

## Shaping Policy Diffusion: Event History Analyses of Regional Laws in Japanese Prefectures

**SHUICHIRO ITO**

*Faculty of Social and Information Studies, Gunma University, 4–2 Aramaki,  
Maebashi, Gunma, Japan. Tel/Fax: 027-220-7496.*

*Email: itoshui@si.gunma-u.ac.jp*

### Introduction

The central theme of Japanese subnational governmental study has been center–local relations. Researchers looked into the question of whether Japanese subnational governments have sufficient autonomy to pursue their own preferences. In other words, the policymaking process of subnational governments in Japan has long been examined in relation to the national government. It is true that, under the centralized governmental system, the national government of Japan exerts a substantial influence on subnational policymaking. Students of subnational governments cannot avoid this issue. However, one cannot understand the reality of subnational policymaking only by looking at the center–local relations and the administrative institutions that define the relations. Indeed, one needs to ask what determines subnational policy outcomes, to what degree the national influence affects the determinants, and under what conditions these determinants function autonomously. The present paper directly examines the subnational policymaking process itself, not the center–local relations, and tries to understand its mechanism. The paper proposes a research framework using a statistical method that has been developed in the area of diffusion study. In the framework, national influence is integrated into an analysis of subnational policymaking as one of the factors that affect policy determinants. Using

This paper is based on the paper presented at the 57<sup>th</sup> Annual Meeting of the Midwest Political Science Association, Chicago, Illinois, 15–17 April 1999. I thank Greg M. Shaw (Discussant), Virginia Gray (Chair), and other panel members for useful comments. I am grateful for comments from anonymous reviewers and the editor of this journal. Also, special thanks go to Ikuyo Kaneko, Masaaki Kataoka, Yasunori Sone (Keio University), Robert Pekkanen (Harvard University), Steven R. Reed (Chuo University), John C. Campbell (The University of Michigan), Kengo Soga (Osaka University), Mikitaka Masuyama (Seikei University), Miyoko Ito (Gunma Prefectural Women’s University) for comments and suggestions.

the framework, the paper analyzes the process of four regional policies, which will lead to a better understanding of subnational policymaking.

### **Issues and models of subnational policymaking in Japan**

There have been a handful of researchers who have looked empirically into subnational policymaking in the past. It was in 1960s and 1970s when autonomous policymaking by subnational governments was frequently observed. In such policy areas as environmental protection and welfare, subnational governments pursued their own policies, even when their goals were in conflict with the national goal of economic development. Many researchers tried to explain the puzzle of autonomous subnational policymaking under a highly centralized governmental system. Steiner (1980a) called this observation 'local political opposition'. This concept is defined as situations in which political forces at the local level propose policy alternatives and bring about policy change at the center, thereby increasing the degree of local autonomy. MacDougall (1975) attributed these phenomena to progressive mayors and governors. His case study showed that progressive leaders caused local policy changes, along with other factors, such as urbanization, civic movement, and transition of assemblies from conservative domination to diverse representation. Similarly, Aqua (1979, 1980) hypothesized that local autonomy and partisanship are highly correlated. By validating the hypothesis, he tried to refute the paradigm that the centralized governmental system did not allow local autonomy. Although a statistical analysis using expenditure of 88 medium-sized municipalities as the dependent variable revealed that local policy change had only little relation with the national priority, what determined the local policy priority were socioeconomic factors, not partisanship of local political leaders.<sup>1</sup> Steiner (1980b) attributed Aqua's unexpected result to the sample selection biased toward middle-sized municipalities to the degree that policy diffusion from progressive governments to conservative ones obscured the effect of partisanship. Instead, he selected metropolitan governments, such as Tokyo and Kyoto, as the samples for his case study and showed the symbolic effects of their policies. In all, case studies dealing with subnational policymaking in the 1960s and 1970s showed that local politicization had positive effects on autonomous local policymaking, but systematic hypothesis testing had at most mixed results.

In 1980s Samuels (1983) and Reed (1986) added important contributions to the study of intergovernmental relations. Samuels showed that Japanese localities developed various kinds of horizontal intergovernmental linkages and argued, based on this finding, that local policymaking in Japan was far from top-down even in the vertically structured polity, and, at least, centralization did not exclude local autonomy. He tried to support this claim by the observation of well-developed

<sup>1</sup> Similarly, through literature review and empirical testing, Campbell and Reed (1981) concluded that the partisan identification of governors and mayors was not associated with the innovativeness of subnational governments in the area of aging programs.

horizontal associations and survey data concerning the behavior of local officials. He emphasized the importance of intergovernmental associations, not for making unique policies, but for effectively participating in the national political arena. Survey data showed that local officials thought it important to communicate with not only the higher levels of government but also with other governments at the same level. This finding is quite important as a basis for the present paper. However, survey data are limited to the extent that they do not tell when and under what conditions horizontal communication becomes critical for subnational policymaking. Reed's well-designed research looked into policymaking of three prefectures, but attempted to test hypotheses as to what conditions gave the prefectures more influence relative to the national government. In this sense, his research focus was still on the line of the traditional inquiry.

