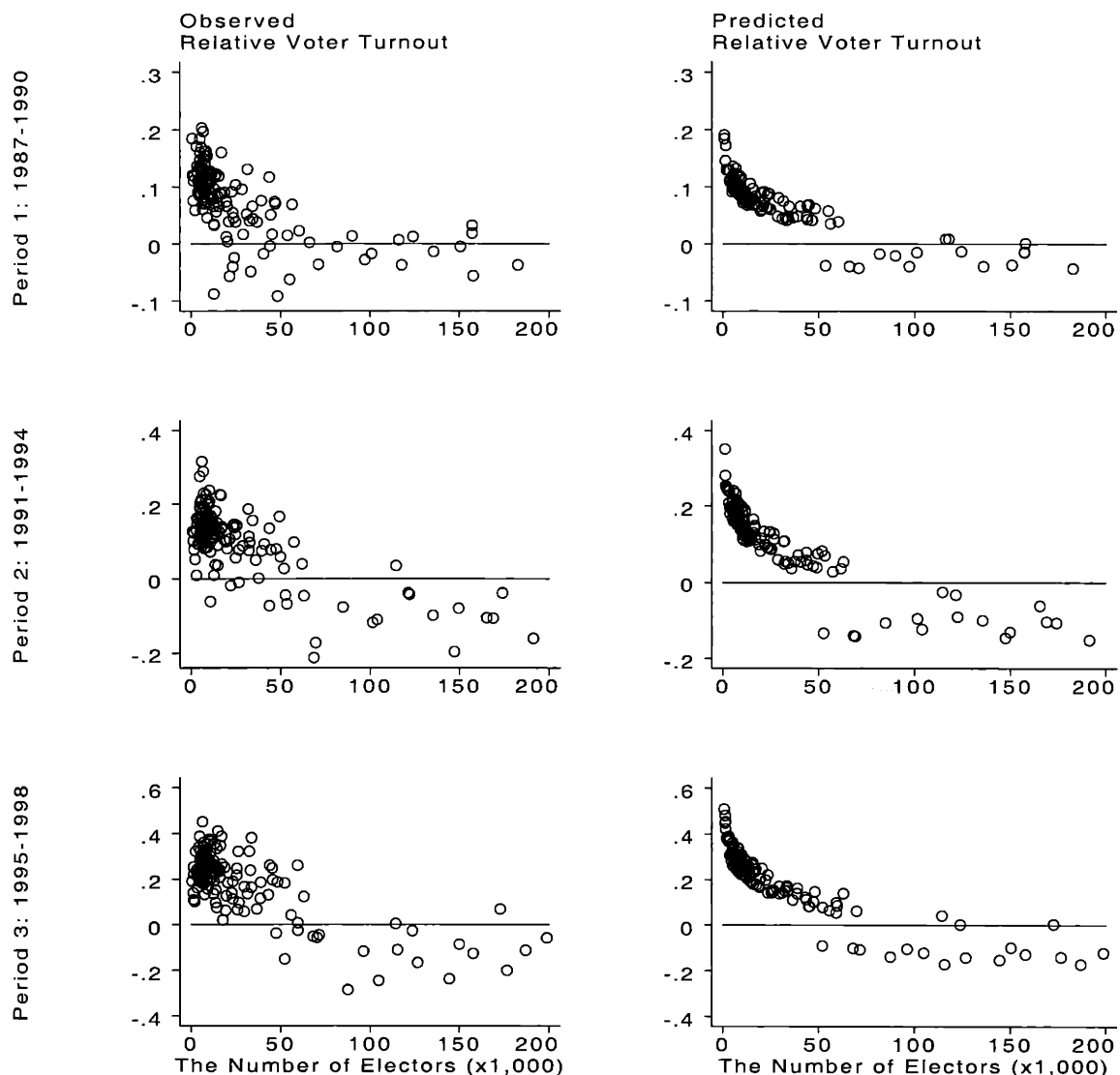
Table 3.5: Correlation between Main Independent Variables and Municipality Size: Cross-Municipal Japanese Data. *The relative number of elected representatives per capita has the largest and the most significant correlation with the municipality size.*

among the main variables in Periods 2 and 3. Therefore, the *Elected Representatives per capita* is the single most important variable shaping the puzzling “turnout twist” phenomenon in Japan.

Figure 3-4 clearly shows how much this variable explains the “turnout twist” in Japan. The three figures on the left-hand side show the *observed* relationship between the relative voter turnout and the municipality size in each period. We can see a clear “turnout twist” pattern in each period; namely, the relative voter turnout in municipal vs. national elections is positive in smaller municipalities but *negative* in large municipalities. The figures on the right-hand side show the relationship between the *predicted* relative voter turnout and the municipality size. The prediction is based on the coefficient estimates in Table 3.4 and the observed values of *Elected Representatives per capita*, and the mean values of all the other explanatory variables. In other words, these right-hand-side figures show the effect of *Elected Representatives per capita* on the relative voter turnout when the effects of other variables are held constant. In each period, this variable, *by itself*, correctly predicts that municipal turnout is higher than national turnout in small towns and villages, but it is lower in large cities.

To complete our investigation, the last question is: Why is the *Elected Representatives per capita* (or the relative number of elected representatives per capita in municipal vs. national elections) so strongly correlated with the municipality size? This negative correlation is *institutionally designed*, as I will argue below.

In Japanese Lower House elections, there is a significant degree of malapportionment of seats across districts. For example, according to recent population statistics, the largest district population is 2.45 times larger than the smallest district population (*Asahi Shimbun*, August 26, 1999). In general, the districts with a small district population are in small rural towns and villages. In the municipal assembly elections, the number of seats in each municipal assembly is defined by the Local Autonomy



Note: The three figures on the left show the observed relationship between the relative voter turnout and the number of electors in each municipality in each period. The figures on the right show the relationship between the predicted relative voter turnout and the (observed) number of electors.

Figure 3-4: Effects of Relative Number of Seats Per Capita on Relative Voter Turnout: Cross-Municipal Data. *The relative number of elected representatives per capita sufficiently explains the “turnout twist” phenomenon.*

Law (*Chihō Jichi Hō*). This law makes the number of representatives per capita in municipal assembly elections correlated negatively with the municipal population size. For example, a small village assembly with a population of 1,000 has 12 seats, while a city assembly with a population of 1,000,000 has 64 seats. The number of representatives per capita in the former is 183 times larger than the latter.³⁵

Such relationships between the number of representatives per capita and the municipality size in the Lower House and municipal assembly elections should be proxied by the following equations:

$$\ln(M_L) = \gamma_L - \delta_L \cdot \ln Z \quad (3.3)$$

$$\ln(M_N) = \gamma_N - \delta_N \cdot \ln Z \quad (3.4)$$

$$\ln\left(\frac{M_L}{M_N}\right) = (\gamma_L - \gamma_N) - (\delta_L - \delta_N) \cdot \ln Z \quad (3.5)$$

M_j is the number of representatives per capita in election $j = (L, N)$ in municipality i , and Z is the total population in municipality i . (The subscript i is dropped for simplicity.) The intercept parameter is larger in the municipal elections than in the national elections ($\gamma_L > \gamma_N > 0$), because the number of representatives per capita is almost always larger in the municipal elections. The slope parameter is also larger in the municipal elections ($\delta_L > \delta_N > 0$). This is because a one percent increase in the municipality size (Z) results in a δ_L percent decrease in the number of representatives per capita (M) in the municipal elections but only a $\delta_N (< \delta_L)$ percent decrease in the national elections. As a result, as shown in Equation (3.5), the *relative* number of elected representatives per capita (i.e., *Elected Representatives per capita*, $\ln(\frac{M_L}{M_N})$) significantly decreases as the municipality size increases.

In sum, the strong negative relationship between *Elected Representatives per capita*

³⁵The examples are based on the legal apportionment for the 1999 unified local elections. Under the current legislation, the actual number of contested seats could be smaller according to each municipality's ordinance (*Jyōrei*). In Chapter 4, I will introduce, more in detail, how the number of seats in municipal assembly elections is determined in Japan.

and the municipality size is *institutionally designed*. Such an institutionally designed variable sufficiently predicts the “turnout twist” phenomenon in Japan.

3.5 Test 3: Individual-level Analysis

The previous section showed that the relative level of voter turnout in municipal vs. national elections in Japan is significantly correlated with some indicators, which are *assumed to measure* how much is at stake and how much votes count in municipal vs. national elections. But an important question remains: Do such statistical correlations in municipality-level data truly mean that Japanese voters consider how much is at stake and how much votes count when they decide whether to vote or abstain? This section attempts to answer this question using individual-level survey data.

The organization of this section is similar to that of the previous two sections. I will first introduce dependent and independent variables, which are used for regressions. Second, I will present regression results. Finally, I will interpret some estimated parameters, and discuss the validity of the theoretical model proposed in this chapter.

3.5.1 Data

In this section, I use a nationwide survey conducted by *Akarui Senkyo Suishin Kyōkai*.³⁶ In this survey, 2,321 randomly selected eligible Japanese voters (i.e., Japanese citizens 20 or more years old) were questioned about their frequency of voting (i.e., how often they had voted) in national Lower House elections and municipal assembly elections.³⁷ Table 3.6 shows the (bivariate) voting frequency distribution

³⁶See Appendix C for a fuller description of this survey.

³⁷This survey also asked each respondent’s voting frequency in other types of elections, including Upper House, gubernatorial, prefectural assembly, and mayoral elections. As in Section 3.4, however, I only focus on the lowest and highest level assembly elections.

	Municipal Elections					National Elections				
	1	2	3	4	5	Total				
1 (I never voted)	29	5	4	7	0	45				
2 (I rarely voted)	2	34	11	14	4	65				
3 (I sometimes voted)	1	5	84	28	9	127				
4 (I usually voted)	3	3	34	469	32	541				
5 (I always voted)	4	2	21	130	1,300	1,457				
Total	39	49	154	648	1,345	2,235				

Note: Municipal elections refer to municipal assembly elections, and national elections to national Lower House elections. Source: Appendix C.

Table 3.6: Voting Frequency Distribution for Municipal and National Elections in Japan: Survey Data. *On average, Japanese voters more frequently vote in municipal assembly elections than in national Lower House elections.*

for municipal assembly and Lower House elections.³⁸

The dependent variable for regressions is the *differential* voting frequency between municipal and national elections.³⁹ In this sample, 85.5% of respondents reported that their voting frequency is the same in both national and municipal elections, 9.2% of

³⁸I ignored 86 respondents (3.7% of the sample) who chose the following answers: “I voted for the first time in the last election.” “I had no voting right (i.e., was less than twenty years old) in the last election.” “I don’t know.” I also ignored the possibility that some respondents misreported their voting frequency. There is room for correcting statistical biases due to dropping some cases by a researcher and misreporting by respondents, but I do not go into technical details to keep methodological simplicity.

³⁹The other candidates for the dependent variable include $\frac{M}{N}$ and $\ln \frac{M}{N}$, where $M = \{1, 2, \dots, 5\}$ is the voting frequency in municipal elections and $N = \{1, 2, \dots, 5\}$ in national elections. While $M - N$ assumes that interval scales between categories are constant ($= 1$), the other two variables assume that the higher the voting frequency, the smaller the marginal difference between two categories. Since there is no theoretical ground to conclude one variable is more appropriate than others, I only use the one with which the statistical model fits data better; namely, $M - N$.

respondents reported a higher voting frequency in municipal elections, and 5.1% in national elections. A large portion of respondents chose the same category for both municipal and national elections, but the difference is significantly different from zero.⁴⁰

The cross-municipal regressions in Section 3.4 showed that the single most important independent variable explaining relative voter turnout in municipal vs. national elections in Japan is the relative number of elected representatives per capita. Then, *if the number of representatives per capita truly means how much votes count*, the differential voting frequency should be determined mainly by the relative level of each respondent's subjective judgment of how much votes count in municipal vs. national elections.

In this survey, fortunately, there is a question asking whether or not a respondent agrees with the following idea: "My vote does not count in an election, because a large number of other people vote."⁴¹ Respondents chose an answer from the following alternatives: 5 if "agree," 4 if "rather agree," 3 if "indifferent," 2 if "rather disagree," and 1 if "disagree." In theory, this variable, labeled as *Vote Magnitude*, is expected to have a negative effect on voting frequency.

This variable helps us to understand whether "vote significance" truly affects voter turnout. But a problem is that it does not specify which type of election is in question. Some people may respond to this question, under an implicit assumption that the question is about national elections. Others may assume municipal elections. Therefore, even though we have this variable in our individual-level data, we cannot *directly*

⁴⁰Wilcoxon's signed-rank test (Snedecor and Cochran 1989), which is an alternative to the commonly used *t* test in paired samples, rejects the null hypothesis that the difference is zero. In this case, Wilcoxon's test is preferable, because it does not assume the normality of the differential voting frequency. The *t* test also rejects the same null hypothesis.

⁴¹For all questions (i.e., variables used for regressions) introduced hereinafter, see Appendix C for question wording and coding.

examine whether the differential level of how much a respondent thinks his/her vote does not count in municipal vs. national elections affects differential voting frequency. Nevertheless, it is still worth using it in regressions, because if the marginal effect of *Vote Magnitude* on the differential voting frequency is *not* significantly differently from zero, there should be a certain meaningful *parametric* difference between the effect of *Vote Magnitude* on voting frequency in municipal elections and its effect on voting frequency in national elections. Later, I will more fully discuss how to interpret the estimated parameters.

Note that the magnitude of the marginal effect of *Vote Magnitude* on the voting frequency (and the differential voting frequency) seems to be different according to the size of municipality where each respondent resides. This is because, as I explained in Section 3.4, the number of seats per capita is negatively correlated with the municipality size, particularly in municipal assembly elections. For this reason, I also include an interactive variable of the municipality size (labeled as *Municipality Size*) and *Vote Magnitude*, as well as *Municipality Size* itself.⁴² The size of municipality is expected to have a negative effect on voting frequency in both municipal and national elections, but its (negative) effect should be larger in municipal elections. Therefore, *Municipality Size* is expected to have a negative effect on the differential voting frequency (because a large negative minus a small negative is negative). The expected sign of *Municipality Size* $\times$ *Vote Magnitude* is ambiguous.

This survey has another question measuring how much votes count in elections. That is, whether or not a respondent agrees with the following idea: “If a party or candidate I support has no chance to win in an election, it is of no use to cast my ballot.” The prepared choices are the same as those for *Vote Magnitude*. Thus, the

⁴²To avoid a high multicollinearity problem, both *Municipality Size* and *Vote Magnitude* are “centered” at zero; namely, they take the differences from the mean in the sample. For the method of centering, see Hamilton (1998, p. 181-184).

expected marginal effect of this variable, labeled as *Closeness*, on the voting frequency is also negative. Similar to *Vote Magnitude*, however, it does not specify which type of election is in question.

According to the model of relative voter turnout, which I have proposed earlier in this chapter, there is another important independent variable; that is, how much is at stake in subnational vs. national elections. To examine the effect of “stake” on voting frequency, I use a question asking how much a respondent thinks an electoral result can influence what a government does (labeled as *Stake in Election*). Respondents chose 3 if “greatly,” 2 if “at least a little,” or 1 if “not at all.” Thus, the expected effect on the voting frequency is positive. This question is also *not* election-type specific.

In my preliminary research, I included many other social, economic, and demographic variables in regressions of the *differential* voting frequency and of voting frequencies in municipal and national elections. And I found some important variables correlating at least with the voting frequency in municipal or national elections. They include the tightness of relationships between a politician (or politicians) and a respondent (labeled as *Politician-Voter Relations*), the tightness of social networks and associations (*Voter-Voter Relations*), the degree of conservative ideological orientation (*Conservative*), and the degree of progressive ideological orientation (*Progressive*). The existing literature suggests that it is reasonable to observe such a positive and significant correlation between each variable and the voting frequency. The first two variables are closely related to the intensity of direct and indirect mobilization of voters. “[Political l]eaders mobilize people *directly* when they contact citizens personally and encourage them to take action. ... Leaders mobilize people *indirectly* when they contact citizens through mutual associates, whether family, friends, neighbors, or colleagues” (Rosenstone and Hansen 1993, p. 26). Concerning the other two variables, Verba and Nie (1972) presented a reason for a positive correlation between

ideology and participation. “An ideology allows a clear choice in a multi-issue situation [thus, gives a higher incentive to participate], since such a belief system places individual issues into some overall structure. One then chooses a party in terms of its agreement with that ideology” (Verba and Nie 1972, p. 107). As I will show later, however, all of these four variables have no significant effect on the differential voting frequency between municipal and national elections.

In my preliminary research, I also attempted to use many other interactive variables other than an interaction between *Municipality Size* and *Vote Magnitude*. None of them, however, has a significant effect on the voting frequency and the *differential* voting frequency. Thus, they are not included in the finalized estimation.

3.5.2 Regressions

An appropriate statistical model with an ordered categorical dependent variable is an ordered probit (or ordered logit) model.⁴³ Having admitted that, however, I used a simple ordinary least square (OLS) model. The use of the OLS model seems to be justified for the following reasons. First, in my preliminary research, I found that the sign and significance level of estimated parameters are about the same in both ordered probit and OLS models. Second, the differential voting frequency (i.e., the dependent variable of our main concern) takes many values centered at zero. Finally, the OLS coefficients are much easier for us to interpret. Since we have an “interpretation problem” due to the fact that all of the independent variables are *not* specific to the type of election, it is worth selecting a model producing easy-to-understand estimates.

Table 3.7 shows the results of estimations. There are three variables significantly correlated with the differential voting frequency. They include *Municipality Size*, *Municipality Size* $\times$ *Vote Magnitude*, and *Stake in Election*. (In the next subsection, I will discuss how to *interpret* the coefficient estimates of these main explanatory

⁴³For the ordered probit/logit model, see, for example, Maddala (1983, p. 46-49).

	Municipal		National		Difference	
Municipality Size	-0.163	***	-0.120	***	-0.042	***
	(0.017)		(0.015)		(0.012)	
Vote Magnitude	-0.201	***	-0.170	***	-0.031	*
	(0.024)		(0.022)		(0.017)	
Municipality Size $\times$ Vote Magnitude	-0.105	***	-0.066	***	-0.040	***
	(0.017)		(0.016)		(0.013)	
Closeness	-0.025		-0.043	**	0.017	
	(0.022)		(0.020)		(0.016)	
Stake in Election	0.092	***	0.155	***	-0.063	***
	(0.032)		(0.029)		(0.023)	
Politician-Voter Relations	0.099	***	0.080	***	0.019	
	(0.023)		(0.021)		(0.017)	
Voter-Voter Relations	0.099	***	0.111	***	-0.012	
	(0.024)		(0.022)		(0.018)	
Conservative	0.080	***	0.076	***	0.005	
	(0.026)		(0.024)		(0.019)	
Progressive	0.095	**	0.061		0.034	
	(0.042)		(0.038)		(0.030)	
Constant	4.137	***	4.025	***	0.112	*
	(0.088)		(0.081)		(0.064)	
Adjusted R^2	0.234		0.224		0.018	
(Mean Squared Error) ²	0.716		0.659		0.523	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ (two-tailed)

Note: The dependent variable is the voting frequency in municipal assembly elections, the voting frequency in national Lower House elections, or the differential voting frequency between municipal and national elections. The number of observations is 1,377. Standard errors are in parentheses. See Appendix C for a complete description of all variables.