After the work of Reed, according to Krauss (2000), interest in subnational policymaking subsided among Western scholars. Stimulated by the work of Western scholars, instead, Muramatsu (1988–1997) proposed a new theory named the 'horizontal political competition model' and the 'interdependent relationship model' based on the observation that national and subnational policymaking authorities were extensively overlapping. He argued that subnational governments had their own policy priorities independent of that of the national government. Such priorities were, he maintained, expressed through elections and pursued by participating in the national political arena to gain budgetary resources and legal authorities. These activities obtaining national resource utilized such political resources as lower house members elected from their districts. Based on his models, explicitly or implicitly, many researchers conducted empirical studies. Most studies done by Japanese scholars tested whether Diet members belonging to the Liberal Democratic Party (LDP) had in fact increased the allocation of national subsidy to their districts (Ishi, 1983; Hujimoto *et al.*, 1983; Hori, 1988; Iwagami, 1991).<sup>2</sup> Although the results of these studies statistically confirmed the positive effect of LDP lawmakers, they found that socioeconomic factors, such as demographic and fiscal variables, explained most of the variance of national subsidy allocation. It is true that Muramatsu's models theorized one important aspect of subnational governmental activities in Japan and were empirically supported. However, what he theorized was only an aspect as participants in the national political arena. It did not shed maximum light on the activities of the policymakers in their own arena, that is, the subnational policymaking process.

The present paper, compared to the previous studies, has three distinct characteristics. First, it focuses, not on the national arena, but on the subnational policymaking process, in which subnational governments pursue their own policy in response to their internal conditions using the resources at hand. To show that there exists such a process under a certain condition leads to a new model theorizing

<sup>2</sup> For more comprehensive review, see Ito (2002).

another aspect that the previous models overlooked. Secondly, it deals with policies that spread in 1980s and 1990s. The previous studies have not fully explored the policies during these periods. Thirdly, the dependent variable of systematic hypothesis testing is neither local expenditure nor national subsidy. Instead, the paper chooses the timing of policy adoption as the dependent variable. In so doing, the present paper identifies political and diffusion factors in each region which function as policy determinants under certain conditions.

Political factors *vis-à-vis* socioeconomic factors have been of central interest in policy studies. Moreover, the effects of political factors were not sufficiently confirmed by the previous statistical analysis of Japanese local politics as reviewed above. The new method and framework of this paper will reveal under what conditions the subnational political institutions make a difference in subnational policy outcomes. As for the diffusion factors, although such researchers as Samuels (1983) paid much attention these, the mechanism has not been fully explored. Rather, some researchers viewed diffusion as a sort of noise that obscured the initiatives of progressive governors. The present paper views it as a propellant of subnational autonomous policymaking under a certain condition. To be sure, the interest of this paper is under what conditions such determinants as political institutions and diffusion work or do not work in the subnational policy process.

### **Diffusion studies and the research framework**

The framework of this analysis has its basis on diffusion study of subnational governments. In the course of its development, the diffusion study has shifted its focus from the 'population level' to the 'individual level'. The framework of this paper attempts to integrate the two perspectives.

By population-level studies, we mean empirical research attempting to grasp the dynamics of policy diffusion. Pioneering research showed the existence of regional diffusion by employing factor analysis (Walker, 1969; also Canon and Baum, 1981), predicted the cumulative proportion of adopters through an 'interaction model' of regression analysis (Gray, 1973), and examined whether there was consistency in state innovativeness across policies using rank-order correlation (Gray, 1973; Menzel and Feller, 1977). The research that followed these studies compared mean diffusion periods, or the graphs of cumulative adoptions, in order to show that the rate of diffusion varied across policy areas and to determine whether such conditions as national incentives and particular attributes of innovations changed the rate and completeness of adoptions (Feller and Menzel, 1978; Welch and Thompson, 1980). As for Japan, Reed (1983) compared the speed and completeness of diffusions in Japan and the US. Murakami (2000) compared the patterns of diffusion of six policies and argued that national influence accelerated the diffusion speed. Despite their varying methods and perspectives, these studies shared a common characteristic: the unit of analysis was not a policymaking unit for each policy but, more broadly, a policy area,

the population of policymaking units as a whole, or the combined attributes of a unit covering all or several policy areas.

Population-level studies have been interested in diffusion patterns. The two main sources that shape diffusion patterns have been identified: national intervention and policy attributes. As for national intervention, population-level studies have distinguished between vertical (or point source) diffusion and horizontal diffusion (Menzel and Feller, 1977). Vertical diffusion occurs when subnational governmental units receive some kind of simultaneous stimuli from the national government. In horizontal diffusion, by contrast, the subnational governmental units take cues from other units when national influence is absent. By definition, the influence of the national government is clearly a point of departure between vertical and horizontal diffusions. Thus, it is hypothesized that with national intervention diffusion starts immediately and is faster and more complete, while without it diffusion takes off only after a long period of trial and error by innovative units and proceeds at a relatively slower pace (Eyestone, 1977; Feller and Menzel, 1978; Welch and Thompson, 1980; Reed, 1983). Given these characteristics, it is expected that a graph of the cumulative adoptions of horizontal diffusion shows a typical S-shaped curve while that of vertical diffusion shows a parabolic shape. We call this **population-level hypothesis I**.

The other source affecting diffusion pattern is policy attributes (Gray, 1994; Rogers, 1995). Becker (1970: 271), for example, states that ‘innovations perceived as high on reward and low on risk and uncertainty are adopted most rapidly’. Feller and Menzel (1978: 483–484) also note that attributes of innovations can affect the rate of adoptions. According to individual-level studies, policy attributes are roughly divided into two categories. Nelson (1984: 27) distinguishes between ‘valence issues’ and ‘position issues’ in terms of the nature of issues that policies try to address: the former ‘does not have an adversarial quality’ while the latter engenders ‘alternatives and sometimes highly conflictual responses’ (see also Stokes, 1963: 373). Similarly, Hayes (1981: 30) distinguishes between ‘consensual’ and ‘conflictual’ patterns in terms of process caused by policy attributes. From these insights, it is hypothesized that the diffusion of a position issue policy takes longer than that of a valence issue policy (**population-level hypothesis II**).

In sum, the population-level studies discovered that national intervention and policy attributes shaped diffusion patterns. By understanding how these sources shape diffusion patterns, we will be able to answer the foregoing questions: to what degree and under what conditions do subnational policy determinants function autonomously? However, the population-level studies have not fully explored this mechanism because of the methodological limitation of population-level studies that do not look into individual policymaking processes. These sources are considered to have certain effects on the policymaking process of each individual unit, and as the accumulated result, they shape diffusion patterns at the population level. Now we need to turn to individual-level studies.

**Table 1.** *Policy attributes and timing of intervention*

Intervention	Valence issue	Position issue
No/Late	FOIA	EIAA
Early	EPA	CDA

In recent studies at the individual level, the unit of analysis is either a policy-making unit or a unit-year in the adoption of a single policy.<sup>3</sup> These studies aim to identify the determinants of subnational policy adoptions by employing such methods as regression analysis and Event History Analysis (EHA). By moving from the population level to the individual level, it has become possible to systematically examine the internal mechanism of policy adoption. At this level, a new method, EHA, has proved useful because it allows explanatory variables to change over time as well as across units<sup>4</sup> and thus makes it possible to simultaneously test two classes of hypotheses that were formerly tested separately: the diffusion hypothesis and the internal determinant hypothesis (Berry and Berry, 1990). Variables tested by this method include policy entrepreneur (Mintrom, 1997), court cases (Pavalko, 1989), media agenda (Hays and Glick, 1997), regional cue taking (Knoke, 1982), and political culture (Moony and Lee, 1995). As for Japan, Tsukahara (1992) dealt with the diffusion of welfare policy among the wards of Tokyo and found that a diffusion variable has a significant effect. Similarly, Ito (1999) analyzed the diffusion of FOIAs and identified political and diffusion variables as important determinants.

While it is true that these individual-level analyses have contributed to subnational governmental studies through systematic hypothesis testing of policy determinants, such analysis has concentrated on the internal adoption mechanism of a single policy at the expense of broader perspectives at the population level. The present paper aims to put the findings of individual-level studies into the population-level perspective. For this purpose, the paper chooses four policies as summarized in Table 1: two policies are from each of the two categories of policy attributes: One relates to a valence issue; the other concerns a position issue. Of the two laws from each category, one experienced no, or late, national intervention, while the other had an early national intervention. The laws with no/late national interventions are the Freedom of Information Act<sup>5</sup> (FOIA) and the Environmental Impact

<sup>3</sup> It is possible that an 'individual' literally means a legislator or the chief of an agency (see Becker, 1970; Freeman, 1985). By an 'individual', however, this paper means an organization as a policymaking unit.

<sup>4</sup> In this sense, the organization analysis of sociology sometimes calls this method 'an individual-level model', distinguishing it from 'a population-level model'. Individual-level models 'allow heterogeneity both within the population and over time', while population-level models assume 'spatial and temporal homogeneity' of units that are at risk of adopting an innovation. I owe this distinction between individual and population levels to Strang and Tuma (1993: 615).

<sup>5</sup> A law enacted by prefectural governments (*jorei* in Japanese) is usually translated as 'ordinance' or, in extreme cases, 'bylaw'. In the present paper, I use the word 'act' because I hope to

Assessment Act/Guideline (EIAA). Those that have early interventions are the Environmental Protection Act (EPA) and the Citizens with Disabilities Act (CDA).

The empirical part of this paper proceeds in two steps. First, the paper conducts a population-level study in order to confirm that the two sources do in fact cause changes in diffusion patterns. From these observations a set of hypotheses will be presented as to by what mechanism the two sources shape diffusion patterns. The second step is a series of individual-level analyses that identify the policy determinants of each of the four policies. Then, the comparison of the four sets of determinants reveals how the sources shape policy diffusion. The comparison is conducted according to the scheme of Table 1: by controlling for the attributes of the innovations, the comparison reveals the effect of national intervention on the individual-level determinants and vice versa.