Table 3.7: OLS Regressions of Voting Frequency and Differential Voting Frequency: Survey Data. *The differential voting frequency is a function of how much is at stake and how much votes count in elections.*

variables.) The effect of *Vote Magnitude* and the constant term are also significant, but only at 0.10 level. The rest of the independent variables are significantly correlated with the voting frequency in municipal and/or national elections, but not with the *difference* in the voting frequency.

It is worth emphasizing that the findings from cross-individual regressions are quite comparable with the findings from cross-municipal regressions; namely, the relative (or differential) voter turnout in municipal vs. national elections is a function of how much is at stake and how much votes count in elections. Neither the intensity of ideological orientation nor the tightness of social networks fully explain why the level of turnout is different by the level of government.

It is also worth emphasizing that compared with *Closeness*, *Vote Magnitude* is more significantly correlated with the dependent variable of any regression model.⁴⁴ Thus, we might be able to claim that *Japanese voters consider how many other people vote, rather than how much their preferred candidate/party has a chance to win, when they calculate whether or not their votes count in elections (thus, whether or not they go to the poll)*. This may be the reason why the relative (or differential) voter turnout is correlated with the number of seats per capita, and why voter turnout tends to be higher in lower-level elections.

There are two more interesting results shown in Table 3.7. First, the marginal effect of *Closeness* is significantly different from zero only in the regression of the voting frequency in national elections. Second, on the other hand, *Progressive* is significant only in municipal elections. These findings make sense, because Japanese political parties compete with one another most vehemently in national elections, and because these parties, except the Japan Communist Party (JCP), have very weak organizational structures at subnational level.

⁴⁴As I have stated, in my preliminary research, I also included *Municipality Size* $\times$ *Closeness* in the three regressions, but the effect of this interactive variable is insignificant.

3.5.3 Predictions

Table 3.7 shows that the marginal effects of some independent variables on the differential voting frequency are *not* significantly different from zero. These variables include *Municipality Size*, *Municipality Size* $\times$ *Vote Magnitude*, and *Stake in Election*. The non-zero effect parameter implies that there is a *parametric* difference between the effect of an independent variable on the voting frequency in municipal elections and its effect in national elections. Let us begin by discussing such a difference in *Stake in Election*.

Stake in Election has a positive effect on the voting frequency in both municipal and national elections. This makes sense: Voters who think an election can result in some policy outcomes are more likely to vote, compared to others who do not think so. But the marginal effect of this variable is not constant. It is *smaller* in municipal elections than in national elections. Thus, the effect of this variable on the differential voting frequency in municipal and national elections is *negative*. Why is this so? A possible (and plausible) explanation for this negative coefficient is the following: Respondents who think electoral results could result in policy outcomes think that public policies are dependent on electoral outcomes *more* in national elections than in municipal elections. In other words, they think “more is at stake” in national elections; namely, who gets elected and what they do after an election is a greater matter of concern in national elections than in municipal elections.

The effects of *Municipality Size* and *Vote Magnitude* are more difficult to interpret, because regression models include an interactive variable between these two variables. This means that the marginal effect of one variable depends on the magnitude of another variable. To make it easier to interpret the effects of these variables, I computed the fitted values of voting frequencies in municipal and national elections, as well as of the differential voting frequency, based on the observed values of *Municipality Size* and *Vote Magnitude* and the mean values of all the other independent variables. The

results are shown in Table 3.8.

This table shows some interesting patterns. First, the effect of *Municipality Size* holding the effects of *Vote Magnitude* and all the other variables constant (i.e., Δ^1 in Table 3.8) is negative for both national and municipal elections. (In each column of matrices, the predicted value decreases as the municipality size increases.) But this effect is larger in municipal elections than in national elections. As a result, the effect of *Municipality Size* on the differential voting frequency (Δ^1 of the third matrix in Table 3.8) is also negative. This finding corresponds to Equation 3.5 in Section 3.4; namely, the *relative* number of representatives per capita, which is the most important determinant of relative voter turnout, is *legally designed* to have a negative correlation with the municipality size.

Second, the effect of *Vote Magnitude* holding the effects of *Municipality Size* and all the other variables constant (i.e., Δ^2 in Table 3.8) is also negative in both national and municipal elections. This is an important finding. Japanese voters, when deciding whether to vote or abstain, indeed think how much their ballots count in elections by considering how many other people vote.⁴⁵

Third, because the municipality size is negatively correlated with voting frequency, *and* because Japanese voters think how many other people vote to elect a representative, the interactive effect of *Vote Magnitude* and *Municipality Size* is considerably large. Namely, in each matrix, the magnitude of Δ^1 becomes larger as it moves right, and the magnitude of Δ^2 become larger as it moves down.

Finally, the predicted differential voting frequency is positive in relatively small municipalities (i.e., towns, villages, and cities with a population of less than 100,000),

⁴⁵Note that this negative effect is larger in municipal elections than in national elections, except in towns and villages. This is somewhat an unclear finding. One possible explanation is the following: The marginal effect of *Vote Magnitude* tends to be small in national elections, because the number of representatives per capita does not significantly vary across municipalities in national elections. It admits, however, of other interpretations.

“My vote does not count in an election, because
a large number of other people vote.”

I disagree. ←

→ I agree.

Δ^2

1. Municipal Elections

towns and villages	4.84	4.80	4.76	4.72	4.68	-0.15
cities with pop < 100,000	4.73	4.59	4.45	4.31	4.17	-0.57
cities with pop ≥ 100,000	4.63	4.38	4.14	3.89	3.65	-0.98
10 largest cities	4.53	4.18	3.83	3.48	3.13	-1.40
23 Tokyo special wards	4.42	3.97	3.52	3.07	2.61	-1.81
Δ^1	-0.41	-0.83	-1.24	-1.66	-2.07	

2. National Elections

towns and villages	4.77	4.70	4.64	4.57	4.50	-0.27
cities with pop < 100,000	4.69	4.56	4.42	4.29	4.16	-0.53
cities with pop ≥ 100,000	4.61	4.41	4.21	4.01	3.82	-0.79
10 largest cities	4.53	4.26	4.00	3.74	3.47	-1.05
23 Tokyo special wards	4.44	4.12	3.79	3.46	3.13	-1.31
Δ^1	-0.33	-0.59	-0.85	-1.11	-1.37	

3. Differential Voting Frequency

towns and villages	0.06	0.09	0.13	0.16	0.19	0.13
cities with pop < 100,000	0.04	0.04	0.03	0.02	0.01	-0.03
cities with pop ≥ 100,000	0.02	-0.02	-0.07	-0.12	-0.17	-0.19
10 largest cities	0.00	-0.08	-0.17	-0.26	-0.35	-0.35
23 Tokyo special wards	-0.01	-0.14	-0.27	-0.40	-0.53	-0.51
Δ^1	-0.08	-0.24	-0.40	-0.56	-0.72	

Note: The prediction is based on the observed values of Municipality Size and Vote Magnitude, the mean values of all the other independent variables, and the estimated OLS coefficients in Table 3.7. Δ^1 indicates the effect of Municipality Size (i.e., the difference in predicted values between “Tokyo special wards” and “towns and villages”), whereas Δ^2 indicates the effect of Vote Magnitude (i.e., the difference in predicted values between “agree” and “disagree”). “pop” stands for the total population of a municipality where a respondent resides. See Appendix C for question wording and coding.

Table 3.8: Predictions of Differential Voting Frequency: Survey Data. *The differential voting frequency is correlated with each respondent’s evaluation of how much his/her vote counts in elections and the municipality size.*

but negative in larger municipalities (i.e., Tokyo special wards and medium-/large-sized cities). Therefore, we can conclude that the model can correctly predict the “turnout twist” within Japan. Compared to national elections, municipal elections attract more voters in small municipalities, but fewer voters in large municipalities.

3.6 Summary

This chapter attempted to give an answer to the following question: Why do national elections produce higher turnout than subnational elections in most cases but not in some others? In other words, how do we explain the conventional turnout pattern (i.e., higher turnout in higher-level elections) *and* the unconventional “turnout twist” pattern (higher turnout in lower-level elections)?

In Section 3.2, I first introduced existing explanations. Some scholars have argued that there are some exceptional cases, which are determined by their unique cultural backgrounds. In almost all the other cases, other political scientists have claimed, lower-level elections should record lower turnout because less is at stake. I argued that both the less-at-stake explanation and the cultural explanation are not fully convincing, because neither model gives a systematic explanation of *why lower-level elections record lower turnout in some cases but not in others*. In other words, these existing explanations are tautological: they only explain what they can explain. Then, I presented an alternative model, which hypothesizes that the relative level of voter turnout in subnational vs. national elections is a function of not only how much is at stake but also how much citizens’ votes count in subnational vs. national elections. I argued that this model gives a logically consistent explanation to both the conventional and the unconventional turnout patterns.

In Section 3.3, I tested the model using cross-national OECD data, and showed that the model can sufficiently explain the variations in relative voter turnout across countries. The cross-national regressions also showed that the model can explain why

Canadian, Japanese, and French subnational elections often bring more voters to the polls than national elections. Namely, compared to other countries, the relative size of government expenditure and/or tax revenue in subnational vs. national governments (i.e., a measure of how much is at stake in subnational vs. national elections) is much larger in Canadian provincial elections and Japanese municipal elections. In French municipal elections, the relative number of elected representatives in municipal vs. national elections (i.e., a measure of how much votes count in subnational vs. national elections) is much larger, as compared to other countries.

In Section 3.4, to explain *intra-country* variations in relative voter turnout, I focused on one of the most notable examples of “turnout twist” within a country: Japanese municipal vs. national elections. I used municipality-level data from Saga and Fukuoka Prefectures and showed that the model of relative voter turnout fits the data quite well. I also showed that the most important variable explaining the “turnout twist” within Japan is the the relative number of elected representatives in municipal assembly vs. Lower House elections.

In Section 3.5, I used Japanese survey data to re-examine the determinants of “turnout twist” within Japan. I found that Japanese voters indeed think about how much is at stake and how much votes count in elections when they decide to vote or abstain in elections. Another important finding was that *how many other people vote in elections* is important for Japanese voters when they consider *how much their votes count in elections*. These findings from survey data, together with the findings from aggregated data, present the following explanation. *The number of representatives per capita has a significantly positive effect to boost voter turnout, because the larger the number of representatives per capita, the more Japanese voters think they can influence electoral outcomes.*

Chapter 4

Culture or Institution? Elections in a Traditional Society

4.1 Introduction

In Chapter 3, I hypothesized that relative voter turnout in subnational vs. national elections is determined by two variables: how much is at stake and how much citizens' votes count in subnational vs. national elections. In this *theoretical* model, while the dependent variable is directly observable, the two independent variables are conceptual and unobservable. Thus, for empirical tests, I used the size of government expenditure and/or tax revenue to measure how much is at stake, and the number of popularly elected representatives per capita to measure how much votes count in elections. Using cross-national and cross-municipal Japanese data, I showed that these observable indicators are significantly correlated with relative voter turnout.¹

But does the statistical correlation in observed data truly *mean* that people are

¹In cross-municipal analyses, I also used the relative degree of closeness in subnational vs. national elections. As I showed in Chapter 3, however, the effect of relative closeness on relative voter turnout is not always significant and, when significant, much smaller than the effect of the relative number of elected representatives per capita.

more likely to vote when more is at stake and/or when votes count more in elections? To examine this question, I also used individual-level survey data from Japan, and showed that as far as Japan is concerned, relative voter turnout in municipal vs. national elections is indeed correlated significantly with respondents' subjective evaluations of how much votes count in elections and how much electoral results affect policy outcomes.

This finding from survey data, however, is still insufficient. It only *indirectly* implies the existence of linkages between indicators (i.e., the size of government expenditure and/or tax revenue, and the number of elected representatives per capita) and theoretical concepts (i.e., how much is at stake and how much votes count in elections). One may still argue that there is a possibility that these indicators are far from the original concepts. We need to examine more carefully whether the observed indicators validly measure the theoretical concepts.

In this chapter, I will examine such a methodological question regarding the possible gap between indicators and concepts.² Among the three main indicators in aggregate data analyses, I focus on the number of representatives per capita, because it is the most crucial indicator/concept in this dissertation.³ Therefore, the ques-

²This is a very important methodological question but often ignored by empirical researchers, as King, Keohane and Verba (1994) wrote as follows. "Often the specific indicator is far from the original concept and has only an indirect and uncertain relationship to it. It may not be a valid indicator of the abstract concept at all. But, after a quick apology for the gap between the abstract concept and the specific indicator, the researcher labels the indicator with the abstract concept and proceeds onward as if he were measuring that concept directly. Unfortunately, such reification is common in social science work, perhaps more frequently in quantitative than in qualitative research, but all too common in both" (p. 110).

³In Chapter 3, I argued that we can present a logically consistent explanation to both the conventional turnout pattern (i.e., higher voter turnout in higher-level elections) and the unconventional "turnout twist" pattern (i.e., higher voter turnout in lower-level elections) by adding the conceptual variable (i.e., how much votes count in elections) to the widely-accepted less-at-stake model. Using empirical data, I showed that the assumed observable indicator for this concept (i.e., the number of

tion examined in this chapter can be more specifically phrased as follows: *Why is the number of representatives per capita positively correlated with voter turnout in Japan?*

In what follows, I will first introduce an existing explanation of why there is a positive correlation between the number of representatives per capita and voter turnout in Japanese elections. This model, presented by Flanagan (1980) and Steiner (1965), emphasizes Japanese cultural traditions and social networks. To examine the validity of this explanation, I will also introduce some testable propositions derived from this cultural model.

Second, I will show that these propositions do not sufficiently fit observations from my field research in a small Japanese town. A single case-study does not allow us to *reject* the existing model; nevertheless, the rich details of the case help us understand some salient factors other than Japanese cultural and social traditions, which affect electoral behavior in rural Japan.

Then, what is missing in the existing model? In Section 4.4, I will argue that the cultural model underevaluates the important effects of an electoral system used in Japanese municipal assembly elections: the single non-transferable vote system with an at-large district (SNTV-ALD). This system tends to produce extremely small vote margins between candidates, *particularly when the number of representatives per capita is large*. This is what I will define as the “mechanical effect” of SNTV-ALD. Because of this effect, both candidates and voters have a strong incentive to think hard about how much an additional ballot can change electoral outcomes. And, more importantly, because they know a single ballot can be decisive, they fully *use* existing social and personal connections and networks to mobilize/cast votes most effectively.

representatives per capita) has a significant effect on relative voter turnout in both cross-national and cross-municipal data, and that it is the single most important determinant of the “turnout twist” phenomenon within Japan.

This is what I will define as the “psychological effect” of SNTV-ALD.

After explaining these effects of SNTV-ALD, I will come back to the question posed in this introductory section and give an answer: In Japan, voter turnout tends to be higher when the number of representatives per capita is larger, because vote margins between candidates get (extremely) smaller, because individuals more seriously think about how much votes count, and because they use social networks more effectively to buy/sell votes.

4.2 Japanese Culture and Electoral Behavior

Why is the number of representatives per capita positively correlated with voter turnout in Japan? In this section, I will first introduce the existing explanation, which focuses on social and cultural characteristics of Japan. Then, after briefly discussing how to test the existing model, I will present some testable propositions derived from this model. The validity of these propositions will be empirically examined in Section 4.3.

4.2.1 Cultural Explanation

The existing cultural explanation is built upon the following elements: the fundamental cause, intermediate effects, and a consequence. In the following, I will introduce each element sequentially.

First, the existing explanation assumes that Japanese electoral behavior is deeply rooted in Japanese culture, which is taken as given. Flanagan (1980) wrote that there are two important cultural traditions. First, Japanese individuals frequently exchange favors with one another, and there exists “a culturally instilled consciousness of the need to repay favors and, so to speak, keep the books balanced” (Flanagan 1980, p. 154). Second, Flanagan wrote that hierarchic social relationships play an

extremely important role in Japanese society. Flanagan cited two influential and famous sociological studies by Nakane (1970) and Doi (1973). These works argued that Japan is a “vertical society” with various types of patron-client relations (*oyabun-kobun*, *sensei-deshi*, *sempai-kohai*) and that such relations originate in *amae* (the desire of an infant to passively receive love from its mother), “which they [i.e, Doi and others] believe is unusually strongly manifest in Japanese culture” (Flanagan 1980, p. 155).

Steiner (1965) made a similar but stronger assumption. He wrote, “The pursuit of individual interests itself is frowned upon because in Japanese tradition the emphasis lies on the interests of the collectivity” (Steiner 1965, p. 377). He argued that Western models developed under an assumption of individuality (or individual rationality) cannot be applied to understand Japanese society and politics.

Second, because of the existence of such Japanese cultural traditions, Japanese individuals develop very tight and close social connections (*kone*) and networks. Traditionally most important social networks (i.e., in his terminology, collectivities) are “the family and the cooperative living group, the *buraku*” (Steiner 1965, p. 407).⁴ Based on these pre-existing collectivities, Flanagan (1980) argued, politicians develop a chain of “political *kankei*” (personal connections) with voters.⁵

Steiner and Flanagan are not the only scholars who emphasized the roles of social solidarity, collectivity, and networks in explaining Japanese politics. “From the early postwar studies (Beardsley et al., 1959; Dore, 1959) through Gerald Curtis’ influential

⁴These family and neighbor networks are more commonly called *chien-ketsuen*; namely, *chien* refers to community connections and *ketsuen* to family connections.

⁵This concept of political *kankei* was developed in Flanagan’s earlier works (1968, 1971). It describes “the networks of ties arising from numerous different sources and contexts—kinship, geographical, occupational, patron-client, school, and other associational ties running the gamut from union to religious to recreational group affiliations—that operate to join diverse groups and individuals to a particular candidate through chains of personal relationships” (Flanagan 1980, p. 153).

study (1971) to an important new study by Kyoji Wakata (1986), both the investigators and the candidates themselves appear to share the view that social network communications and transactions are the most important factors in shaping voting behavior in Japan” (Flanagan 1991, p. 52).⁶

Third, because Japanese individuals are tightly linked to social networks, which are built upon Japanese traditions that place a heavy emphasis on social collectivity, hierarchy, and solidarity, Japanese voters feel obligated to vote when a particular candidate, with whom they have the tightest personal connection, asks them to vote. Flanagan wrote, “[I]f a candidate has done some past favor for one’s family or community, this creates a sense of obligation in the voter to reciprocate with electoral support” (Flanagan 1980, p. 154). He also claimed that hierarchical relations in Japanese communities “can be exploited to deliver votes for a particular candidate” (Flanagan 1980, p. 155). Steiner made a similar argument: “Because the individual is expected to assign the highest priority to the collective interests, he is expected to vote for the candidate who supposedly represents the collectivity interests, even if his individual interests would incline him to vote for some other candidate. Abstention from voting amounts to shirking a duty to the collectivity” (Steiner 1965, p. 377).

Finally, this series of arguments gives an explanation of why voter turnout is higher when the number of representatives per capita is larger: It is because the tightness of personal connections between candidates and voters, as well as the sense of obligation to vote for a particular candidate, are greater. This claim makes sense, because, if a politician wins a seat with only 200 votes, he can have very tight and frequent communications with his supporters. But if a politician represents 10,000 citizens, she cannot develop close personal connections with all voters.

In sum, according to the existing cultural model, the fundamental determinants

⁶Other works Flanagan cited include Allinson (1979), Flanagan (1968), Richardson (1967), Iga and Auerbach (1977), and Ike (1978). Also see Ike (1972) and Richardson (1974, 1997).

of exceptionally high voter turnout in smaller-unit elections are Japanese cultural traditions and culturally-rooted social networks. Because the culturalists tend to think Japanese culture is unique, they claim that the exceptionally high voter turnout in local elections is a phenomenon unique to Japan.