#### **An overview of the four laws at the population-level perspective**

This section outlines the four laws in terms of the attributes, the modes of national intervention, and the diffusion patterns from the population-level point of view. It also describes selected examples of policymaking process at the individual-level through which we will consider the mechanism of shaping policy diffusion in the next section.

**FOIA** The Freedom of Information Act is a valence issue policy with no national intervention until 1999. The law provides that governmental officials disclose governmental information upon citizen's requests. In the late 1970s, responding to a series of scandals in the national political arena, the movement to demand information disclosure occurred. Many scholarly journals and newspapers carried reports on information disclosure legislation in the United States and European countries. Opposition parties wrote bills for information disclosure, and citizens groups, including consumer advocates, environmentalists, and attorneys, were organized to lobby on behalf of the bills, but the national government led by the LDP was reluctant to enact the law.<sup>6</sup> Instead, prefectures and municipalities took the initiative. By early 1982, most prefectural governments and Designated Cities (DCs)<sup>7</sup> began investigating and preparing for the enactment of regional FOIA.

facilitate readers' understanding by using the names of the US laws on which prefectural governments in Japan have modeled their laws.

<sup>6</sup> For more details of FOIA adoption at the national arena, see Ito (2001b).

<sup>7</sup> The governmental system in Japan has three layers: national, prefectural, and municipal. Although the latter two are categorized as local governments, prefectural governments, the middle layer, are comparable to the state governments in the United States in terms of size and capacity (but not in terms of degree of autonomy). Although this investigation looked at these prefectures, influence from the large cities with special legal status, or the 'Designated Cities (DCs)' have to be considered, especially in terms of diffusion variables. The DCs are large cities with populations and areas above a certain level. As of the end of 1998, 12 cities, including Osaka, Yokohama, and Nagoya, were designated as DCs and delegated nearly as much policymaking authority as prefectural governments. Because of their broad authority and



Progressive governors and mayors in particular led the movement. For example, governor Nagasu of Kanagawa Prefecture, who was supported by progressive parties, such as Japan Socialist Party (JSP) and Japan Communist Party (JCP), viewed information disclosure as an effective measure to enhance citizen participation to prefectural policy process. In 1979 he set up a cross-sectional task force that studied information disclosure legislation in Western countries and discussed issues that were expected to arise when the prefecture decided to disclose information. Such issues included privacy of individuals, information as to so-called 'Kikaninjinjimu',<sup>8</sup> business secrets, and so forth. After a year of investigation, the task force of Kanagawa submitted a report that could have enhanced administrative transparency greatly if it had been implemented. It opened up a heated controversy: citizens groups supported the report and demanded greater transparency by guaranteeing the legal right to know while business organizations, such as Keizai Douyukai, opposed the report for fear that business secrets might be disclosed through the prefecture. National bureaucrats, including the Ministry of Home Affairs, opposed Kanagawa's plan. Officials of the legal section in the prefecture, usually working under the guidance of the MOHA, opposed the plan as well. Moreover, most prefectural officials were afraid of information disclosure because it could undermine their monopolistic and privileged status in the policymaking process.

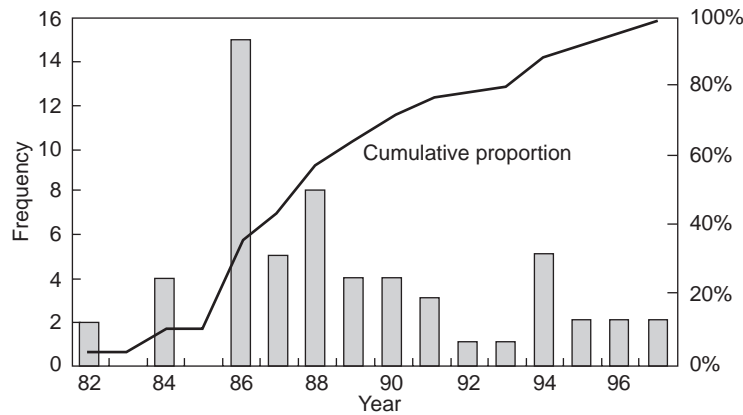
Governor Nagasu and his task force overcame these oppositions by two strategies. One strategy is to emphasize public support throughout the process of policy formulation. He appointed scholars and activists working closely with citizens groups as members of the provisional council that was to draft a regional FOIA bill. The other strategy was to form coalition with other prefectures. Kanagawa paid close attention to other prefectures, including Tokyo, Saitama, Shiga and others that had made head starts. They exchanged information with each other frequently. Their communication channels included symposiums, *ad hoc* meetings, study groups, questionnaires, and telephone polls. The coalition of prefectures negotiated with the MOHA and, with the help of public support that the coalition had built up through such activities as symposiums and frequent press release, extracted concessions. According to one of Governor Nagasu's staff members, what an innovative prefecture fears is that it becomes the one and only adopter of a new policy and as a result it must face the opposition of hostile national ministries by itself without any support from its peer localities. The anticipation that other localities are sure to follow reduces such risk and makes the innovators adopt a new policy even when it contradicts the national priority (Ito, 2002).

In the Kanagawa Prefectural Assembly, the LDP opposed the bill while progressive parties including the JSP and the JCP supported it. Although the heated

capacities, the DCs often lead the prefectures in the adoption of new policies and their policy adoption affects prefectures' policy adoption.

<sup>8</sup> Kikaninjinjimu were policies that belonged to the national jurisdiction but were implemented by governors.





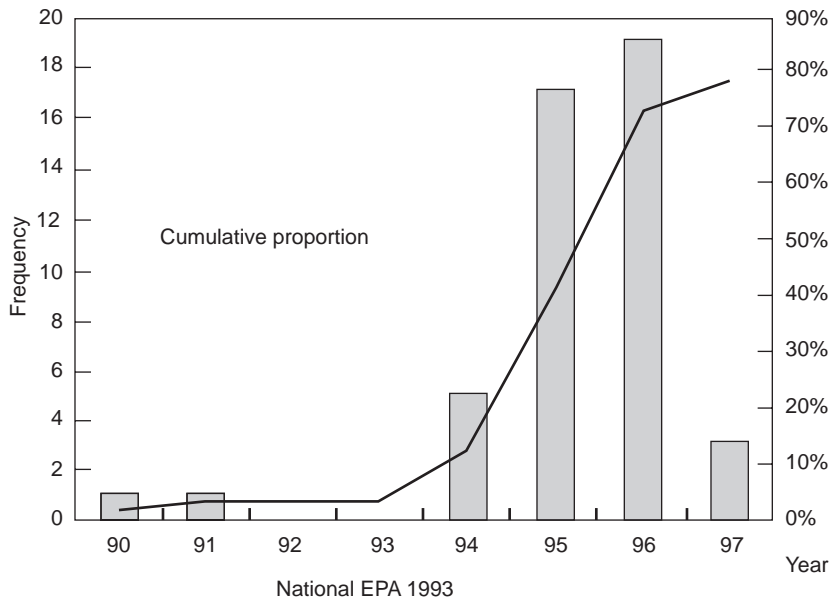
**Figure 1.** FOIA Diffusion

debate extended the session, the LDP turned to give its support to the bill at the final moment. Because the LDP did not have the majority of the assembly seats, it was apparent that they could not have hindered the bill.

In 1982 the first two prefectures, Kanagawa and Saitama, enacted FOIAs, followed in 1984 by three additional prefectures and one DC. The peak of enactment occurred between 1986 and 1988. After the peak the laws spread gradually with no national involvement (see Figure 1). In prefectures whose governors were reluctant to adopt FOIAs, progressive parties in the assemblies and citizens groups repeatedly demanded adoption. Such lobbying efforts and the gradual increase of prefectures having adopted FOIAs forced these reluctant governors to consider adoption. In Shiga Prefecture, by contrast, the LDP that occupied the majority of the Shiga Assembly hindered progressive governor Takemura from submitting a FOIA bill. The last prefecture to enact the law did so in 1998, before the Japanese Diet passed the national FOIA in 1999. In all, it took 17 years, from the beginning of the diffusion, for all prefectural governments and DCs to enact FOIAs. This is almost an ideal type of horizontal diffusion, since the subnational governments enacted the laws through interaction with each other, not because of national influence.

**EPA** The Environmental Policy Act is categorized as a valence issue policy with an early national intervention. It is a basic charter for environment protection similar to Title I of NEPA in the United States. At the national level, the Environmental Policy Act of Japan was enacted in 1993 and reflected the ideas of the Earth Summit held in Rio de Janeiro in 1992. It established national goals for sustainable development and for protecting the global environment.

Before the national enactment, Kumamoto Prefecture and Kawasaki DC enacted regional EPAs (see Figure 2). Both regions had experienced severe industrial pollution. In Kumamoto, for example, the initiative of the environment-conscious



**Figure 2.** EPA Diffusion

governor Hosokawa was critical. He ordered the Environment Department to investigate EPA in the fall of 1989 and at the 1990 New Year press conference promised its enactment within a year. According to his speech, a painful experience of Minamata determined him to lead environmental policy.<sup>9</sup> Most officials were surprised at his decision but managed to prepare for the bill because slack resources became available after the long effort of cleaning up the polluted sea and soil of Minamata. Because the bill was only a basic charter that did not inflict any cost or regulation upon private parties, the bill passed the Kumamoto Prefectural Assembly without any serious opposition.

During the course of policy formulation, only officials of Kawasaki DC visited Kumamoto to exchange information. It was after the enactment of the national EPA that other prefectures paid attention to regional EPAs and diffusion took off. But the Kumamoto EPA was little referred to because it was very different from the national EPA. In 1994 five governments adopted the laws, and by 1996 more than 70 per cent of prefectures and DCs had adopted the laws. As Figure 2 shows, diffusion of EPAs was very fast. The national EPA did not require that subnational governments enact similar laws, only that they establish environmental protection policies comparable to the national policies. In view of the national legislation, regional EPAs might have been considered redundant, yet the national action promoted adoptions at the

<sup>9</sup> *Kumamoto Nichinichi Newspaper*, 31 December 1989 and 5 January 1990.