4.2.2 How to Test?

Recall that we empirically observe the positive correlation between the number of representatives per capita (temporarily labeled as X) and voter turnout (Y) in Japanese elections, particularly in municipal assembly elections. Since X is exogenously determined by laws, as I introduced in Chapter 3, this correlation means that X affects Y . Then why does X affect Y in Japan? This is the core question in this chapter. The existing model proposes Japanese culture (and social networks derived from it) as an “intervening” variable (Z). Then how do we test whether or not Z sufficiently explains the causal relationship between X and Y ?

I will examine this question in the following manner: First, in the next section, I will introduce some testable propositions regarding electoral behavior and outcomes, *if X and Y are large, and if Z is the true intervening variable*. Then, in Section 4.3, I will examine the validity of these propositions based on my observations during an election, in which *both X and Y are relatively large*.

4.2.3 Propositions

If Japanese cultural traditions and social networks are truly important, what should we observe in elections with a large number of representatives per capita, which typically record high voter turnout? How do candidates and voters behave in such elections? What are the observable outcomes (other than high voter turnout) in these elections if culture dominates behavior? In the following, I will introduce some implications (i.e., propositions) derived from the cultural model. Most of them were

originally presented by Steiner.

Let me begin by re-introducing Steiner's claim that cooperative living groups (*buraku* or *chiku*) are one of the most important collectivities for rural Japanese. These *buraku* or *chiku* were independent administrative units before a series of local government reforms in the 1950s. Today they have neither formal boundaries nor administrative roles, but still exist as *informal* cooperative groups for rural citizens. Steiner wrote that individuals within such an informal collectivity must pursue the interests of the collectivity. Thus, when an election is held, candidates to a town/village assembly are nominated by communities, community representatives pursue their collective interests, and each collectivity is expected to vote as a unit. Therefore, the first proposition can be phrased as follows:

Proposition 1 *Residents in a community are expected to vote for a community-nominated candidate.*⁷

Unlike in voting theories developed in the contexts of American elections, each individual is not regarded as an independent decision-making unit. The Japanese harmonic tradition rules out any individualistic behavior, claimed Steiner.

Steiner also claimed that a family is another important collectivity for rural Japanese. "Loyalty to the family, of course, may conflict with loyalty to the *buraku*—for example, if a member of the family living in another *buraku* is a candidate. In these cases, family loyalty is likely to win out. ... The likelihood of conflicts between family loyalty and *buraku* loyalty is somewhat diminished by the fact that families are usually settled in the same *buraku*" (Steiner 1965, p. 410). Thus the following proposition can be also presented:

Proposition 2 *Members of a family are expected to vote for the same candidate, who is typically nominated by a community where the family settles.*

⁷Steiner made much a stronger claim. He wrote, "[A]ll *buraku* residents must vote for the same candidates" (Steiner 1965, p. 410). This propositions, however, seems to be too exaggerated.

Then how do families and *buraku* residents cast their ballots if a community nominates more than one candidate to the assembly? According to Steiner, since each community selects the appropriate number of candidates “in a *buraku* meeting by the device of recommendation and consensus” (Steiner 1965, p. 411), candidates from the same community do not need to compete with one another in taking votes away from others. Voters in communities that nominate multiple candidates vote for one of the candidates under a certain informal agreement/consensus. Some very small communities, however, may not elect any member to the municipal assembly. In such a case, “[I]t is likely to work out an informal cooperative arrangement with other *buraku* to assure representation of its interests in the assembly” (Steiner 1965, p. 411). In sum, under this Japanese-style cooperative consensus system, there exist no conflicts across communities, within communities, across families, and within families.

If this consensus system works perfectly, however, we should expect that the number of seats should be exactly equal to the number of candidates. There is no need for an election under the consensus system. As a matter of fact, about 10-20 percent of Japanese town and village assembly members are selected without voting. The other assembly members are elected, because the number of candidates exceeds the number of seats for whatever reasons. However, “Even in cases where actual balloting takes place, it is often a mere formality because

Proposition 3 *the outcome of the election can be predicted accurately in advance*” (Steiner 1965, p. 411). In other words, who votes for whom is “common knowledge” prior to voting.

There are some not-very-serious contenders in most elections, but these “also-ran” candidates (*hōmatsu kōho*) know that they cannot win. All the other candidates also know that these also-ran candidates will surely lose. Therefore, Steiner wrote, “[I]n town and village assembly elections the overwhelming prevalence of the ‘fixed vote’—in other words, the almost complete absence of a ‘floating vote’—makes campaigns

unnecessary” (Steiner 1965, p. 411). Steiner even wrote, “[V]igorous campaigning is not the proper ‘political style’ in the traditionalistic Japanese countryside. The self-assertion that such campaigning requires is embarrassing and even offensive to people who consider self-effacement a virtue because the group and not the individual is important” (Steiner 1965, p. 412). Thus,

Proposition 4 *most candidates do not need to seriously deploy their electoral campaigns.*

The only exceptions are candidates not nominated by local collectivities; for example, Socialists and Communists. They have to actively campaign throughout the town/village to assert their ideological ideals. According to Steiner, however, these candidates who seek “floating votes” have a difficult time winning, simply because there are almost no floating votes.

Then, the next question is: Who are these representatives to municipal assemblies? Steiner wrote that the members of the informal political leadership group, who also hold formal office, typically come from “old and well-established families of better than average lineage or ancestry (for example, families of former samurai or of former village headmen)” (Steiner 1965, p. 413). Thus, “[C]ertain families are rather regularly nominated and elected to the town or village assembly.” (Steiner 1965, p. 413). This picture suggests that in municipal assembly elections,

Proposition 5 *there is a strong incumbency (and inheritance) advantage.*

When the head of such an influential family retires from his position, his son runs in the next election and inherits all votes from his father. Therefore, the members of an assembly are almost fixed to certain families. A newcomer, whose family has lived in a community only for a generation or two, has difficulty taking a seat.

4.3 Kitagata Town Assembly Election

Following the five-day official electoral campaign period, approximately half of all Japanese municipalities held their municipal assembly elections on April 25, 1999.⁸ During this election week, I visited the Town of Kitagata in Saga Prefecture and closely observed electoral behavior of candidates and voters.

I chose Kitagata, mainly because it typically records quite high voter turnout in town assembly elections *and* has a relatively large number of seats per capita in its assembly, and because Kitagata has some demographic and economic problems common to Japanese rural towns and villages. Kitagata had prospered as a coal-mining town until the 1950s, but after closing a mine in 1959, the total population dramatically decreased. In 1960, the central government officially designated Kitagata as a “depopulated area” (*kasō chiiki*) and began to take special measures to promote economic development and social welfare.⁹ As a result of unsuccessful attempts to attract new business and the younger generation, Kitagata has become a typical “aged society” (*kōrei shakai*). As of 1995, 17.2 percent of all residents are over 65 years old. This is the same as the national average figure. The decreasing population, the declining economic prosperity, and the aging population have made Kitagata’s government budget highly dependent on financial transfers from the central government. In 1997, only 33.9 percent of the total revenue was based on municipal taxes; namely, Kitagata is a rural municipality with “thirty-percent-autonomy” (*sanwari jichi*). With

⁸As of April 1999, there were 3,209 municipalities (i.e., 23 special wards, 12 cities designated by ordinance, 659 cities, and 2,515 towns and villages), of which 1,652 special wards, cities, towns, and villages elected their assembly members on April 25, 1999. Eleven of 12 cities designated by ordinance had their assembly elections concurrently with nationwide prefectural assembly and gubernatorial elections on April 11, 1999. The rest of the municipalities had their elections during off-years. See Jichishō Senkyobu (2000) for the result of the 1999 unified subnational elections.

⁹For a brief introduction of Kitagata’s history, see “Chōsei 50-nen (Gappei 40-nen) no Ayumi: Kitagata Town Since 1944” (Kitagata-cho machi-yakuba kikaku-ka, 1997).

these demographic and economic problems (i.e., *kasō chiiki*, *kōrei shakai*, and *sanwari jichi*), it seems reasonable to regard Kitagata as typical of today's Japanese rural municipalities.

In the following, I will introduce observations from my field research, and argue that what I observed and heard in Kitagata does not fully agree with the proposition introduced in the previous section.

4.3.1 Predictable Outcomes? Incumbency Advantage?

Let me begin by introducing the results of the 1999 Kitagata town assembly election. The Kitagata town assembly has sixteen seats. As in most other municipalities in Japan, in Kitagata, all town assembly members are elected under the single non-transferable vote system (SNTV) with a whole municipality constituting a single electoral district. In 1999, eighteen candidates competed for the sixteen seats, and 6,034 of 6,879 eligible voters¹⁰ wrote *one* candidate's name on the ballot.

The voter turnout rate was 87.7%, which was lower than turnout in the previous election in 1995 (i.e., 88.9%) but still significantly higher than turnout in any other recent upper-level elections; 65.3% in the 1996 Lower House election, 63.7% in the 1998 Upper House election, and 75.0% in the 1999 gubernatorial and Saga prefectural assembly election. (See Table 4.1 for voter turnout rates in all general elections held in Kitagata since 1987.) Therefore, Kitagata exhibits a typical “turnout twist” phenomenon: higher voter turnout in lower-level elections. This is another important justification to treat Kitagata as a typical rural municipality in Japan.

In the 1999 election, there were sixteen candidates. All of them were male. Except Shirō Hara, a Communist non-incumbent, all candidates were “conservative independents” (*hoshukei mushozoku*).¹¹ Only one incumbent (Hachirō Noguchi) and Commu-

¹⁰See Chapter 1, Footnote 1.1.

¹¹They are conservative but not certified officially by any conservative political party, including

Type of Election	Date	%
Kitagata town assembly elections	04/26/1987	90.9
	04/21/1991	90.4
	04/23/1995	88.9
	04/25/1999	87.7
Saga prefectural assembly elections and Saga gubernatorial elections	04/12/1987	80.9
	04/07/1991	80.5
	04/09/1995	60.4
	04/11/1999	75.0
election to the House of Councillors (<i>Sangi-in</i>)	07/23/1989	74.3
	07/26/1992	61.2
	07/23/1995	48.0
	07/12/1998	63.7
elections to the House of Representatives (<i>Shūgi-in</i>)	02/18/1990	82.2
	07/18/1993	79.6
	10/20/1996	65.3
	06/25/2000	67.4

Note: Saga gubernatorial elections were held simultaneously with Saga prefectural assembly elections. During 1987-2000, only one Kitagata mayoral election was held on September 13, 1998, and recorded a turnout rate of 83.9%. The 1990 and 1994 mayoral elections were uncontested.

Table 4.1: Voter Turnout in Kitagata, 1987-2000. *The lowest-level elections record the highest voter turnout rates in Kitagata.*

nist Hara officially registered themselves as a full-time politician. Most others were farmers or local storekeepers, serving as local politicians on a part-time basis. These political/social/economic backgrounds of the candidates are quite typical of Japanese municipal-level politicians (Muramatsu and Itō 1986, Steiner 1965, and Wakata 1984).

As I mentioned above, Kitagata has demographic and economic problems typical of Japanese rural towns and villages. The voter turnout pattern is typical of Japanese towns and villages. Candidate types are very typical of Japanese local politicians. Judging from these *typical* characteristics, we should expect typical electoral outcomes, which should be highly predictable prior to voting, because who votes for whom is pre-determined and common knowledge. But I found, as I will introduce below, many Kitagata citizens were surprised by the outcomes.

After the four polling stations closed at 8:00 pm, I visited the ballot-counting office, which was at the indoor basketball court in Kitagata's only public gymnasium. The basketball court was divided into two areas with a rope. In one area, there were some tables, ballots, ballot-counting staff members, policemen, and a white board used to report the election results. In another area, there were about 200-300 Kitagata citizens waiting to see the election results. The results were publicized three times: the first in-progress result at 10:00 pm with 35.8% of ballots counted, the second in-progress result at 10:30 pm with 92.0% of ballots counted, and the final result at 11:00 pm. Each time, some observers with cellular phones reported the result to their election camp. Some of them also had a pair of field glasses, which they used to

the Liberal Democratic Party (LDP). The independent candidates in Japanese town and village assembly elections often have "Good Luck" (*Hisshō*) posters in their camp. These posters are given by major LDP politicians in upper-level governments. But they do not necessarily mean that these independents are, in reality, Liberal Democrats. In Kitagata, none of these upper-level LDP politicians visited to cheer conservative-independent candidates during the 1999 election. I heard that some secretaries of the LDP politicians manually distributed these posters to all candidates except Communists.

estimate the number of votes piled up for each candidate separately on some tables. (A candidate's name was displayed for each vote pile so that all observers could tell which pile was for which candidate.)

Soon after the second in-progress report determined winners and losers, I heard some people murmuring comments like the following. "*Yokota, torisugi da!* (Yokota took too many votes!)" "*Hara ga agatta k̄a!* (Gee, Hara took a seat!)" "*Ikeda ga 291 k̄a!* (Why! Ikeda took only 291 votes!)" I also heard one person saying, "*Senkyo wa aketeminaito wakaran bai!* (We never know election outcomes until all ballot boxes are opened!)" There are several possible reasons why these people at the basketball court were surprised to see the result. (See Table 4.2 for a list of candidates and their votes in the 1999 election and three previous elections.)

- Hiroki Yokota received the largest number of votes, 566, which is almost a hundred more than the second winner's vote total. Yokota's vote total is larger than any of the top winners in the three previous Kitagata town assembly elections. What is noteworthy is that it was the very first time for Yokota to run in an election. Moreover, he is not only a challenger but also a non-typical local candidate; namely, he is not a farmer and is the only candidate with a college degree from Kanagawa University. Since Kanagawa University is located in Yokohama City, the largest Japanese city near Tokyo, he is clearly not a "100-percent local" person.
- Another non-incumbent, Shirō Hara, ranked seventh among sixteen winners. This was another surprise for Kitagata voters, because he lost with the fewest votes when he ran, for the first time, in the 1998 by-election.¹² He was obviously a frivolous candidate in 1998, but one of the top winners in 2000. This result

¹²The other three candidates (and winners) received 1,615 votes (Masanori Kawaguchi), 1,580 votes (Kazuya Koike), and 1,559 votes (Kenji Yamaguchi), but Hara received only 890 votes.

Name	<i>Chiku</i>	The Number of Votes			
		1999	1995	1991	1987
Yokota, Hiroki	Kōya	566			
Yamaguchi, Kenji	Kakehashi	464	413	465	461
Koike, Kazuya	Ashibara	443			
Egashira, Hisao	Oiwake	426	401	399	
Kawaguchi, Masanori	Kitagata	425	520	469	530
Kuroiwa, Yukio	Nishi-Miyasuno	384	390		
Hara, Shirō	Kōya	351			
Kawahara, Chiaki	Nishikinu	328	334		
Miyahara, Hiroyasu	Yakigome	314	362		
Egashira, Shigenobu	Nagaike	312	333	303	449
Ikeda, Masayoshi	Kitagata	291	461	393	431
Kogakura, Satoru	Ioji	278	285	342	
Noguchi, Hachirō	Umagami	269	248		
Ishimaru, Sadamu	Kitagata	265			
Mitsutake, Kazuo	Iouji	232	308	348	
Yamaguchi, Yasuo	Higashi-Miyasuno	226	358		
Sakamoto, Hideomi	Yakigome	208	261	258	
Kajihara, Fumio	Umagami	194			

Note: The number of seats in the Kitagata town assembly is 16. Thus, Hideomi Sakamoto and Fumio Kajihara were the two losers in the 1999 election. The numbers of votes for Kenji Yamaguchi and Masanori Kawaguchi in 1987, 1991, and 1995 are those for their fathers. *Chiku* refers to an informal subdivision of a municipality.

Table 4.2: Result of 1999 Kitagata Town Assembly Election: By Candidate. *This table shows the number of votes each candidate received in the 1999 election, as well as in previous elections.*

is surprising even more for Steiner, because Hara is not only a non-incumbent but also a Communist.

- Masayoshi Ikeda, one of longtime incumbents, who ranked second in 1995, ranked eleventh with only 291 votes in 1999. Since he received 431 votes in 1987, 393 votes in 1991, and 461 votes in 1991, only receiving 291 votes must have been a shocking outcome for him and his supporters. The other candidates who lost votes significantly include Yasuo Yamaguchi (358 votes in 1995 but 226 votes in 1999) and Masanori Kawaguchi (520 votes for Hironori Kawaguchi, Masanori's father, in 1995 but 425 votes for Masanori in 1999.)
- Fumio Kajihara received the fewest votes. According to my pre-election interviews, he was not one of the weak candidates. Many interviewees named Hideomi Sakamoto (a loser in the 1991 general election), Hachirō Noguchi (a loser in the 1993 by-election and in the 1995 general election), and Shirō Hara (a loser in the 1998 by-election) as possible losers. Noguchi and Hara unexpectedly took their seats. Sakamoto, the alleged weakest candidate, lost as expected, but Kajihara's 194 votes were even fewer than Sakamoto's 208 votes.

As one of the people at the ballot-counting office murmured, it was not the first time for Kitagata voters to see unexpected electoral outcomes. Here are some other examples of puzzling results in past elections.

- When the 1995 general assembly was held, Akio Kubota was the incumbent chairman of the Kitagata assembly and regarded as one of the shoo-in candidates. But he *lost* his seat with the *fewest* votes among all seventeen candidates. His votes decreased from 364 in 1987 to 305 in 1991, and then to only 214 in 1995.
- Sōichi Tsurusaki, who ranked second with 504 votes in 1987, ranked thirteenth with only 285 votes in 1991. He lost 219 votes.

These examples of unexpected results from the Kitagata town assembly elections suggest that two of the five propositions derived from the cultural model are questionable. Namely, *electoral outcomes may not be sufficiently predictable* (i.e., contrary to **Proposition 3**), and *incumbents may not always be winners* (i.e., contrary to **Proposition 5**).

4.3.2 *Chiku*-based Nomination and Voting?

As I introduced earlier, during the 1960s and 1970s, Steiner and other non-Japanese Japan observers wrote that *chiku* (informal subdivisions of a town) and *Chien* (neighbor connections mainly within *chiku*) are extremely important to understand electoral behavior in Japanese municipal elections. Today, their claim is still neither obsolete nor strange for many Japanese insiders. For example, in his recent book, *Chihō Senkyo* (Local Elections), Hiroshi Nakamura (1996, p. 118) wrote that assembly members in rural towns and villages, at least in Shimane Prefecture, are very often nominated by *chiku* organizations. Almost all individuals I interviewed in Saga Prefecture had the same view.¹³ Therefore, it seems almost an undeniable stylized fact that *chiku* organizations nominate candidates and that voters cast their ballots for a particular candidate in accordance with informal agreements made within and between *chiku*.

Then the question is the following. Was the *chiku*-based nomination and voting truly an important determinant of the 1999 Kitagata town assembly election? To fully answer this question, we should know how many eligible voters in each *chiku* voted for a candidate (or candidates) from their *chiku*. It is very difficult, however, to make such an inference because a town-wide, individual-level, post-election survey was unavailable, and because aggregated voting results are only available at the level

¹³They include Yoshinori Tasaki, the chief of the general affairs in the Kitagata town office; Teruhiko Washizaki, the head of the editorial board of Saga Shimibun; and Norichika Yoshino, the managing director of Saga Shimibun.

of each voting precinct, which covers multiple *chiku*.

Therefore, I tried to roughly understand *chiku*-based electoral behavior based on which *chiku* each candidate is from and how many eligible voters reside in each *chiku*. But even these pieces of information are very difficult to obtain. They were never written in publicly available documents, including election-related public documents, newspapers, candidate posters, and election bulletins. I could not obtain *chiku*-related information until I interviewed one of the candidates in the 1999 election, Hideomi Sakamoto. Not only did he state which candidate was from which *chiku*, but he spread a very large and detailed map of Kitagata in front of me and marked the location of each candidate's camp. Sakamoto's campaign manager, Heihachi Egashira, showed me a list of all registered voters in Kitagata. This list was prepared by the Kitagata town office and distributed to each candidate. Interestingly, it includes each voter's *chiku* together with his/her name, gender, date of birth, and address. It should be emphasized that *chiku* is an "informal" group, which has neither legally-determined geographical boundaries nor formal administrative roles under a town government. Nevertheless, the list (prepared by the town office!) shows which person is in which *chiku*, and summarizes the total number of eligible voters in each *chiku* on the first page. This fact implies that *chiku* is indeed important for candidates when counting the expected number of votes.

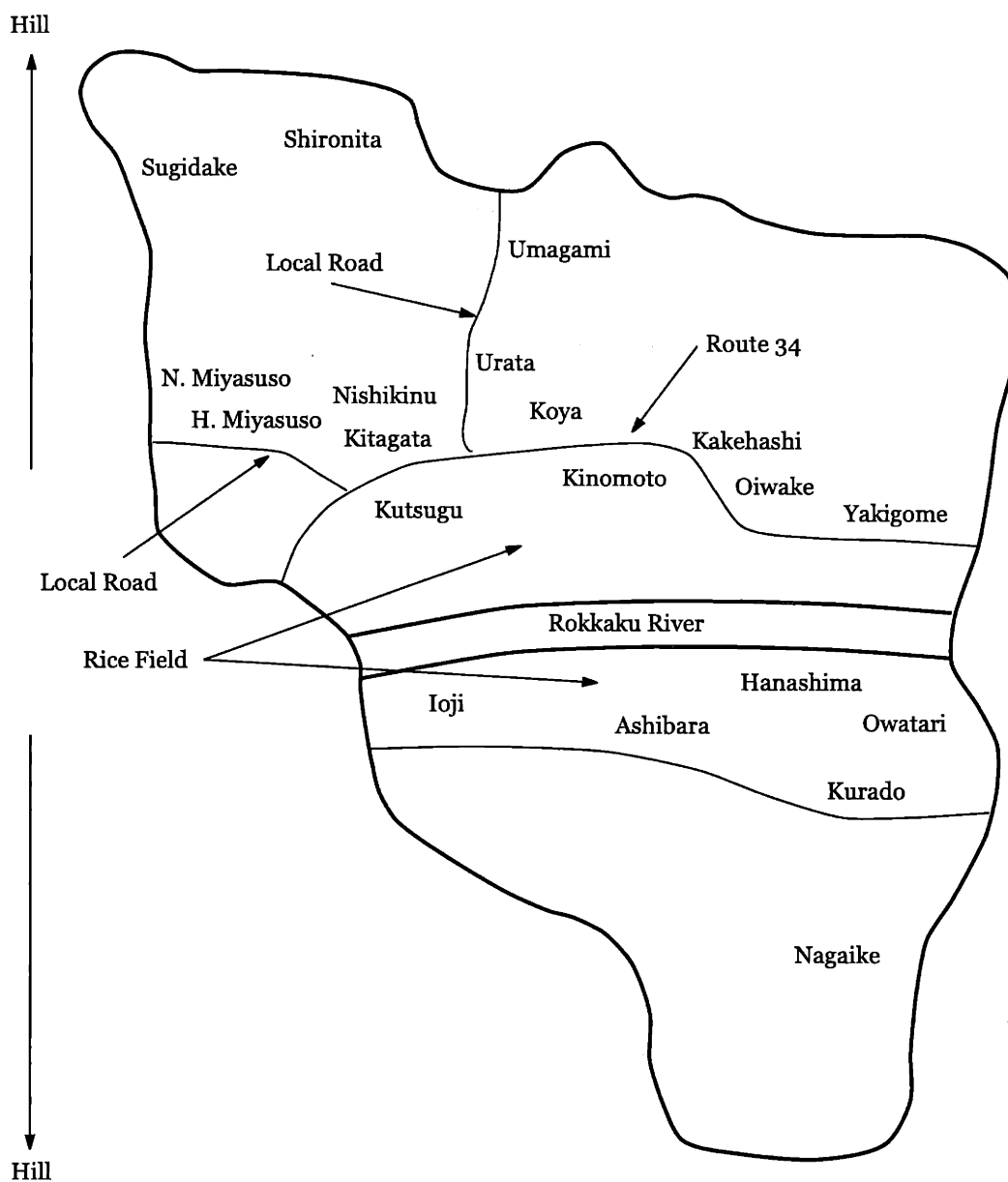
These *chiku* data are summarized in two tables and one map. Table 4.2 shows each candidate's *chiku* and votes received. Table 4.3 shows the number of candidates, votes, and eligible voters by *chiku*. Figure 4-1 shows where each *chiku* is located in Kitagata. These tables and map show some interesting results.

- The candidate from Higashi (East) Miyasuno, Yasuo Yamaguchi, received a total of 226 votes, which is approximately the same as the number of eligible voters in Higashi Miyasuno.
- A candidate from Nishi (West) Miyasuno, Yukio Kuroiwa, received 155 more

Precinct	<i>Chiku</i>	The Total Number of			Difference
		Candidates	Votes	Electors	
Shiku	Yakigome	2	522	456	-66
	Oiwake	1	426	670	244
Kitagata 1	Kakehashi	1	464	629	165
	Kinomoto	0	0	591	591
	Kōya	2	917	905	-12
Kitagata 2	Kutsugu	0	0	226	226
	Kitagata	3	981	700	-281
	Umagami	2	463	245	-218
	Urata	0	0	271	271
	Nishikinu	1	328	748	420
	Higashi-Miyasuso	1	226	216	-10
	Nishi-Miyasuso	1	384	229	-155
	Sugidake	0	0	107	107
	Shironita	0	0	52	52
Hasshimo	Ōwatari	0	0	111	111
	Kuradō	0	0	103	103
	Nagaike	1	312	49	-263
	Hanashima	0	0	144	144
	Ashibara	1	443	248	-195
	Iouji	2	510	272	-238

Note: There are four polling stations (i.e., voting precincts) in the Kitagata town assembly election. *Chiku* refers to an informal subdivision of a municipality. See Table 4.2 for the number of votes each candidate received.

Table 4.3: Result of 1999 Kitagata Town Assembly Election: By *Chiku*. *This table shows the total number of candidates, votes, and eligible voters by chiku.*



Note: Twenty names on the map indicate the approximate location of *Chiku* (subdivisions of Kitagata). Most people reside along the main road, Route 34. Kitagata Town Hall (i.e., the center of the town) is located in Koya. Major shops and a shopping center are located in Koya and Kitagata. Sugidake, Shironita, and Nagaike are located in hilly areas in Kitagata.

Figure 4-1: Map of Kitagata. *This map shows the approximate location of Chiku in the Town of Kitagata.*

votes than the number of Nishi Miyasuno voters. This “additional” number of votes is almost the same as the total number of voters in two *chiku* on a hill near Miyasuno region; namely, Sugidake and Shironita. These two small *chiku* had no candidate from their *chiku*.

- Nagaike is the smallest *chiku* on another hill in Kitagata and has only 49 eligible voters. Nevertheless, the candidate from Nagaike, Shigenobu Egashira, took 312 votes. The two other small *chiku* down the hill (i.e., Ōwatari and Kuradō) did not field any candidate, and the total number of eligible voters in these three *chiku* exceeds the number of votes needed to win a seat.

These three outcomes suggest that a stylized explanation may be true to some extent; namely, some small *chiku* in Kitagata may have made an informal arrangement to support a particular candidate. Such an arrangement may have worked effectively because these *chiku* remain very rural for some geographical reasons (i.e., because they are located in hilly areas away from downtown Kitagata).

But they are the only observations that seem to be consistent with the stylized *chiku*-based nomination and voting model. There are many other puzzling outcomes, including the following:

- No candidate was running from Kinomoto, which has 591 eligible voters. This *chiku* could have sent at least one member to the assembly (Note that a candidate needs approximately 220-230 votes to win a seat in Kitagata. Thus, according to Steiner’s explanation, *chiku* with more than 220-230 eligible voters can nominate at least one candidate. *chiku* with more than 440-460 eligible voters can nominate at least two candidates.)
- Oiwake, Kakehashi, and Nishikinu, which have more than 600 voters, had only one candidate from each *chiku*. With more than 600 votes, they could have nominated two candidates.

- Kōya is located at the center of Kitagata and has the largest population, 905 eligible voters. Thus Kōya could have nominated at least three candidates, but it only had two candidates. More importantly, these two candidates are both non-incumbents. Before the 1999 election, there was no assembly member from this largest community.

These findings imply that another culture-derived proposition is questionable; namely, *chiku* may not always nominate the appropriate number of candidates; and in such a case, *chiku* residents may not necessarily cast their ballots for the same candidates (i.e., contrary to **Proposition 1**).

In a survey conducted in 1991,¹⁴ only 39.5% of people¹⁵ ($N = 289$) reported that their *chiku* organizations (i.e., *chōnai-kai*, *jichi-kai*, *tonari-gumi*) nominated a candidate (or candidates) to the assembly. This proportion was slightly higher in the 1970s; namely, it was 44.6% in 1975 ($N = 294$).¹⁶ But still a majority of respondents reported, “No, my *chiku* organizations did not nominate any candidate” or “I don’t know.” There is no clear criterion to reject the proposition; however, if more than half of rural Japanese do not need to vote for *chiku* candidates, the proposition’s validity should be admittedly low.

In sum, these findings in Kitagata and from surveys are enough for us to question the existing explanation that the place of residence is a very strong predictor of voting behavior and outcomes in municipal elections in rural Japan.

¹⁴*Tōitsu Chihō Senkyo-go Seiji Ishiki Chōsa* (post-local-elections survey) conducted by Akarui Senkyo Suishin Kyōkai in 1991. This polling organization conducted similar post-elections surveys in 1971, 1975, 1979, 1983, and 1987.

¹⁵The denominator is the number of voting-age adults living in a town or village where a municipal assembly (contested or uncontested) election was held during the 1991 nationwide local elections.

¹⁶The 1971 survey is not comparable, because only those who *voted* (i.e., excluding those who abstained) were asked whether there had been *chiku* nominations.

4.3.3 Family Voting as a Unit?

During the election campaign period, I closely followed the behavior of a candidate in the 1999 Kitagata election. His name is Hideomi Sakamoto. He was an incumbent representative, but regarded as one of a few likely-to-lose candidates, not only because he was the last winner or the top loser¹⁷ in previous elections, but also because he was accused of being untrustworthy and disrespectful. In December 1998, Sakamoto caused a car accident while intoxicated. All Kitagata town assembly members except Sakamoto called on him to resign. Sakamoto, however, ignored the request, continued to stay in the assembly, and decided to run again in the 1999 election. And he lost his seat.

Sakamoto believed that he could win a seat, based on the following subjective calculation of votes. Sakamoto is an LPG (liquefied petroleum gas) distributor with approximately 100 customers in Kitagata. He is also a serious *sake* (Japanese alcohol) lover, and has many *sake* friends, who often meet at a *sake* bar called *Charumera*. He does not have enough *chiku*-based votes, because there is another strong incumbent from the same *chiku* (Yakigome). But he has a sister with a very good reputation throughout Kitagata, who has been a welfare commissioner (*Minsei In*) for many years and earnestly helped elderly people. Sakamoto counted the number of his LPG clients, *sake* friends, other friends, his sister's fans, and families, and predicted that he could take 250 votes. This number was enough to win a seat in the Kitagata town assembly election.

His method of prediction was quite simple; namely, he simply assumed, "I know him (typically, the head of a household) quite well, so his whole family should vote for me." Sakamoto's family and supporters, however, thought that he overestimated the total votes. Hence, during the five-day campaign period, they made phone calls to all

¹⁷There are sixteen seats in Kitagata assembly. Thus, the "last winner" is the candidate ranked sixteenth, whereas the "top loser" is the one ranked seventeenth.

of Sakamoto's customers and friends, and *negotiated* how many votes each household could give for Sakamoto. For example, for a family with four eligible voters, they first negotiated to give Sakamoto all of the four votes. If the first request was rejected, they asked to give Sakamoto three votes. If not, two votes, and so on. On the eve of the election day, the Sakamoto camp finalized the expected number of votes. It was 216 votes. The outcome was 208 votes, eight votes fewer than the election-eve prediction.¹⁸ (Later, I will discuss how to interpret this high prediction rate.)

These observations at the Sakamoto camp suggest that *a family can split their six votes across candidates* contrary to **Proposition 3**. It is reasonable to assume that each household in a traditional society has *multiple* close connections with several candidates. For example, for a family with six eligible voters (e.g., grandfather, grandmother, father, mother, son, and daughter), Candidate A may be a neighbor of the family, Candidate B may be a close friend of the father, Candidate C may be the father of the son's best friend, candidate D's wife might be a former classmate of the mother, and so on. In such a case, the family may allocate its "multiple ballots" across candidates. This family's vote-allocation pattern may not be always consistent, because of a set of candidates is not always exactly the same, and because some candidates may be regarded as "shoo-in" in one election but not in another. Such behavior can be called "intra-household ticket splitting." Some families I interviewed

¹⁸So, what is the source of this discrepancy? Sakamoto's campaign manager, Heihachi Egashira, told me that there were 6-8 people who always visited Sakamoto's camp during the five-day election campaign period but did not appear on the election day. The Sakamoto camp counted votes from these people. But they probably did not vote for Sakamoto and most likely visited the other candidate's camp on the election day. Why did they double cross? Egashira's guess is the following: These people went to the winner's camp to drink plenty of *sake*, because they knew that winners often serve more generously than losers. They came to Sakamoto's camp during the campaign, because they knew that Sakamoto would serve *sake* illegally. In fact, I observed Sakamoto serving *sake* to some people who did not show up on the election day. After the election, Sakamoto was arrested for having served *sake* to voters.

indeed told me that they had a family meeting to discuss how to split votes among candidates.

Here is another important piece of evidence. The surveys introduced earlier included the following question: “What is the (single) most important determinant for you to decide for whom you cast your ballot?” “Consultation with family members” (17.4%) is the second highly-rated answer, only slightly lower than the top answer, “the candidate’s personality” (17.7%).¹⁹ More importantly, the percentage of respondents choosing “because the candidate is a relative” is quite small, merely 2.0%.²⁰ This finding from the nationwide survey also suggests that Steiner’s explanation is questionable; namely, family connections (*ketsuen*) may not strongly constrain citizens’ voting behavior in rural municipalities.

4.3.4 Common Knowledge?

As mentioned above, the Sakamoto camp predicted 216 votes on the election-eve and the actual vote total was 208. It should be noted that this high prediction rate does not mean that the electoral outcomes are highly predictable and common knowledge *for all* (i.e., **Proposition 3**). Rather, *who votes for whom is “private information” and can be estimated with accuracy only on the eve of election day*. Namely, the

¹⁹The data are from the 1987 survey. This question was not asked in the 1971 and 1991 surveys. In the 1975 and 1979 surveys, a slightly different set of choices were prepared for the same question. Therefore, the findings from the 1975 and 1979 surveys are not directly comparable with those from the 1983 and 1987 surveys. The top three answers in the 1983 survey were the same as those in the 1987 survey. The denominator is the number of voting-age adults who voted in a municipal assembly: $N = 350$ in 1987.

²⁰The other answers include “because I personally know the candidate well” (17.1%), “because the candidate is my friend” (7.7%), “the candidate’s political party” (3.7%), “the candidate’s speech” (3.4%), “recommendations by unions and other organizations” (3.1%), “consultations with neighbors” (2.3%), “requests by the candidate” (2.3%), “newspapers” (2.3%), “others” (1.1%), and “I don’t know” (19.1%).

Sakamoto camp found out whether or not Sakamoto could win only after the five-day intensive campaign ended. With an estimate of the voter turnout rate, Sakamoto knew that his vote total would be insufficient to take a seat (i.e., about 250 votes). But, what is important is that Sakamoto and his supporters did not know who would win and lose. They talked with many voters on the phones during the campaign period. A certain portion of these voters, explicitly or implicitly, told the Sakamoto camp that they would not vote for Sakamoto. But the Sakamoto camp did not fully know for whom those non-supporters for Sakamoto cast their ballots. Recall that there were eighteen candidates in the 1999 election. Unlike two-candidate races under the single-member district system, *not-my votes* do not mean *your votes*.

4.3.5 No Active Electoral Campaign?

Steiner claimed that candidates in towns and village assembly elections do not need to deploy serious campaigns, because there are almost no floating votes. He also stated that candidates, who think self-effacement is an important Japanese virtue, try to avoid making offensive, pestering, and noisy electoral campaigns.

In Kitagata, no candidate had a public oratorical meeting to announce their policies. No candidate, except a Communist, made a speech on the street. But these observations do not necessarily mean that Steiner's explanation is right. In fact, candidates for Kitagata assembly conducted some very noisy and offensive campaigns during all the five days of the official campaign period. The noisiness mainly came from candidates' specially-designed election cars (*senkyo kō*). All candidates rode on their own car, drove around Kitagata from 8 am to 8 pm (as defined by the law), and repetitively and loudly shouted their name using a microphone. I had a chance to ride on Sakamoto's car. I was asked to waive my hand (with a white glove) to people on the street. Two women from Sakamoto's camp (i.e., the so-called "*uguisu-jyo*" meaning warbler girls) stood on a roof of the car and repeatedly shouted, "I am

Sakamoto, Hideomi Sakamoto. I am running in the this election. Please, please cast your vote for me. I am Sakamoto, Hideomi Sakamoto. I have been working very hard for Kitagata residents. I am Sakamoto, Hideomi Sakamoto. I do my best to improve our quality of life in Kitagata.” Sakamoto’s car went to every corner of Kitagata, and I saw the other candidates do the same at least for the first three to four days of the five-day campaign period. On the last day, some candidates walked around in some particular *chiku* (maybe in some *chiku* strategically important for them) and shook hands with voters on the street.

What did the candidates do other than shouting their names, and waving and shaking hands with voters? As I observed in Sakamoto’s camp, they may have made lots of phone calls to voters. What else? Did they spend money to buy votes? During my stay in Kitagata, I could not obtain any hard evidence of vote-buying. But, on the eve of the election day, a woman in Sakamoto’s camp whispered, “*Sā, konya wa [okane ga] ugokuzo!* (Well, money should move [from candidates to voters] tonight!).” This utterance may imply that candidates (at least, Sakamoto) spent money to buy marginal votes, particularly on the election eve.

In sum, these (legal and illegal) styles of electoral campaigns are very noisy, offensive, and against the alleged Japanese virtue of self-effacement (i.e., contrary to **Proposition 4**). Clearly, Steiner’s explanation that candidates in Japanese municipal assembly elections make only minimal electoral campaigns is invalid in Kitagata.