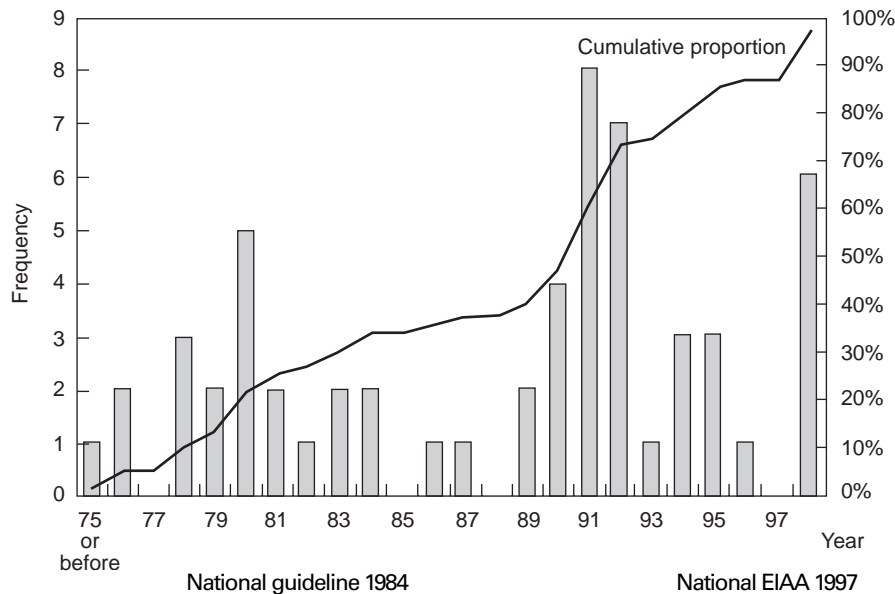
subnational level. Except for the first few years, the diffusion showed a vertical pattern.

According to a survey conducted by Ito and Kikuhara (2001), 48 of 59 prefectures/DCs reported that they had enacted their own EPAs because of the national EPA enactment. Very few respondents reported such answers as lobbying by environmentalists, their governors' pledge, and demand from the assemblies. In the same survey, 30 of them answered that they enacted EPAs because other prefectures/DCs had done so. In addition, 50 prefectures/DCs modeled their bills on the national EPA and 46 did so on laws of other prefectures. These data imply that what made prefectures adopt EPAs were not the political factors within their regions, but competition among prefectures and national intervention.

In most prefectures, environmental groups did not play significant roles in the regional EPA adoption process. In Kanagawa, however, some environmental groups opposed the bill for fear that it might shift focus to global issues from pollution controls for which they had long fought. In Shiga, being famous as an environment conscious prefecture, the Environment Department formulated a unique bill that attempted to regulate public works. With the help of environmental groups, the bill passed the assembly in 1996 despite the fierce opposition from the Public Works Department. However, the example of Shiga is quite an exception. Most prefectures adopted EPA with little input from the outside.

**EIAA/EIAG** The Environmental Impact Assessment Act/Guideline is a position issue policy with late national intervention. Since its inception in 1971, the Environment Agency of Japan had tried to enact the national EIAA. In the mid 1970s the agency began preparing a bill modeled on the NEPA of the United States, but its actions met strong opposition from business, its related ministries, and probusiness factions of the LDP. In 1981, after continuing efforts, the agency finally submitted the bill to the Diet, but it was aborted in 1983 without serious debate. After this defeat, the agency gave up attempts to enact the law and instead adopted an administrative guideline that was approved by the cabinet in 1984. This 'Environmental Impact Assessment Guideline' required the submission of an environmental impact assessment statement when public agencies and private entities planned major development projects over a certain size. In legal terms public and private entities were only expected to comply voluntarily, but the guideline had a quasi-legal effect because it was approved by the cabinet and implemented in accordance with its related regulations.

Before the agency adopted this guideline, prefectural and DC governments had enacted four laws and 16 guidelines. They formed the first wave of adopters (Figure 3). Most included urbanized areas, where development projects met opposition from citizens, and industrialized areas, where residents had suffered from severe pollution. Among 12 early adopters as of the end of 1980, eight were led by progressive governors. These governors determined to introduce environmental impact assess-



**Figure 3.** EAA/EAG Diffusion

ment systems despite the opposition of the national government. Five progressive governors and mayors in the metropolitan area held a conference (Kakushin Shucho Kondankai) and agreed that they would cooperate and take the initiative in regional EIAA enactment. In the national government, by contrast, public-works-related ministries, including the Ministry of Construction, the Ministry of Agriculture and Fishery, and the MITI, were strongly opposed to the adoption of regional EIAs because the new laws could have delayed their public works' plans. Prefectures, such as Toyama and Ishikawa, led by conservative governors pledged themselves that their prefectures would not adopt any new policy that the national government had not yet adopted. Supporting their determination was the existence of more than ten prefectures that had a similar pledge (Ito, 2002).