4.4 Discussion

Why do my observations in Kitagata not fully agree with the propositions derived from the cultural model? I would argue that Steiner and Flanagan insufficiently consider some important effects of an electoral system on electoral behavior and

outcomes.²¹

4.4.1 Mechanical Effect of SNTV-ALD

Let me first re-introduce, more completely, the electoral system used in almost all Japanese municipal assembly elections.²² This system is composed of the following elements:

- There are 10 to 100 seats in each municipal (i.e., city, ward, town, or village) assembly depending on the population size. The number of seats in each assembly is defined by a law (*Chiho Jichi Ho*). Each municipality can reduce the actual number of seats by a *Jyorei* (municipal ordinance).²³
- Except in twelve cities designated by ordinance (*Seirei Shitei Toshi*), all candidates compete in a single at-large electoral district, which is a municipality as a whole. These twelve large cities have administrative wards (*ku*) within a city,

²¹I admit that there are many other possible reasons for this discrepancy. First, I may have picked up an inappropriate town for testing the validity of Steiner's explanation. Second, my case selection may be appropriate but my observations through limited interviews and participatory observations may be biased. Finally, the cultural model may be valid only until the 1970s or 1980s, but not anymore. To examine these other possible factors, we need more cases from other municipalities, a fuller re-examination of Kitagata case, and/or large-scale data analyses.

²²There are some municipalities, which do not use the electoral system introduced here. For example, the Town of Sakito in Nagasaki Prefecture and the Town of Nakajima in Ehime Prefecture, which are composed of many small islands, use the single-member district system for geographical reasons. Some municipalities use ballots with all candidates' full names pre-printed. Voters in these municipalities simply mark one of them.

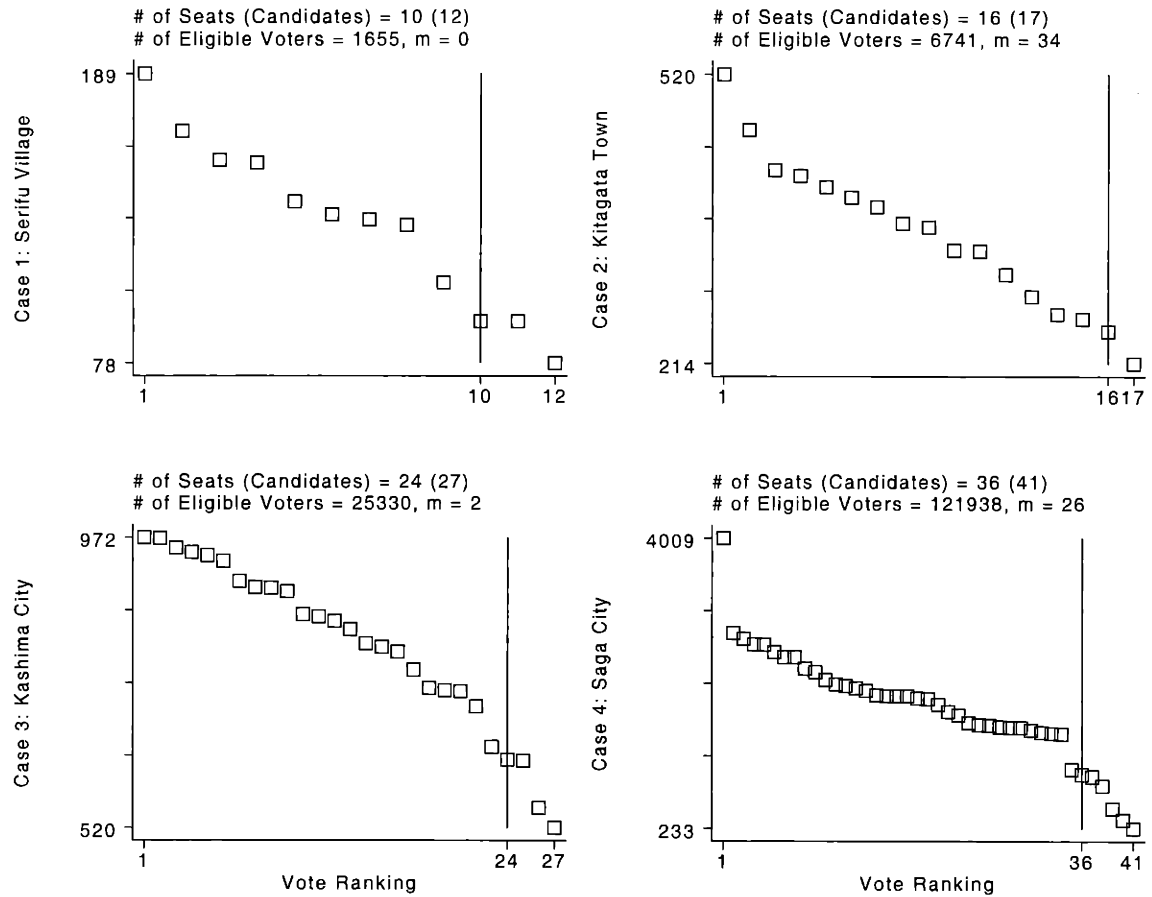
²³Under the currently effective legislation, each municipality proclaims a *Jyorei* only when it needs to *reduce* the number of seats defined by *Chiho Jichi Ho*. Under the new legislation (i.e., the so-called *Chiho Bunken Ikkatsu Ho*) proclaimed on July 16, 1999, only the *maximum* number of seats is defined. Thus, all municipalities must determine the number of seats by their municipal *Jyorei*. This new rule will become effective on January 1, 2002.

which are used as electoral districts.

- Each voter has only one vote, which cannot be transferred. Thus, losers' votes cannot be counted as votes for someone else (e.g., a candidate from the same political party).
- Each voter *writes* a full name of a particular candidate. If there are multiple candidates with the same family name, and if some voters write only the family name, their votes are proportionally allocated to the candidates according to the ratio of other unquestionable votes. For example, if Taro Suzuki receives 60 votes and Hanako Suzuki receives 40 votes, and if there are two votes with only "Suzuki" on the ballots, Taro Suzuki's total number of votes becomes $61.2 = 60 + 2 \times \frac{60}{100}$ and Hanako Suzuki's votes $40.8 = 40 + 2 \times \frac{40}{100}$. This method of counting votes is called *an-bun*. The *an-bun* vote allocation is quite common, because there are often candidates with the same family name.

The most important consequence of this electoral system is that it makes vote margins between candidates very small. Figure 4-2 shows some examples of vote-distribution among candidates, which are drawn from 1999 municipal assembly elections in Saga Prefecture. The horizontal axis indicates the vote ranking among candidates, and the vertical axis indicates the number of votes received by each candidate. The vertical line within each figure indicates a *border lines*, that is, the vote ranking equivalent to the total number of seats. In Case 2 (Kitagata), the vote margin between the last winner and the top loser was 34. In Case 4 (Saga), this vote margin was 26. But in Case 1 (Serifu) and Case 2 (Kashima), it was zero and two, respectively. Thus, the probability that a *single* ballot can change who wins and who loses is quite high in these elections.

It is not very surprising that the vote difference between the last winner and the top loser is one, zero, or a certain decimal number. (See Appendix D for some



Note: These four examples are drawn from 1995 municipal assembly elections in Saga prefecture. m in each graph indicates the vote margin between the last winner and the top loser. The vertical lines indicate votes received by the last winners.

Figure 4-2: Sample Distributions of Votes Among Candidates. *The single non-transferable vote (SNTV) system with an at-large district (ALD) produces very small vote margins between candidates.*

interesting stories from newspapers, showing how decisive and controversial a single ballot can be in Japanese municipal assembly elections.) In my data sampled from Saga and Fukuoka Prefectures for 1987-1998, the vote margin between the last winner and the top loser is 0 in three elections, 1 in nine elections, and 1.197-4.704 in thirty elections. As shown in Table 4.4, this vote margin is less than (or equal to) 10 in more than 20% of all municipal assembly elections, and less than (or equal to) 20 in almost 40% of all elections.

Voters and candidates may care about not only the vote margin between the last winner and the top loser, but vote margins between any other two candidates, which are usually also very small, as Figure 4-2 suggests. In other words, voters and candidates may care about not only who wins and who loses, but also who wins *at what rank*. In fact, it is quite likely that they do care, because the following causal relationships make sense, at least to some degree. The higher the ranking, the higher the chance of taking an important position (e.g., to be a chairperson) in an assembly, and the higher the chance of running for an upper-level (i.e., prefectural or national) election in the future. If the ranking matters, voters' subjective probability of casting a decisive ballot (to change the ranking) could be very high in most municipal assembly elections.

In short, "votes count" in Japanese municipal elections. A single vote has a sufficient chance to change electoral outcomes. There are two important things to which we must direct our attention. First, this effect of Japan's electoral system to produce very small vote margins in municipal assembly elections is *independent of* Japanese cultural traditions and social networks. As Figure 4-2 suggests, the distribution of votes tends to be "flat and smooth" in any municipal assembly election, regardless of how much each municipality is rural and how much people's behavior is bound by traditions and social connections. Second, the vote margins between candidates become particularly small in *elections with a large number of representatives per capita*;

Vote Margin	Average Vote Margin	Average Voter Turnout	Average Number of Seats Per Capita	Number of Districts (%)
$0 \leq m \leq 10$	5	89	1.29×10^{-3}	92 (20.8)
$10 < m \leq 20$	15	86	0.98×10^{-3}	81 (18.3)
$20 < m \leq 50$	33	85	0.77×10^{-3}	121 (27.4)
$50 < m \leq 100$	70	85	0.86×10^{-3}	66 (14.9)
$100 < m \leq 1,000$	303	74	0.29×10^{-3}	69 (15.6)
$1,000 < m$	2,049	58	0.08×10^{-3}	13 (2.9)

Note: The data include all general municipal assembly elections (i.e., excluding by-elections) held in Saga and Fukuoka Prefectures during 1987-1998. All elections were held under the single non-transferable vote (SNTV) system. In Fukuoka and Kita-Kyūshū, two of the twelve largest cities (i.e., cities designated by ordinance) in Japan, wards (*ku*), administrative subdivisions of a city, constitute electoral districts. In other cities, towns, and villages, each municipality as a whole constitutes an electoral district. The vote margin (*m*) is defined as the vote difference between the last winner and the top loser in each electoral district. The total number of observations (i.e., districts) is 442.

Table 4.4: Distribution of Vote Margin in Municipal Assembly Elections in Saga and Fukuoka Prefectures, 1987-1998. *The vote margin between the last winner and the top loser is often very small in Japanese municipal assembly elections, particularly when the number of representatives per capita is large.*

namely, when the number of seats is large and/or the number of electors is large. As Table 4.4 shows, there is a negative correlation between the vote margin (between the last winner and the top loser) and the number of seats per capita.

Considering these features, I would define the following important effect of the single non-transferable vote system with an at-large district (SNTV-ALD).

The Mechanical Effect of SNTV-ALD: Regardless of cultural and social backgrounds of municipalities, the SNTV-ALD system produces small vote margins between candidates, particularly when the number of seats per capita is large.

Because vote margins are very small, candidates must make a very hard effort to solicit votes on the street and/or buy votes under the table. Because voters, who can influence electoral outcomes, do not want to waste their votes, they prudently decide how to split their family ballots to multiple candidates. Because candidates know that voters may split their family votes, they persistently make phone calls and negotiate for as many votes as possible from each family. Because such negotiations for voting continue until the electoral eve, electoral outcomes are unpredictable for most voters.

4.4.2 Psychological Effect of SNTV-ALD

But the mechanical effect of the electoral system, by itself, may not be sufficient to understand voting behavior in Japanese municipal assembly elections. Steiner and Flanagan's explanations should be true, at least to some degree. Namely, how tight social connections and networks are, as well as how much they place an emphasis on social collectivity and harmony, should *affect* electoral behavior and high voter turnout. But I would hypothesize that they are also *affected by* the SNTV-ALD system. Let me explain my argument, more concretely, in the following.

As I stated above, I believe that the “political *kankei*” and “collectivity” do matter. As the list of eligible voters in Kitagata shows, which *chiku* (i.e., informal living cooperative groups) each voter resides in is a necessary piece of information for candidates. As Sakamoto’s campaign behavior suggests, social and family connections are indeed important when they mobilize votes. It is also an undeniable fact that some families are elected to an assembly over generations, such as the Yamaguchi and Kawaguchi families in Kitagata. As many scholars and journalists still argue, people in rural societies may make informal consensus and agreements within/between living cooperative groups and families to nominate candidates, at least to some degree.

But it is important to emphasize that only a few deviations from such informal agreements may change electoral outcomes significantly under the SNTV-ALD system. Knowing that, candidates and their core supporters may *use* all available *chien-ketsuen* and other personal connections to guard their electoral turf from encroachment by other candidates. They also *attach* a greater importance to social collectivity and solidarity to obtain as many collective votes from families and living groups as possible.

Voters may also *use* personal networks to collect information about each candidate’s good and bad reputation. According to my interviews in Kitagata, the reputation of each candidate is the most important reason for choosing a particular candidate. The reputation (in Japanese, *hyō-ban*) does not necessarily mean the reputation of each candidate’s ability to successfully implement desired public policies. Rather, it is more like the “personality” (in Japanese, *hitogara*) of each candidate. The survey introduced earlier also shows that the top answer to the question of what is the most important factor in deciding how to vote is “candidates’ personal characteristics.” These pieces of information about candidates’ personal characteristics are most effectively gathered through social and personal connections. Hence, voters *need to use* social networks particularly during the election campaign period.

In short, because of the SNTV-ALD system, candidates and voters strategically interact with one another through various social and personal connections and networks. Because candidates want to buy as many votes as possible, and voters want to sell votes as effectively as possible, the political *kankei* and collectivities become very important *resources* for them during elections. This is another important effect of the SNTV-ALD system, which I call the “psychological effect” of SNTV-ALD. Note that unlike the mechanical effect of SNTV-ALD, this effect is *dependent on* cultural and social backgrounds. Namely, the negotiations between candidates and voters become severer in communities with tighter and denser social networks and/in communities that always (i.e., even during off-election periods) attach an importance to social harmony and solidarity in people’s daily lives. Thus, this important effect of the SNTV-ALD system can be phrased as follows:

The Psychological Effect of SNTV-ALD: The SNTV-ALD system encourages candidates and voters to use social connections and to attach a greater-than-usual importance to social collectivity and solidarity, particularly in rural and traditional societies.

Social connections and social solidarity are indeed important, as many scholars of Japanese politics have argued, but their influences on social psychology and behavior may be significantly intensified *particularly during elections*. The scholars of Japanese politics have not fully considered this psychological effect of the electoral system.

4.4.3 Answer: Culture *and* Institution

Let us return to the main questions in this chapter. Why is there a positive correlation between the number of elected representatives per capita and voter turnout in Japanese elections? Is it because people think votes count more? Is it because political connections between candidates and voters get tighter, and voters’ sense of

obligation for voting becomes greater? My answers to these questions are given as follows:

In Japanese municipal assembly elections, the larger the number of representatives per capita, the more citizens' votes count, by the mechanical effect of the electoral system. When votes count more, candidates make a harder effort to mobilize votes, and voters have a higher incentive to vote. For these reasons, the number of representatives per capita is positively correlated with the level of participation.

It is also true, at least to some degrees, that the larger the number of representatives per capita, the tighter the social connections between candidates and voters, and the greater the importance citizens attach to the virtue of social solidarity and harmony. I would argue, however, that this correlation is indirect. Let me explain this point more clearly. First, there is a clear negative relationship between the number of representatives per capita in municipal assembly elections and the population size, which is determined by law. Second, *because the population size and the number of representatives per capita are arranged to have a negative correlation*, smaller municipalities are expected to have smaller vote margins between candidates (by the mechanical effect of SNTV-ALD), which give a stronger incentive to voters to participate. Third, *because smaller municipalities are almost always more rural and traditional*, people in these smaller municipalities also experience more vigorous vote-negotiations by fully using social connections and by emphasizing the importance of social solidarity. (This is the psychological effect of SNTV-ALD.) These three relationships produce a *indirect correlation* between the number of representatives per capita and the tightness of social connections and the importance of social solidarity.

Therefore, what is critically important in understanding the positive correlation between voter turnout and the number of representatives per capita is the incentives produced under the electoral system. By interacting with social and cultural characteristics, the SNTV-ALD system makes candidates and voters think hard about how

much an additional vote can change who wins and who loses, particularly when the number of representatives per capita is large.

I must state that my argument summarized above is hypothetical. Its validity should be tested empirically in the future. I must also state that I only discussed the determinants of the positive correlation between voter turnout and the number of representatives per capita in Japanese municipal assembly elections. A similar argument might be applicable, to a greater or lesser degree, to other elections; namely, the number of representatives per capita raises the level of voter turnout as a product of some interactive effects between incentives given by the electoral system and social and cultural conditions. But I must leave other scholars to investigate this point.

Chapter 5

Conclusion

In this final chapter, I will briefly summarize findings in this dissertation, discuss empirical, theoretical, and policy implications, and introduce unanswered research questions, which should be examined in the future.

5.1 Summary

Original Puzzle: Contrary to the conventional wisdom, Japanese municipal assembly elections, particularly in small towns and villages, often record remarkably *higher* voter turnout than national Lower House elections.

Finding 1: Japan is not the only exception. There are many other important examples of what I defined as the “turnout twist” phenomenon: *higher voter turnout in lower-level elections*. They can be found in Australia, Canada, Finland, France, India, Italy, Northern Ireland, Spain, and Switzerland.

Theoretical Model: The relative level of voter turnout in subnational vs. national elections is determined by the relative magnitudes of *how much is at stake* and *how much votes count* (“vote significance”) in elections. In lower-level elections, electoral outcomes may less significantly affect public policies, but citizens may be able to affect the electoral outcomes more significantly by voting. Therefore,

if the effect of vote significance outweighs the effect of stake, “turnout twist” is a logically possible consequence.

Finding 2: Compared to other OECD countries, the relative sizes of government expenditure and tax revenue at subnational vs national levels (i.e., a measure of the relative degree of how much is at stake in subnational vs. national elections) are quite large in Japan. This fact significantly explains why relative voter turnout is, on average, particularly high in Japanese local elections.

Finding 3: The relative voter turnout *within Japan* is determined most significantly by the relative number of elected representatives per capita in municipal vs. national elections (i.e., a measure of the relative degree of how much votes count in these elections).

Finding 4: The differential voting frequency between municipal and national elections in Japan is determined by respondents’ subjective evaluations of how much their votes count in elections and how much electoral outcomes change policy outcomes.

Finding 5: The electoral system used in Japanese municipal assembly elections, the single non-transferable vote system with an at-large district (SNTV-ALD), produces extremely small vote margins between candidates, *particularly when the number of seats per capita is large*. Thus, it gives a strong incentive to voters and candidates to think hard about how much a single ballot can change electoral outcomes, and to *use* personal networks and social collectivities to mobilize votes, collect information, and cast ballots most effectively.

Bottom Line: The counter-intuitive “turnout twist” in Japan is a result of Japanese citizens responding to *incentives* produced by various institutions. No matter how traditional a society is, incentives always affect behavior.

5.2 Implications

Then what do these findings suggest? How do my findings improve our understanding of political participation in democracy? What policy implications can we draw from these findings? How does my research contribute to the political science literature? This section discusses these implications.

5.2.1 Extrapolation is Problematic

This project started with the conventional wisdom in the political science literature; namely, elections for lower-level offices produce lower voter turnout. This dissertation did not *reject* this conventional explanation. In fact, it is certainly true in the United States (Burnham 1965) and in Great Britain (Rallings and Thrasher 2000). But the truth in the United States and Great Britain is not necessarily the truth in all the other democracies. By collecting national and subnational turnout data from as many countries as possible for as many years as possible, I showed that there are many important cases, which contradict the conventional wisdom. One of the most notable counter-intuitive examples is found in Japan.

Political scientists have developed a number of electoral and voting models. But most of them have been developed in the context of American and British elections, and tested *only* with American and British electoral data (and, occasionally, data from some other European countries). More importantly, based only on findings from American and European data, American and European scholars have often thought that their models should be widely applicable in other democracies. But this “extrapolation” may be simply wrong. I would claim that the number of comparative studies of elections and voting behavior is too limited for them to claim, “This model is widely applicable in other democracies.” This dissertation strongly suggests that we must direct more attention to other under-studied democracies in the world to improve our understanding of how democracy works.

5.2.2 A Study of *Relative* Voter Turnout is Suggestive

Voter turnout is one of the most extensively studied subjects in the political science literature. These studies are roughly categorized into two groups. The first group of studies examines *who* votes in elections (e.g., Dahl 1961, Verba and Nie 1972, Verba, Nie, and Kim 1978, and Wolfinger and Rosenstone 1980). The majority of existing studies of voter turnout are in this group. Using large-*N* empirical data, they examine correlations between voter turnout and demographic, economic and social attributes of voters (in survey data) or of geographical units (in aggregate data). These studies are practically important, because governmental policies are often systematically biased *for* citizens who participate and *against* citizens who abstain from voting (Lijphart 1997). In other words, to fully understand *Who Governs* (Dahl 1961), *Who Votes* (Wolfinger and Rosenstone 1980) is a necessary question we must examine.

The second group of studies examines *why* people vote. The importance of these studies has risen particularly in the past decade, because the level of voter turnout is declining in many countries. Since “low voter turnout means unequal and socio-economically biased turnout” (Lijphart 1997, p. 2), the declining voter turnout may intensify biased influences on public policies and may break democratic legitimacy (Teixeira 1992). For this reason, there is a strong need for effective measures to maximize voter turnout; however, many of the existing models explaining why people vote (or why people do not vote) cannot satisfactorily present valid measures, because of the following methodological reasons.

First, most of the existing models cannot propose feasible policies to promote participation, because they only make indirect inferences about *why* people vote and why they do not vote, based on empirical findings of *who* votes or *when* they vote. These models include the following:

The resource model, proposed by Verba, Schlozman and Brady (1995) and Brady,

Verba, and Schlozman (1995), claims that citizens with more money, time, and civic skills are more likely to vote. This is because these “resources” can reduce citizens’ opportunity costs of voting, as well as their costs of collecting information about candidates and parties.

The mobilizational model, proposed by Rosenstone and Hansen (1993), claims that individuals closely linked to various social networks are more likely to vote because politicians, parties, and party activists mobilize voters through such social networks. In other words, people are more likely to participate *when* they are asked to participate.

The sociological/cultural model, proposed by Steiner (1965), claims that voters (at least, Japanese voters) in densely networked communities are more likely to vote, because they feel obligated to fulfill collective duty by going to the polls.

These models, which explain *why* people vote based on the studies of *who* votes and *when*, can only present impractical/uncontrollable policies to increase voter turnout. Citizens’ personal attributes (e.g., income and educational levels, and civic-mindedness) and their social environments (e.g., the tightness of social networks) should be improved and/or politicians, political parties, and party activists should mobilize voters more enthusiastically.

Unlike these models, the rational choice model, first presented by Downs (1957), is directly aimed to explain *why* people vote. It explicitly deals with how the costs and benefits of voting affect individuals’ decisions to vote or not to vote. As Blais (2000) argued, there is some overlap between the rational choice model and other models. For example, the resource model and the mobilizational model also focus on the cost of obtaining information about candidates, parties, and elections and its effect on voter turnout. But the rational choice model is the only model that systematically compares the benefits of voting vs. the costs of voting in each election.

But because of this very reason, that the rational-choice theorists *compare* the benefits vs. costs of voting in a given election, they got stuck. They realized that the rational choice model, in its purest form, cannot explain *why* people vote because the cost of voting usually exceeds the infinitesimally small expected benefit of voting, which is the product of the infinitesimally small probability of casting a decisive vote and the benefit of choosing one candidate/party rather than another. Many solutions to this “paradox of not-voting” (Ferejohn and Fiorina 1974) or “paradox that ate rational choice theory” (Grofman 1993) have thus been proposed. Then, anti-rational choice scholars criticized some of these remedies in that they attempt to save the rational choice theory itself, instead of attempting to improve our understanding of political participation (Green and Shapiro 1994). The debate still continues even today.¹

This is the second reason why the existing models cannot fully present policy implications to boost voter turnout; namely, political scientists have spent too much energy debating whether or not voting is rational for each individual in each election. But I would dare to maintain that this question is meaningless. For those seeking policies to boost turnout, *To Vote or Not to Vote* (Blais 2000) in a given election is not the question.

What is more important for policy makers is to explain how *relative* changes or differences in explanatory factors affect *relative* changes or differences in voter turnout. Only these studies of *relative* voter turnout can present meaningful policy implications, because policies are aimed to result in a *relative* increase in voter turnout, not to achieve a certain *absolute* level of voter turnout. As Grofman (1993) and Hanks and Grofman (1998) claimed, the rational choice model becomes a powerful

¹For the controversy over the rational choice model of voter turnout, see Aldrich (1993), Blais (2000), Jackman (1993), Green and Shapiro (1994), Grofman (1993), Uhlaner (1993), and Whiteley (1995).

tool only when we use it in “comparative statics” analysis of *relative* (or marginal) voter turnout. It seems that even anti-rational-choice scholars cannot oppose this claim. For example, even Green and Shapiro (1994), the authors of *Pathologies of Rational Choice Theory*, wrote, “If rational choice [model of voter turnout] provides one advantage over competing explanatory approaches, it is the ability to make clear predictions about the effects of increasing and decreasing the costs of voting” (p. 70).

This claim that studies of relative voter turnout are fruitful is originally emphasized by Hanks and Grofman (1998, p. 409) in the following paragraph:

We believe strongly that the key question to be addressed by a rational choice model of turnout is not “When should anyone bother to vote?” Rather, following Grofman (1993), we find questions such as “How would we expect turnout among a given set of voters to vary across different types of elections?,” “How would we expect turnout to change as specific institutional factors related to participatory incentives or participatory barriers undergo change?,” and “How would we expect roll-on (office-specific ballots cast by voters already at the polls) for different offices to vary as a function of the importance of the office and its degree of competitiveness?” to be of greater empirical usefulness. Such questions put analyses of turnout into the standard comparative statics approach familiar to economists, and do not require economists to delve into the far murkier question of exactly how voters make tradeoffs between instrumental and non-instrumental considerations in deciding whether to vote. Moreover, when we look at turnout and competition in terms of a comparative statics perspective, it turns out that expectations derived from the public choice literature perform very well, indeed.

This dissertation is such a study of *relative* voter turnout with a focus on the difference in voter turnout between subnational and national elections. The question is

not why people vote in a particular election, but *why the same individuals often vote in one election but abstain in another*. The studies of differential turnout between different levels of elections are particularly useful to answer this question, because we can examine why turnout is different *when all social, economic, and demographic characteristics of voters/geographical units are constant*. Such a “quasi-experimental” research design can most effectively propose policies to promote electoral participation.

5.2.3 How to Boost Voter Turnout?

Many scholars have proposed various institutional remedies to promote voter turnout, including “user-friendly registration rules, proportional election formulas, relatively infrequent elections, weekend voting, and compulsory voting” (Lijphart 1997, p. 2). It is worth noting that scholars proposing these institutional solutions implicitly take the “comparative statics” approach, which I found most fruitful and suggestive. None of them get caught in the infertile debate of whether benefits of voting exceed costs of voting in a particular election. Their only concern is whether voter turnout can be *relatively* increased when one of the input factors changes, *holding other things constant*. For example, the introduction of user-friendly registration rules reduces the cost of registration (Powell 1986, p. 36; Teixeira 1992, p. 122; Wolfinger and Rosenstone 1980, Chapter 4). The introduction of a proportional-representation system reduces wasted votes; thus, it may raise citizens’ perceived levels of how much their votes count in elections (Blais and Carty 1990; Ladner and Milner 1999).

What can my dissertation suggest? As I have claimed, my dissertation showed that relative voter turnout in subnational vs. national elections is a function of how much is at stake and how much votes count in subnational vs. national elections. Thus, a conceptual answer based on this theoretical claim is that voter turnout can be increased by designing a political system that raises citizens’ perceived levels of

“stake” and “vote significance” in elections. However, this is too conceptual. How could we achieve such a goal? Among the two main explanatory factors, we shall confine our attention to how to increase citizens’ perceived levels of vote significance in elections, because, as I have argued, how much votes count in subnational vs. national elections is the critically important variable to solve the puzzle of the “turnout twist” phenomenon; namely, when votes count much more in lower-level, small-unit elections, higher voter turnout in lower-level elections is a logically possible consequence.

The observable indicator, which I used to measure how much votes count in elections, is simply the number of elected representatives per capita. The larger the number of elected politicians relative to the population size, the higher the voter turnout. This effect is statistically significant in both cross-national and cross-municipal regressions. But since the mechanism behind the statistical correlation was unclear, I conducted survey data analyses and, more importantly, in-depth field work in a Japanese small town. And I argued that as far as Japanese municipal assembly elections are concerned, the positive correlation between the number of representatives per capita and voter turnout is produced by the two important effects of the SNTV-ALD system: the mechanical and psychological effects. These effects result in the exceptionally high level of mobilization and participation, particularly when the number of representatives per capita is large. As far as I know, this system is only used in Japanese municipal elections.

Given these findings, I would propose the introduction of the SNTV-ALD system in other democracies. It produces very small vote margins, and gives strong incentives to candidates and voters to get involved in elections. It is important to note that the SNTV-ALD can boost voter turnout most effectively *in small-unit local elections in rural and traditional municipalities*. In the United States, these local elections in rural areas are precisely the elections recording very low voter turnout, for which many scholars and policy makers are searching for solutions to boost voter turnout.

I understand that the SNTV-ALD may have undesirable consequences. For example, it may encourage personalistic campaigns and pork-barrel politics, increase political corruption, and weaken party organizations.² But these negative effects may be minimized by institutionalizing other rules and regulations. It is worth giving serious consideration to importing Japan's SNTV-ALD system to countries with problematically low voter turnout, particularly at local levels.

5.3 Future Research Agenda

This dissertation drew these important empirical, theoretical, and policy implications discussed above, but leaves many unanswered questions and problems. In the following, I would like to enumerate possible extensions from this dissertation. I hope this dissertation will pave the way for the development of new research areas, such as "turnout twist," relative voter turnout, and national-subnational political dynamics.

5.3.1 More Cross-National Data Collection

The cross-national regressions in Chapter 3 were based on a sample with only 20 observations (16 countries). Although I found that it is very difficult to collect detailed subnational electoral data³ from many countries, I must say that a further data-collection effort needs be made in the future. It is particularly worth collecting

²Many scholars of Japanese elections, such as Ramseyer and Rosenbluth (1993), argue that the SNTV system, which was used in Japanese Lower House elections until 1993, is the origin of personalistic political campaigns and of factions within the Liberal Democratic Party (LDP). These effects of SNTV are much more intensified at municipal levels, because the district magnitude (i.e., the number of seats) is much larger: 10-100, as compared to 3-5 in Lower House elections until 1993.

³Vote turnout data at subnational levels are relatively easily to collect through websites and newspapers. What is particularly difficult to collect is the total number of representatives in subnational governments, which is not always reported in available documents and on-line resources.

national and subnational electoral data from newly-emerging democracies in Latin America, Africa, and Asia.

Such a larger cross-national collection of national and subnational turnout data allows us to examine the following important questions. Do citizens in new democracies have a higher incentive to participate at national-level politics or local-level politics? What are policy consequences of turnout differentials according to government levels, when a country is in the process of democratization and/or decentralization? How do we design electoral systems and inter-governmental relations to promote political participation at both national and local levels?

5.3.2 More Country-Specific Empirical Studies

In this dissertation, I have mainly focused on voter turnout in Japanese elections, because I aimed to solve the original puzzle, which stemmed from the conflict between the conventional wisdom in the literature and my prior knowledge about Japanese politics and elections. In Chapter 2 and Appendix A, I introduced turnout data from other democracies, but I did not have enough space to examine intra-country variations of relative voter turnout in these countries.

However, the theoretical model proposed in my dissertation, as well as the results of some cross-national regressions, let us speculate about the determinants of high voter turnout at subnational levels in other countries. For example, the high subnational turnout in Northern Ireland, Quebec and some other Canadian provinces, and Åland (Finland) seems to be a product of *high stake* at subnational levels. When subnational governments have strong autonomy and authority relative to the central government, it makes sense to believe that subnational elections could bring more voters to the polls. The high communal turnout in small municipalities in France seems to be a function of *high vote significance* in these elections, because in French communal elections, a very flexible electoral system and the enormously large num-

ber of local representatives give voters a chance to affect who gets elected.⁴ These explanations are, however, just hypothetical. Clearly, more country-specific studies should be conducted to test the robustness of the model.

5.3.3 Other Effects of Electoral Institutions

This dissertation mainly focused on the effect of a specific electoral institution: the number of elected representatives per capita. As the Japanese case suggested, it is likely that in any country, other types of electoral institutions (e.g., the SNTV-ALD in Japan) significantly affects relative voter turnout. These institutions may include whether a plurality or a proportional-representation system is used, whether a transferable or a non-transferable vote system is used, whether voting is compulsory or voluntary, and whether national and subnational elections are held on the same day or independently.⁵

I examined the effects of some of these institutional characteristics in preliminary analyses of cross-national data, but not sufficiently. More explicit treatment of the effect of electoral institutions in regression analyses is expected to provide better estimates of how the differences in electoral institutions affect relative voter turnout in subnational vs. national elections.

But regressions are not sufficient to understand the effects of electoral institutions on voter turnout. There is an important lesson to be drawn from this dissertation. As I argued in Chapter 4, electoral rules (i.e., formal institutions) create *incentive structures* jointly with cultural traditions (i.e., informal institutions). This may be

⁴For a more detailed explanation of French communal elections, see Appendix B.

⁵For example, as I briefly argued in Chapter 3, the exceptionally low local voter turnout in the United States seems to be related to the fact that most elections, except local elections, are held on the same day. Ladner and Milner (1999) showed that in Switzerland, the level of communal voter turnout is significantly correlated with the municipality size under the proportional system.

particularly true in lower-level, smaller-unit local elections, in which candidates and voters may have some degree of personal and social connections. Therefore, for future inquiries, I would propose not only more regressions but also more in-depth case studies to fully understand how incentives promote participation in elections.

5.3.4 Better Measures for *How Much is at Stake*

In all regression analyses in this dissertation, I used the sizes of government expenditure and tax revenue to measure how much is at stake in elections, but they may not be good measures. Unfortunately, the available quantitative, cross-national, and cross-level data, which may indicate the level of stake in elections at various levels of governments, are limited. In cross-national regressions, for example, the only cross-national, cross-government-level data available were government finance statistics published by IMF and OECD. In reality, however, citizens of democracy may be concerned more about non-budget-related policy issues, such as abortion, environment, human right, and national security. How to examine the effect of these policy issues on political participation is also open to further discussion.

Appendix A

Cross-National Analysis: Data Sources

This appendix presents the sources of turnout data used for cross-national regressions in Chapter 3. Before introducing county-specific information, let me explain some definitions and data sources common to all countries.

1. As I defined in Chapter 1, I use the term, *local* elections, to refer to the following: for federal countries, legislative elections under state or provincial governments; and, for non-federal countries, all levels of subnational legislative elections. Such a definition of “local” is used in *Government Finance Statistics Yearbook* (International Monetary Fund), from which I took cross-national budgetary data for regression analysis.
2. As I also explained in Chapter 1, the numbers of seats at subnational levels exclude political appointees, indirectly elected seats, chief executives (i.e., governors or mayors), and special-purpose officials (e.g., school committee members in the United States).
3. In Chapter 2, I introduced national and subnational turnout data from some other countries not included in cross-national regressions. For the data sources

of these countries (i.e., India and Switzerland), see the main body and/or footnotes in Chapter 2.

4. Voter turnout rates used for cross-national regressions (hereafter, *Turnout for Analysis*) are the average turnout in elections held during the 1990s. More recent data, if available, are introduced in footnotes. Unless otherwise noted, voter turnout is defined as the number of voters divided by the voting-age population (VAP). The turnout rates in national elections for all countries since 1945 are available from *Voter Turnout from 1945 to Date: A Global Report on Political Participation* (International Institute for Democracy and Electoral Assistance N.d.).
5. If detailed data of voter turnout and the number of popularly elected seats in subnational elections are unavailable, I make some rough judgments based on available pieces of information. I admit that these judgments are open to question.
6. The structures of a national parliament (i.e., unicameral or bicameral, the number of seats in each chamber, etc.) are taken from the *CIA World Factbook 1999* (CIA 1999).

Australia

The federal Parliament consists of the Senate (76 seats) and the House of Representatives (148 seats). All members of the Parliament are elected by popular vote. The two chambers usually hold their general elections concurrently. Most state assemblies also consist of two chambers: the Legislative Assembly (Lower House) and the Legislative Council (Upper House).¹ The total number of seats in state assemblies is 618

¹The state governments in Queensland, Northern Territory, and Australian Capital Territory consist of the Legislative Assembly only. In Tasmania, the state Lower House is called the House of

(Australian Bureau of Statistics 1999). The state elections are held independently from the federal elections. Under the governments of six states and Northern Territory, there are 703 local authorities (cities, municipalities, towns, shires, or districts) with a total of 2,213 elected local officials (CLAIR 1995*d*).

Since voting is compulsory, voter turnout is usually quite high in federal and state elections. Turnout in federal elections was 95.5% in 1990, 95.6% in 1993, 95.9% in 1996 and 95.2% in 1998 (IDEA N.d.). State elections usually produce a 2-5 percentage point lower turnout (Hughes 1977, Hughes 1986). CLAIR (1995*d*) reported that voter turnout in local elections is 5-45% in states where voting for local councillors is not compulsory (South Australia, Western Australia, Tasmania) and less than 70% in states where voting is compulsory (New South Wales, Victoria, Queensland, Northern Territory). Turnout for Analysis: 96% in federal elections, 92% in state elections, and 60% in local elections.

Austria

The federal Assembly (*Bundesversammlung*) consists of the Federal Council and the National Council. All 183 members of the National Council are elected by popular vote. All 64 members of the Federal Council are political appointees representing each of the nine states on the basis of population. Each state has a legislative assembly, and the total number of seats in state elections is 450 (Österreichisches Statistisches Zentralamt 1998). The state elections are held independently from the federal elections. Voting is compulsory in federal elections. Some state elections are also held under a compulsory voting system (Nakamura 1996).

Voter turnout in federal elections was 86.1% in 1991, 82.5% in 1994, and 86.0% in 1995 (IDEA N.d.). In recent state elections held between 1994-1998, the average voter turnout (weighted by population) was 78.4% (Österreichisches Statistisches

Assembly (Australian Bureau of Statistics 1999).

Zentralamt 1998). Local election data are unavailable. Turnout for Analysis: 85% in federal elections and 78% in state elections.