According to Figure 3, during the four-year period after the adoption of the national guideline (1985–88), only two governments had adopted the guidelines. This suggests that the national guidelines did not cause vertical diffusion as in the case of the national EPA. The second wave of diffusion began in 1989 and continued until 1997, peaking in 1991. It coincided with the Japanese economic bubble in the early 1990s, when development projects were ubiquitous and even the governments in rural regions had to deal with conflicts arising from the construction of golf courses and ski resorts. During this period, not only progressive governors, but also conservative governors, adopted Environmental Impact Assessment Guidelines. This suggests that subnational governments responded to their internal conditions, not to the national intervention.

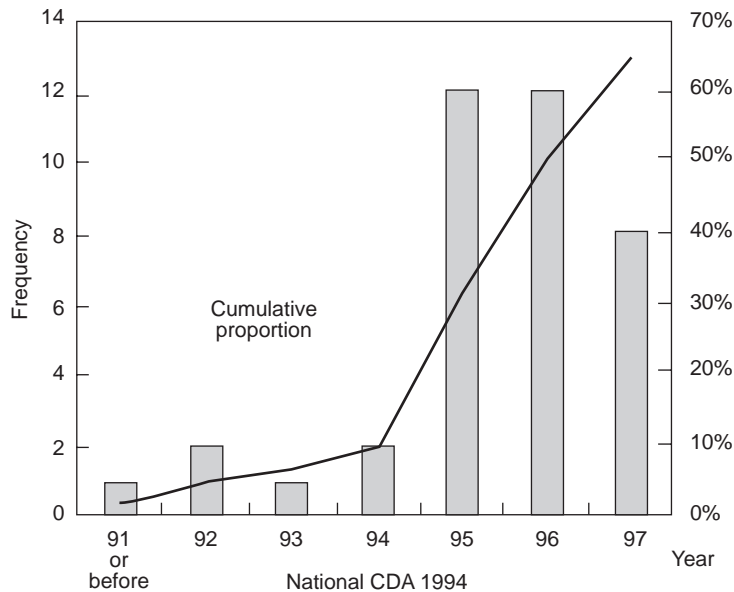
When the Environment Agency finally enacted the national EIAA in 1997, six governments rushed to follow suit, and others are planning to promote the guidelines into laws. While it is possible that the national EIAA will trigger vertical diffusion of the law in the near future, this is excluded from our sample.

**CDA** The Citizens with Disabilities Act is a position issue policy with early national intervention. The CDA is modeled on Title II and III of the Americans with Disabilities Act. It requires that the facilities of governmental entities be accessible to all people, including those with disabilities and senior citizens. For this purpose, governments have to remove structural and architectural barriers. The law also applies the same requirement to certain private entities that operate public buildings, such as hotels, theaters, halls, large grocery stores and shopping centers, and mass transit stations.

In late 1960s and early 1970s, a handful of subnational governments established their own guidelines to attain the goal of better public accessibility and requested public and private entities to remove barriers from their public buildings. During 1980s, the guidelines had spread among subnational governments as the idea of ‘normalization’ was gradually accepted into the Japanese society through such international trends as the World Program of Action Concerning Disabled Persons in 1981 and the United Nations Decade of Disabled Persons from 1983 to 1992. However, the objectives of the guidelines were hardly achieved because they lacked legal enforcement.

One measure which made the guidelines more effective were the financial incentives to facilitate removal of barriers to public access. The associations of disabled people had long lobbied for installing elevators at railroad stations. Yokohama DC in 1989 began subsidizing elevator installation for railroad companies, which was followed by large prefectures and DCs in urbanized areas. However, only affluent prefectures could afford to take this measure because it cost large amounts of money.

The alternative was enactment of CDAs. In the early 1990s Hyogo and Osaka Prefectures began efforts to enact laws to improve public accessibility more effectively than they had done under the guidelines. The governors of Hyogo and Kyoto agreed to the proposal of the governor of Osaka that they adopt CDAs simultaneously so that their adoptions become more effective. This proposal was stimulated by the enactment of the American Disability Act (ADA) of 1990. When the governors were searching for a policy suitable for the last year of the United Nations Decade of Disabled Persons, what appeared as a solution was the idea of a CDA modeled on the ADA of 1990. The Welfare Department of Hyogo Prefecture, the first adopter, studied the guidelines of other prefectures and held intensive meetings with construction companies, shop owners, mass transportation companies, and hospitals, all of which were to be regulated by the new law. The associations of disabled people had long been demanding measures to facilitate public access. In the CDA adoption



**Figure 4.** CDA Diffusion

process, they lobbied the department repeatedly, such that the bill would include more effective measures (Ito, 2000). In the Hyogo Prefectural Assembly almost all parties supported the bill, although the progressives demanded more effective and coercive measures while the conservatives preferred incentives to coercive measures.

After five prefectures and DCs adopted the CDA, the Ministry of Construction enacted the national CDA in 1994. This legislation prompted other prefectures to adopt regional CDAs. From the next year, the number of adoptions suddenly increased (Figure 4). Kanagawa Prefecture, for example, had once considered CDA adoption in 1990 but rejected it in favor of amendments of the existing regional construction codes. The reason was that there was no other prefecture adopting a regional CDA at that time. This excuse did not apply when Kanagawa decided to enact its own CDA in 1995.