Canada

The federal Parliament consists of the Senate and the House of Commons. All 301 members of the House of Commons are elected by popular vote, and all members of the Senate (104 seats at maximum) are selected on the advice of the prime minister and appointed by the governor general. Under the Canadian federation, each of ten provinces and three territories has its provincial assembly (or council). The total number of seats in these provincial assemblies is 686.² The provincial elections are held independently from the federal elections. Under provinces and territories, there are 30 million inhabitants in approximately 4,000 municipalities: cities, towns, boroughs, villages, townships districts, or parishes (Norton 1994, Statistics Canada N.d.). In New Brunswick, there are 515 local councillors for 755,000 inhabitants (in 1999) in

²This number excludes the number of seats in state elections in Northwest Territories, Yukon and Nunavut. The number of seats, as well as voter turnout rates in recent elections, are available from the following Internet web pages:

Elections Canada, <http://www.elections.ca>

Alberta, <http://www.assembly.ab.ca/ELECTORA/Chief/main.htm>

British Columbia, <http://www.elections.bc.ca/>

Manitoba, <http://www.elections.mb.ca/>

New Brunswick, <http://www.gov.nb.ca/elections>

Elections Newfoundland, <http://www.gov.nf.ca/electoratoffice/oceo.htm>

Northwest Territories, <http://www.electionsnwt.com/>

Nova Scotia, <http://www.gov.ns.ca/elo>

Nunavut, <http://www.gov.nu.ca>

Ontario, <http://www.electionsontario.on.ca>

Prince Edward Island, <http://www.gov.pe.ca/election/>

Saskatchewan, <http://www.legassembly.sk.ca/election/>

Quebec, <http://www.dgeq.qc.ca>

99 municipalities; namely, on average, five councillors per municipality (Office of the Chief Electoral Officer, Government of New Brunswick N.d., Statistics Canada N.d.). Since the average municipality population in New Brunswick (i.e., about 7,600) is almost the same as the average population including all 4,000 municipalities in Canada, I use five-councillors-per-municipality as a rough estimator of the total number of elected local councillors in Canada.³

Voter turnout in federal elections was 69.6% in 1993 and 67.8% in 1997 (IDEA N.d.). The average voter turnout (weighted by population) in the last three provincial elections held in ten provinces is 68.9%. Graham, Phillips and Maslove (1998, p. 95) reported that the average voter turnout in eight major cities (Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton, Calgary, and Vancouver) was about 40% (with citations of Higgins 1986, p. 313; Clarke et al. 1991, p. 37; and McCormick 1996, p. 365). Local election data publicized by the New Brunswick provincial government show that voter turnout in municipal elections was 44.9% in 1995 and 47.3% in 1998 (Office of the Chief Electoral Officer, Government of New Brunswick N.d.). Since the turnout data in New Brunswick include not only turnout in large cities but also turnout in small rural municipalities, a rate of 40-50% seems to represent voter turnout in Canadian local elections. Turnout for Analysis: 69% in federal elections, 69% in provincial elections, and 45% in local elections.

Denmark

The unicameral Parliament (*Folketing*) has 179 seats. All members are elected by popular vote to serve four-year terms. Under the central authority, there are 14 counties, 2 cities (Kobenhavns and Fredericksburg), and 275 municipalities. Legislators in county and municipal governments are elected by popular vote. All subnational

³Norton (1994, p. 452) very roughly estimated a total of 30,000 to 50,000 elected local councillors. It seems to be, however, slightly over-estimated.

elections are held concurrently every four years (Danmarks Statistik 1999), but not with the national elections. The total number of seats is 374 in county councils and 4,685 in municipal councils (Danmarks Statistik 1999).

Voter turnout in recent national elections was 82.8% in 1990, 84.3% in 1994, and 85.9% in 1998 (Danmarks Statistik 1999, IDEA N.d.).⁴ Voter turnout in recent county elections was 68.8% in 1989, 71.2% in 1993, and 71.4% in 1997 (Danmarks Statistik 1999). In municipal elections, it was 67.6% in 1989, 71.2% in 1993, and 70.1% in 1997 (Danmarks Statistik 1999). Nakamura (1996) reported the turnout rates in municipal elections were 72.4% in 1970, 62.8% in 1974, 73.1% in 1978, and 73.2% in 1992. Morlan (1984) reported that the average turnout in municipal elections during 1970-1979 was 72.8%. Turnout for Analysis: 84% in national elections and 71% in local elections.

Finland

The unicameral Parliament (*Eduskunta*) has 200 seats, and all members are elected by popular vote to serve four-year terms. There are six provinces under the central authority; however, they do not have a government body. The only exception is Åland, the smallest province in Finland, which consists of islands between Sweden and Finland. It has a well-developed autonomous provincial government and 30 legislators are elected by popular vote (Harloff and IULA 1987, Nakamura 1996). Under the provinces, there are 455 municipalities with elected councillors. The total number of seats in the municipal councils is 12,482 (Statistics Finland N.d.). Most municipal councillors are elected concurrently every four years, but independently from the national elections. Only in Åland, municipal council elections are held a year before the unified municipal elections.

⁴The data exclude voter turnout in the Faroe Islands and Greenland, which are parts of the Kingdom of Denmark but self-governing administrative divisions.

Voter turnout in recent national elections was 72.1% in 1991, 71.9% in 1995, and 68.3% in 1999, whereas turnout in municipal elections was 70.5% in 1988, 70.9% in 1992, and 61.3% in 1996 (Statistics Finland N.d.). Morlan (1984) reported that the average voter turnout during 1956-1979 was 79.7% in national elections and 75.3% in municipal elections. The results of Åland provincial elections are unavailable. Turnout for Analysis: 71% in national elections and 66% in local elections.

France

The bicameral Parliament (*Parlement*) consists of the Senate (321 seats) and the National Assembly (577 seats). All senators are indirectly elected by an electoral college, and all members of the National Assembly are elected by popular vote. France is divided into 22 regions and subdivided into 96 departments. Under the departments, there are 36,763 municipalities (Norton 1994, Table 2.1). All municipalities concurrently hold their council elections every six years. National and local elections are held separately. The most recent unified elections were held in June 1995, and 508,732 municipal councillors were elected (Dominique, Dusseau, Rama and Renault 1995). The total number of elected councillors in regional and departmental assemblies is unavailable.

Voter turnout in national elections was 66.2% in 1988, 68.9% in 1993 and 68.0% in 1997 (IDEA N.d.).⁵ Voter turnout in 1995 nationwide municipal elections was 69.4% in the first-ballot and 68.0% in the second-ballot (Dominique, Dusseau, Rama and Renault 1995). In 1989, it was 72.8% and 73.1%, respectively (Dominique, Dusseau, Rama and Renault 1995). Turnout for Analysis: 68% in national elections and 69% in local elections.

⁵The French National Assembly elections use the majority-runoff system. As of writing this draft, I have not yet verified whether the turnout figures presented in IDEA are those for the first-ballot or for the second-ballot.

Germany

The bicameral chamber (no official name for the two chambers as a whole) consists of the Federal Assembly (656 seats usually, but 669 for the 1998 term) and the Federal Council. All members of the Federal Assembly are elected by popular vote. The members of the Federal Council are elected by representatives from state governments. Under the federation, there are 16 state governments, each of which has a state Parliament with popularly elected legislators. The total number of seats in recently held state legislative elections is 1,972 (Federal Statistical Office Germany N.d.). The state elections are usually held independently from the federal elections. Under sixteen states except for three city-states, there are 426 counties, 117 county boroughs or cities, and 16,127 communes (Norton 1994, Table 4.1). The total number of elected representatives in the local authorities was 153,000 in 1980 (Norton 1994, p. 283).

Voter turnout in federal elections was 77.8% in 1990, 79.0% in 1994 and 83.0% in 1998 (IDEA N.d.). The average voter turnout (weighted by population) in recent state elections (two elections for each state) is 68.9% (AICGS N.d.). As Schultze (1995) stated, "At the level of Laender [state] elections the turnout is on average ten percentage points below the participation for federal elections in the same jurisdiction" (p. 93). Norton (1994, p. 283) wrote that in the 1980s, voter turnout was near 90% in federal elections and 70-76% in local elections. Morlan (1984) reported that during 1950-1979, voter turnout was about 86-90% in federal elections and 67-82% in municipal elections. During the same period, voter turnout in state elections was about 70-83% (AICGS N.d.). Therefore, as Schultze (1995, p. 93) claimed, it seems reasonable to assume that turnout in local elections is slightly lower than turnout in state elections. Turnout for Analysis: 80% in federal elections, 69% in state elections and 65% in local elections.

Italy

The bicameral Parliament (*Parlamento*) consists of the Senate (326 seats) and the Chamber of Deputies (630 seats). All members of the Parliament, except 11 appointed senators, are elected by popular vote to serve five-year terms. Both houses usually hold their elections concurrently before the end of the terms. There are three levels of subdivisions under a central authority: 20 regions, 95 provinces, and 8,100 communes (Norton 1994, Table 3.1). In addition, large communes are subdivided into wards (De Mucci 1994, p.116). Before the local government reform act of 1993, there were 1,057 regional councillors, 2,505 provincial councillors, and 164,500 communal councillors (De Mucci 1994, Table 1).⁶ The 1993 reform reduced the number of seats in communal councils to 107,454 (De Mucci 1994, Table 2/b).⁷ Most local elections are usually held at the same time (Corbetta and Parisi 1995, p. 153). National and local elections are usually held independently.

Voter turnout in national elections was 87.4% in 1992, 86.1% in 1994, and 82.9% in 1996 (IDEA N.d.). Corbetta and Parisi (1995, Figure 3) showed that voter turnout in local elections is only slightly lower than turnout in elections to the House of Deputies. The difference is about 0-4 percentage points, at least before the local government reform. It should be noted that voting is not compulsory in Italy, but failure to vote is entered on a citizen's certificate of good conduct. "[T]his, in fact innocuous sanction,

⁶The data exclude provinces in Valle d'Aosta, Trentino-Alto Adige, and Sicilia, as well as communes in Trentino-Alto Adige. Not only the structure of local governments, but also the electoral systems used in local elections changed in 1993. Before the reform, only legislators were elected by popular vote by the proportional representation system. Under the new electoral law, however, mayors are directly elected by the two-round voting system. For more detailed explanations about the electoral reform, see De Mucci (1994).

⁷De Mucci (1994) did not report the total number of seats in regional and provincial councils after the reforms. For statistical analysis, I use 111,016 ($= 1,057 + 2,505 + 107,454$) as the current total number of local councillors.

was nevertheless perceived by many citizens something to be avoided" (Corbetta and Parisi 1995, p. 150), and hence raised the participation rates in all levels of elections. Turnout for Analysis: 85% in national elections and 82% in local elections.

Japan

The national Diet (*Kokkai*) consists of two chambers: the House of Representatives (Lower House, 500 seats) and the House of Councillors (Upper House, 252 seats).⁸ Except in 1980 and 1986, both houses have not held their elections concurrently. As of April 2000, there are 47 prefectures and 3,229 municipalities under a central authority (Jichishō N.d.). The total number of seats is 2,910 in prefectural assemblies and 60,113 in municipal assemblies, as of December 1999 (Jichishō N.d.). Approximately half of the municipal assemblies and most prefectural assemblies hold unified elections every four years (Jichishō Senkyobu 1996). The other elections are held independently during off-years. The local elections are usually held independently from the national elections.

Voter turnout in Lower House elections was 73.31% in 1990, 67.26% in 1993, and 59.65% in 1996, whereas turnout in Upper House elections was 50.72% in 1992, 44.52% in 1995, and 58.84% in 1998 (Meisuikyo N.d.).⁹ Voter turnout was 60.49% (1991), 56.23% (1995), 56.78% (1999) in recent prefectural assembly elections, and 63.81% (1991), 59.61% (1995), and 60.35% (1999) in municipal assembly elections (Meisuikyo N.d.).¹⁰ Turnout for Analysis: 59% in national elections and 60% in local elections.

⁸In 2000, the number of seats in the Lower House was reduced to 480.

⁹Voter turnout in the 2000 Lower House election was 62.5%.

¹⁰Since these data exclude off-year elections, these reported voter turnout rates in prefectural and municipal elections do not accurately indicate the level of nationwide average participation rates.

Korea

All 299 members of the unicameral National Assembly (*Kukhoe*) are elected by popular vote to serve four-year terms.¹¹ Under the central authority, there are 15 regions (i.e., 9 provinces and 6 special cities) and 230 municipalities (CLAIR 1995a). The number of seats is 690 in regional assemblies and 3,490 in municipal assemblies (CLAIR 1999). South Korea has a tumultuous history of regional and local elections.¹² After the liberation from the Japanese colonial rule in 1945, regional and local elections were held in 1952, 1956, and 1960. Yet, a coup d'état in 1961 dissolved all subnational governments, and all subnational elections were suspended thereafter. In March 1991, legislative elections to municipal assemblies were held after 31 years of interruption. In the following June, elections for the members of provincial and special-city assemblies were held. Finally in 1995, all four types of subnational elections, including regional and municipal assembly elections, gubernatorial elections, and mayoral elections, were held concurrently. In 1998, another unified subnational election was held.

Voter turnout in national assembly elections was 71.9% in 1992, 63.9% in 1996 (IDEA N.d.).¹³ Voter turnout in 1991 local elections was 55.0% for municipal assemblies and 58.9% for regional assemblies (CLAIR 1995a). Turnout in nationwide unified subnational elections was 65.3% in 1995 and 52.6% in 1998 (CLAIR 1999, 1995a). Turnout for Analysis: 68% in national elections and 58% in local elections.

¹¹In 2000, the number of seats was reduced to 273.

¹²For the history of local elections in South Korea, see CLAIR (1995b).

¹³Voter turnout in the 2000 national assembly election was 57.2%.

Netherlands

The bicameral Parliament (*Staten General*) consists of the First Chamber (75 seats) and the Second Chamber (150 seats). All members of the Second Chamber are elected by popular vote, but all members of the First Chamber are indirectly elected by the members of 12 provincial councils. Each election to the First Chamber should be held within three months after provincial elections. This chamber is given much less legislative authority than the Second Chamber. For example, it does not have the right to propose and amend a bill but can only pass or reject it in full. Under the 12 provinces, there are 633 municipalities. Each municipality has a municipal council with directly elected representatives. The total number of seats in provincial and municipal councils is 756 and 10,091, respectively (Statistics Netherlands 1998).

Morlan (1984) reported that voter turnout for the period 1970-1979 was 83.5% in national elections and 70.0% in municipal elections. Voter turnout in recent Second Chamber elections was 85.8% in 1986, 80.3% in 1989, and 78.8% in 1994 (Statistics Netherlands 1998). Voter turnout in municipal council elections was 73.3% in 1986, 62.3% in 1990, and 65.2% in 1994 (Statistics Netherlands 1998). In provincial elections it was 66.3% in 1987, 52.3% in 1991, and 50.2% in 1995 (Statistics Netherlands 1998). Turnout for Analysis: 79% in national elections and 64% in local elections.

Norway

The Parliament (*Storting*) is essentially unicameral, but it divides itself into two chambers for certain purposes. The total number of seats in the Parliament is 165 (Statistics Norway 1995). There are 19 counties and 439 municipalities. Since 1975, municipal and county council elections have been carried out simultaneously (Statistics Norway 1995). The number of seats is 13,078 in municipal council elections (Statistics Norway 1995). The total number of seats in county councils is unavailable. Nakamura (1996) reports that there are 25-85 seats in each county council.

Hence, it is roughly estimated that there are approximately 1,000 representatives in 19 councils.

Morlan (1984) reported that voter turnout for the period 1956-1979 was 81.5% in national elections and 74.5% in municipal elections. Voter turnout in recent national elections was 75.8% in 1993, and 78.0% in 1997 (IDEA N.d.). Voter turnout in county/municipal council elections was 69.4% in 1987 and 66.0% in 1991 (Statistics Norway 1995). Recent turnout data for local elections are unavailable, but I assume that local turnout is, as in the late 1980s and early 1990s, approximately 10 percentage points lower than national turnout. Turnout for Analysis: 77% in national elections and 67% in local elections.

Spain

The Spanish national government, the National Assembly (*Las Cortes Generales*), consists of the Senate and the Congress of Deputies. All 350 members of the Congress of Deputies and most (208) members of the Senate are elected by popular vote, and 48 members of the Senate are appointed by regional legislatures. Both chambers usually hold elections concurrently (Nakamura 1996, p. 164). Spain is divided into 17 regions, 50 provinces, and approximately 8,000 municipalities (Nakamura 1996, p. 161). The members of provincial assemblies are elected by municipal legislators (Nakamura 1996, p. 161). All municipal elections are held concurrently with regional elections every four years, except in four regions including Catalonia and Andalusia (Justel 1995, p. 45; Font and Virós 1995, p. 14). The total number of seats in municipal councils is 68,956 (Nieto 1994a, Table 2).

Voter turnout in recent national elections was 70.0% in 1989, 77.0% in 1993, and 78.1% in 1996 (IDEA N.d.). Voter turnout for the period 1979-1991 is 65% in local elections and 74% in national elections (Justel 1995, p. 45). Recent turnout data for local elections are unavailable, but I assume that local turnout is, as in the 1980s,

approximately 10 percentage points lower than national turnout. Turnout for Analysis: 76% in national elections and 66% in local elections.

Sweden

The unicameral Parliament (*Riksdag*) has 349 seats, and all members are elected by popular vote to serve four-year terms. Sweden has 21 counties and 288 municipalities (Statistics Sweden 1998). The legislative body of each government is unicameral and its members are all elected by popular vote.¹⁴ There are 1,990 county councillors and 13,337 municipal councillors (Statistics Sweden 1998).

Since 1967, elections for all three levels of government have been held on the same day (Statistics Sweden 1998). This arrangement produces quite high turnout in all three levels of elections. Voter turnout (the proportion of valid votes to the number of eligible voters) in recent elections was 85.3% (1991) and 85.5% (1994) in national elections, 81.7% (1991) and 82.4% (1994) in county elections, and 82.6% (1991) and 83.0% (1994) in municipal elections (Statistics Sweden 1998). Turnout for Analysis: 85% in national elections and 82% in local elections.

United Kingdom

The United Kingdom of Great Britain and Northern Ireland consists of four countries: England, Wales, Scotland and Northern Ireland. The bicameral Parliament consists of the House of Lords (1,200 seats) and the House of Commons (659 seats). The members of the House of Commons are elected by popular vote to serve five-year terms. All members of the House of Lords are lords, hereditary peers, life peers, bishops or archbishops. Under the four countries, there are 47 counties, 7 metropolitan

¹⁴Each county has a county council. The Island of Gotland and the cities of Göteborg and Malmö, which have a county status as well as a municipal status, also form a county council (Norton 1994, p. 296).

counties, 26 districts, 9 regions and 3 island areas.¹⁵ These local authorities (or their subdivisions) have legislative councils.¹⁶ The total number of popularly elected representatives in local governments is 24,511 in Great Britain and 582 in Northern Ireland (Nakamura 1996, p. 13, p. 168). These local elections have various election cycles according to the types of authority (Denver, Fisher, Cowley and Pattie 1998, p. 272). Except in 1979 and 1997, nationwide local elections were not held concurrently with the Parliamentary elections.

Voter turnout in recent Parliament elections was 77.8% in 1992 and 71.5% in 1997 (IDEA N.d.). In Northern Ireland, voter turnout in unified municipal elections was 55.0% in 1993 and 54.7% in 1997 (Whyte N.d.). The overall average voter turnout in recent local elections in Great Britain (England, Wales, Scotland) was lower: 30.0% in 1998 and 38.9% in 1999 (LGC N.d.). The levels of voter turnout in national and local elections in Great Britain have not changed drastically since the 19th century; namely, voter turnout has been around 70-80% in national elections and 40-50% in local elections (Rallings and Thrasher 2000).¹⁷ Turnout for Analysis: 75% in national elections and 45% in local elections.

Prime Minister Tony Blair, who took power in 1997, has taken a strong leadership to devolve authorities from Westminster (the national Parliament) to the four countries. In 1998, the Wales Assembly and the Scottish Parliament were es-

¹⁵Since the British local government structures have changed recently, the number of subnational units, which are taken from CIA (1999), may not be accurate. For the British local government structure and its reorganization history, see Norton (1994, p. 362-366).

¹⁶The legislative councils in metropolitan counties, including Greater London, were abolished in 1986, and the local authorities were transferred to 32 London boroughs and 26 metropolitan districts (Nakamura 1996).

¹⁷Rallings and Thrasher have extensively written about local elections in Great Britain. Also see Rallings and Thrasher (1993, 1994, 1997).

established following the referendum in September 1997.¹⁸ The first elections to the regional Assembly/Parliament were held on May 12, 1999, and recorded a turnout rate of 60% in Scotland and less than 50% in Wales (*Agence France Presse*, May 7, 1999). The Northern Ireland Assembly was also established in 1998 following the referendum on the Good Friday Agreement (Whyte N.d.). In the first election to the new Assembly, voter turnout was quite high: about 70% (Whyte N.d.). When calculating the overall average turnout in recent local elections in the United Kingdom, I did not count turnout data in these *first* regional elections.

United States

The bicameral Congress consists of the Senate (100 seats) and the House of Representatives (435 seats). All members of the Congress are elected by popular vote: One-third of the members of the Senate are elected every two years to serve six-year terms, and all member of the House are elected every two years to serve two-year terms. Under the federation, there are 50 states and 1 district, and each state has a bicameral legislative assembly¹⁹ with popularly elected representatives. Under the states, as of 1997, there are 3,043 counties, 19,372 municipalities, 16,629 towns and townships, 13,726 school districts, and 34,683 special districts (United States Census Bureau N.d.).²⁰ Most local governments elect legislators, as well as chief executives and major administrative officers, by popular vote (Norton 1994). The number of popularly elected officials is 18,828 in state governments and 318,979 in local govern-

¹⁸The Scottish Parliament, which was abolished in 1707, now has powers to legislate and determine tax rates. The National Assembly of Wales also gained significant authority in many areas of public policies. See National Assembly of Wales (N.d.) and Scottish Parliament (N.d.).

¹⁹The only exception is Nevada, which has a unicameral chamber.

²⁰The structure of subnational governments in the United States is quite complicated. For a detailed description of the local government system in the United States, see Norton (1994).

ments (United States Census Bureau 1992).

Unlike in most other democracies, the election schedule is fixed in the United States. Congressional elections are held every two years on the day after the first Monday (i.e., the first or second Tuesday) in November. Gubernatorial elections, state legislative elections, as well as most other elections to state and county offices, are held on the same day.²¹ The lowest-level elections, municipal and township elections, are not necessarily held concurrently.²²

Voter turnout in recent Congressional elections was 36.5% in 1990, 55.1% in 1992, 38.8% in 1994, and 49.1% in 1996. The elections in 1992 and 1996 were held in presidential election years. Voter turnout in midterm years (1990 and 1994) almost always “drops” in American elections (Burnham 1965, Campbell 1966). On average, voter turnout in Congressional elections is about 45%. As long as we use the ratio of voters to the voting-age population as a measure of voter turnout, turnout in state elections is the same as turnout in federal elections, simply because, as I explained, these elections are held concurrently. Austin, Clubb, Flanigan, Grand and Zingale 1991, however, showed that the average turnout, measured by the proportion of the *effective* number of votes to the voting-age population, during 1968-1986 was 46.9% in U.S. Senate elections, 44.7% in U.S. House elections, 43.6% in state House elections, and 40.9% in state Senate elections. The lower the office on a ballot, the lower the number of effective votes. This is what Burnham (1965) called “roll-off” of voter turnout in American elections. It is difficult to grasp a general trend and pattern of voter turnout in local elections, because no organization systematically collects

²¹New Jersey, Virginia, Louisiana, Kentucky (until 1984), and Mississippi hold state legislative elections in odd-numbered years (Austin, Clubb, Flanigan, Granda and Zingale 1991).

²²Detailed election data (dates, turnout, vote distribution among candidates, etc.) for municipal and township elections are difficult to obtain. In Massachusetts, most town elections are held in March or April (Levitan 1984).

local election data.²³ Some existing studies, however, suggest considerably low voter turnout. For example, Karnig and Walter (1983) found that voter turnout in local (i.e., municipal) elections was 39.9% in 1935-37, 36.5% in 1962, and 31.0% in 1975.²⁴ With some other citations, Lijphart (1997) wrote that turnout in recent local elections is only about 25% (Ansolabehere and Iyengar 1995, pp. 145-6; Teixeira 1992, p. 7). Turnout for Analysis: 45% in federal elections, 40% in state elections, and 25% in local elections.

²³ *Municipal Year Books*, published by the International City Management Association, reported voter turnout in local elections only in the 1935 and 1937 editions.

²⁴ Also see Alford and Scoble (1968), Alford and Lee (1968), and Karnig and Walter (1977). Karnig and Walter's data include 3,410 cities with 25,000 population.

Appendix B

French Communal Elections

In France, there are 36,433 communes with an average population of only 1,600. For this population in France, there are approximately 500,000 local legislators (Norton 1994, p. 134), as I briefly mentioned in Chapter 3. Therefore, a simple calculation suggests that each legislator, on average, represents only 116 citizens. Moreover, the number of legislators is not proportional to the size of commune, as in Japan. Namely, the smaller the commune size, the larger the number of representatives per capita. For example, while a commune with a population of more than 300,000 (except Paris, Marseille, and Lyon) has only 69 seats in the communal assembly, a commune with a population less than 100 has 9 seats, and a commune with a population between 100 and 500 has 11 seats (CLAIR 1995*c*, p. 7). In such very small communes, it is not surprising that individuals expect that their votes can change electoral outcomes.

We should also pay attention to the discrepancy in the electoral system. In France, the electoral system differs according to the level of elections.¹ While the National Assembly (*Assemblée Nationale*) elections use the SMD majority-runoff system,² the

¹All the descriptions of the French electoral system in this appendix are from CLAIR. 1995*c*.

²If any candidate receives the majority of the total effective votes, he/she wins a seat. If no candidate receives the majority, all candidates whose vote exceeds 1/8 of the registered electorate may participate in the run-off.

regional assembly elections use the exclusive list system. The departmental assembly elections use a SMD majority-runoff system similar to the system used in the National Assembly elections. The communal assembly elections, in communes with a population of 3,500 or more, use the exclusive list majority-runoff system.³ Therefore, citizens choose a candidate in national and departmental elections, and a party in regional and communal elections. However, as long as the list system is exclusive and voters can only vote for a list (i.e., voters cannot add or delete candidates on a list or change the rank of candidates on a list), the number of alternatives each voter has under the proportional representation system is not necessarily larger in the list system than in the simple plurality system.

What is striking and interesting in French subnational elections is the electoral system used in communal elections *in communes with a population of less than 3,500*. Such communes include more than 90% of all communes in France, and often record *higher* communal than national turnout (Kesselman 1966). These elections also use the list majority-runoff system, but voters can freely add or delete candidates on a list. Moreover, in communes with a population of less than 2,500, the electorate can either vote for a list (with modifications) or for a particular candidate, because individuals can also run in elections independently. In such small communes, voters may also cast an incomplete-list ballot.⁴ Unlike the standard list system, candidates on a list do not have their own ranks, and one ballot for a list is counted as one vote for each candidate on the list. Candidates whose vote total is greater than half of

³If any list (i.e., party) receives the majority of the effective votes, that list takes half of the seats. The rest of the seats are distributed proportionally to other lists whose vote total exceeds 5% of the effective votes. If no list receives the majority, all lists whose vote total exceeds 1/10 of the registered electorate may participate in the run-off.

⁴The number of candidates a voter lists does not need to be equal to the the number of seats. In communes with a population of more than or equal to 2,500 but less than 3,500, such an incomplete-list ballot is invalid.

the number of effective ballots and more than one-fourth of the registered electorate win in the first elections. In the run-off, the rest of the candidates compete for the remaining seats, and those who take a relative majority (not an absolute majority) win.

The non-exclusive list system used in small French communes is almost equivalent to the multimember district system with multiple votes for candidates. Therefore, the French electorate in small communes has significantly more choices in communal elections than in national elections, similar to Japanese municipal assembly elections. The larger number of alternatives and the very small size of the electorate in small French communes may suggest that a voter's expected probability of being pivotal is quite high in local elections. They may also suggest that each candidate's expected probability of changing outcomes by an additional effort of mobilization is also quite high.

Appendix C

Survey Data Analysis: Question Wording and Coding

All individual-level survey data used in Chapter 3 are taken from *Senkyo Ni Kansuru Zenkoku Ishiki Chōsa* (A Nationwide Opinion Survey on Elections), conducted by *Akarui Senkyo Suishin Kyōkai* during January-February 1987. The data set and codebook are available from the Leviathan Data Bank.¹ All question wording in the original is in Japanese; however, in this appendix, I only present the translated wording. For some variables, codings used in analyses are different from the original's. Any transformation is, however, essentially neutral to statistical analyses. For example, the coding for voter turnout used in analyses is in a descending order, while it is in an ascending order in the original. The *m* indicates that the corresponding answer is treated as missing. DK is an abbreviation for "I do not know."

Voter Turnout in National Elections *Question wording:* "Since you obtained the right to vote, how often have you voted in national and local elections? First, how about the House of Representative elections?" *Coding:* 5 if always votes, 4 if usually voted, 3 if sometimes voted, 2 if rarely voted, 1 if never voted,

¹Leviathan Data Bank (LDB). Address: 5-11-15-302, Koishikawa, Bunkyo-ku, Tokyo, Japan. Phone/Fax: + 81-3-3814-4195.

m if voted for the first time in the last election, m if had no voting right (i.e., was under 20) in the last election, and m if DK.

Voter Turnout in Local Elections *Question wording:* “Then, how about municipal assembly elections? *Coding:* 5 if always votes, 4 if usually voted, 3 if sometimes voted, 2 if rarely voted, 1 if never voted, m if voted for the first time in the last election, m if had no voting right (i.e., was under 20) in the last election, and m if DK.

Differential Voter Turnout *Coding:* Voter Turnout in Local Elections – Voter Turnout in National Elections. *Note:* m if missing in either.

Municipality Size *Coding:* 5 if special wards in Tokyo metropolitan area, 4 if ten largest cities designated by ordinance (*Seirei Shitei Toshi*, including Sapporo, Yokohama, Kawasaki, Nagoya, Kyōto, Ōsaka, Kōbe, Hiroshima, Kita-Kyūshū, and Fukuoka), 3 if cities with a population $\geq 100,000$, 2 if cities with a population $< 100,000$, and 1 if towns and villages.

Vote Magnitude *Question wording:* “Do you agree with the following opinion: My vote does not count in an election, because a large number of other people vote.” *Coding:* 5 if agree, 4 if rather agree, 3 if indifferent, 2 if rather disagree, 1 if disagree, and m if DK. *Note:* The type of election is not specified in the question wording.

Closeness *Question wording:* “Do you agree with the following opinions: If a party or candidate I support has no chance to win in an election, it is of no use to cast my ballot.” *Coding:* 5 if agree, 4 if rather agree, 3 if indifferent, 2 if rather disagree, 1 if disagree, and m if DK. *Note:* The type of election is not specified in the question wording.

Stake in Election *Question wording:* “How much do you think an electoral result

can influence what a government does?” *Coding:* 3 if greatly, 2 if at least a little, 1 if not at all, and *m* if DK. *Note:* The type of election and the level of government are not specified in the question wording.

Politician-Voter Relations *Question wording:* (1) “Are you or anyone in your family a member of *Kōenkai* [a candidate-based supporting organization] for a mayor, a local representative, and/or a national representative?” (2) “Do you have any politician who provides special support when you and/or your family member searches for jobs, applies to schools, etc?” (3) “Do you have any politician who always makes an effort, for your neighborhood, to improve road conditions, get subsidies from governments, etc?” *Coding:* The sum of “yes” responses to the above three questions. *Note:* *m* if DK in any of them.

Voter-Voter Relations “Are you a member of the following organizations? (1) neighborhood association (*Chōnaikai*, *Jichikai*, *Kukai*), (2) women’s association (*Fujinkai*) or youth association (*Seinendan*), (3) PTA, (4) agricultural cooperative union (*Nōkyō*) or other agricultural organizations. *Coding:* The sum of “yes” responses to the above three questions. *m* if DK. *Note:* Other types of organizations are also listed in the original, but I did not use them in coding this variable, because they seem to be irrelevant to voter turnout and/or have only a very weak correlation with voter turnout.

Conservative *Question wording:* “How do you identify your ideological position?” *Coding:* 2 if very conservative, 1 if conservative, 0 if otherwise (very progressive, progressive, or in-between), and *m* if DK.

Progressive *Question wording:* “How do you identify your ideological position?” *Coding:* 2 if very progressive, 1 if progressive, 0 if otherwise (very conservative, conservative, or in-between), and *m* if DK.

Appendix D

A Single Vote Can be Decisive: Examples from Japan

What is the probability that a voter's single ballot can decisively determine who gets elected? This question has some policy, normative, and theoretical importance (Gelman, King and Boscardin 1998). Namely, the examination of this question helps us understand how candidates allocate campaign resources to maximize their winning chances, whether an electoral system gives an equal chance to all voters in influencing electoral outcomes, and whether the rational choice model of voter turnout, whose "most original component" (Blais 2000) is the concept of decisiveness or pivotalness, is valid.

Thus, a number of political scientists, economists, statisticians, and behavioral scientists have developed various methods and formulae to calculate the probability of a voter being decisive, and measured this probability using empirical and simulated data (for examples, Beck 1975; Fischer 1999; Good and Mayer 1975; and Gelman, King and Boscardin 1998.) There are many different estimates using different data, but the existing studies commonly show that "The probability of being decisive (P_D) in an election with more than a handful of voters is always small, usually very small, and sometimes infinitesimally small" (Fischer 1999, p. 267). Grofman (1983) recalled

to us that Adolph Hitler was first elected head of the Nazi Party by only one vote. But this is a very special case. Almost all scholars, I suppose, believe that there is no democratically held legislative or executive election in which just *one* vote can critically change who wins and loses.

But as I introduced in Chapter 4, we can find many elections in which one vote is decisive, in Japanese municipal assembly elections. These elections use the single non-transferable vote (SNTV) system with an at-large electoral district (i.e., a municipality as a whole constituting an electoral district), which tends to produce extremely small vote margins between candidates. In this appendix, I will introduce some concrete stories from newspapers, which show how a single vote (or even a less-than-one vote) can be decisive and controversial.

We should note that all of these examples are quite recent. The 2000 United States Presidential election turned out to be extremely close, and whether or not ballots should be re-counted in Florida became the headline news. But such a re-counting is not a rare event in Japan. Every four years, there are at least some elections in which a winner is determined after all ballots are recounted and/or candidates' draw a lottery.

Vote Margin = 1, Then = 0

The first example is a Kawashima town assembly election held in January 1996 (*Nishi-Nihon Shimbun*, April 10, 1999). The number of seats contested was fourteen. Shōichi Fujioka received 229 votes and became the last (i.e., fourteenth) winner. Kazuo Hide, a runner-up, received 228 votes, just a vote different from Fujioka's. Hide did not concede and officially lodged an objection (*igi mōshitate*) to the electoral outcome. The election administration committee in the Town of Kawashima re-counted all ballots and found that a ballot with a different candidate's name was counted as Fujioka's vote. Thus, the effective number of votes became exactly the same for both

Fujioka and Hide. They drew a lottery to decide a winner in July 1997, and Hide took Fujioka's seat. But this was not the end of this story.

In January 1998, the town assembly decided to expel Hide, the last winner, from the assembly for his inappropriate statement encouraging discrimination. Thus, the runner-up, Fujioka, took Hide's seat. Then, Hide instituted a lawsuit against the enforcement of expulsion. In September 1998, the Tokushima prefectural court decided to suspend the enforcement, and Hide re-took Fujioka's seat. Finally, in April 1999, one of the incumbent assemblymen passed away, and the runner-up, Fujioka, for the third time, celebrated his victory.

Vote Margin = 3, Then = -3

The second example is an Ebina city assembly election held in November 1999 (*Mainichi Shimbun*, March 1, 2000). Twenty-seven candidates competed for twenty-four seats. The vote margin between the last winner and the top loser was three: Ryūichi Gotō received 1,254 votes and won, while Yoshio Kitsukawa received 1,251 votes and lost. Kitsukawa officially lodged an objection. But in December 1999, the Ebina city election administration committee (EAC) rejected Kitsukawa's request to re-count all ballots. Then, Kitsukawa requested the Kanagawa prefectural EAC to re-count. In February 2000, the prefectural EAC counted all 50,447 votes in the City of Ebina, and found that six of Kitsukawa's ballots were mistakenly counted as the other candidates' votes. Thus, Kitsukawa's total effective votes became 1,257, which exceeded Gotō's votes (1,254), and Kitsukawa took the seat.

Vote Margin = 0.871, Then = -0.138

The third example is a Shimizu city assembly election held in April 1999 (*Asahi Shimbun*, August 23, 1999; and *Shizuoka Shimbun*, December 19, 1999). Forty-one candidates competed for thirty-three votes. The last winner, Kōzaburō Haruta, re-

ceived 2,179 votes, while the top loser, Toshiyuki Sugiyama, received 2,178.129. Since there was another candidate named “Sugiyama,” some ballots with only their family name, Sugiyama, written were proportionally allocated to the two Sugiyama candidates. (See Chapter 4 for a more detailed explanation of how unclear ballots are counted.) Thus, the vote margin between these two candidates was less than one: 0.871.

Similar to the other examples, the top loser, Sugiyama, did not concede and requested a re-count of ballots. But the Shimizu city EAC rejected this request. Then, Sugiyama asked for a re-count by the Shizuoka prefectural EAC. After all ballots were re-counted, the Shizuoka prefectural EAC found two additional votes for Haruta and three votes for Sugiyama. Thus, the effective number of votes became 2,181 for Haruta, while 2,181.138 for Sugiyama. Sugiyama, the former runner-up, took the seat only by a 0.138 vote margin.

Vote Margin = 0.0 (Note: Not = 0)

The last example is a Yanadani village assembly election held in April 1999 (*Ehime Shimbun*, April 26, 1999). In this small village with only 1,323 eligible voters, thirteen candidates competed for ten seats. What is worth noting is that the vote margin between the last winner and the top loser in this example is 0.0, not 0. The last winner, Morinao Tachino, received 85.5 votes, and the top loser, Yoshihito Tachino, also received 85.5 votes. Since both of these candidates had the same family name, some unclear ballots were allocated proportionally, as in the third example. But, even after this *an-bun* vote-allocation, the number of effective votes was exactly the same. They drew a lottery and Morinao Tachino took the seat.

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