The policy of trying to attain 'barrier free society' had an appeal to both disabled and senior citizens. Welfare-related departments in many prefectures received orders from top management to prepare bills in time for the next gubernatorial elections. In Toyama and Ishikawa, for instance, the bills were prepared by the election of the incumbent governors. The CDA adoption was treated as a kind of 'monument' that symbolized the contribution of retiring governors in Kanagawa and Tokyo where the bills passed the assemblies at the last sessions in their terms.

In summary, the national enactment legitimized CDAs and drove almost all political actors to advocate them despite opposition from shop owners and construction companies. It became difficult for even these social interests to oppose the bills

publicly, and partisan difference was obscured. As Figure 4 shows, the diffusion period was much shorter than that of EIAAs.

### **Integrating the two perspectives**

The above observations from the population-level perspective have confirmed the relation between national intervention and diffusion patterns. FOIA and EIAA that had late interventions showed horizontal diffusion patterns at slower paces while EPA and CDA showed vertical patterns at faster paces. At the same time, EIAA and CDA that addressed position issues took longer for diffusion than FOIA and EPA respectively. These observations support the population-level hypotheses I and II.

What mechanism generated these patterns of diffusions? For this purpose let us begin by considering how each outcome of the four policies was determined. Here, a set of 'individual-level hypotheses' is extracted from the examples in the foregoing section. As for FOIA, we have observed that political institutions functioned in the policy process of each region. Interests, including consumer advocates and environmentalists, lobbied for the bill. It is hypothesized that the more intense the activities of consumer advocates and/or environmentalists, the higher the probability of FOIA adoption. Governors who had particular kinds of preference set up taskforces and took initiative as policy entrepreneurs. One type of such governors was a progressive governor. It is hypothesized that progressive governors are more likely to adopt FOIA. The observation tells us that this hypothesis also appears to apply to EIAA. The other type were former MOHA bureaucrats who promoted themselves as professional administrators. They are also considered to adopt EIAA without reluctance because they have little connection with such ministries as the Ministry of Construction and the Ministry of Agriculture and Fishery whose jurisdictions are public works that are in conflict with environmental regulation.

In some prefectures where the LDP occupied the majority of the assembly, they had veto power that could block FOIA bills. It is hypothesized that when the LDP occupies the majority, it is less likely for the prefecture to adopt a FOIA. As we have seen, CDA bills were prepared such that they were enacted just before the next gubernatorial elections. It is hypothesized that when a gubernatorial election is immediate, the higher the probability of CDA adoption.

As we have seen in FOIA and EIAA cases, the subnational governments make decision referring to other governments located within the same area, such as Kanto and Tohoku, and to governments of similar size.<sup>10</sup> They take cues from this group. Innovators like Kanagawa and Saitama exchanged information on FOIA bills with each other. The followers paid much attention to the innovators. A similar process was observed in the EIAA case. Prefectures that determined not to adopt EIAA before the national enactment also referred to other similar prefectures. It is hypothesized

<sup>10</sup> For more details of reference groups, see Ito (1999 and 2001b).



that the greater the number of other reference group members that have adopted the policy, the higher the probability of policy adoption.

In all, most individual-level hypotheses as to political institutions and lateral cue taking are expected to apply to FOIA and EIAA, except the election hypothesis. In other words, political factors and lateral cue taking work in a policy process when national intervention is absent. We call such a policy process 'an intrinsic pattern of policymaking'.

Such an intrinsic pattern is distorted when the national government intervenes in the policy area in question. Gray (1973:1180) points out 'program adoptions tied to federal grant-in-aid will diverge from the patterns of normality exhibited by programs adopted independently by states'. The intervention of the national government distorts this intrinsic pattern of policymaking by subnational governments. Menzel and Feller (1977: 534) identified legislation, persuasion, and technical certification/evaluation services by the national government that facilitated subnational policy adoptions and blurred 'lateral (state-to-state) cue taking'. When the national government intervenes in the focal policy area, it has a substantive effect, which drives subnational governments to adopt the policy whether or not they perceive a pressing need for it. National intervention outweighs regional cue taking as the source of legitimization, and, as a result, the strongly legitimized policy bypasses the usual policymaking process.<sup>11</sup> Competition among the subnational governments occurs for fear that they might be left behind. We call it 'bandwagon competition'. It is hypothesized that the more the number of other units that have adopted the policy, the higher the probability of policy adoption. This hypothesis is expected to hold in EPA and CDA cases.

In summary, which individual-level hypotheses are expected to hold depends on whether national intervention occurs or not. In other words, it is hypothesized that national intervention specific to a particular policy bypasses the intrinsic political process and regional cue taking and causes vertical diffusion, in which subnational governments take cues from the national action. In contrast, when national intervention is absent, what is to be observed is intrinsic policy process, in which subnational governments respond to their regional socioeconomic conditions through the political process, taking cues from other governmental units. We call it the 'integrated hypothesis' in the sense that it combines the hypotheses at the two levels. In order to test the integrated hypothesis we need to perform a series of individual-level analyses and compare the results, controlling for the effects of national intervention and policy attributes.

The analysis using the discrete model of EHA<sup>12</sup> will be performed on each policy

<sup>11</sup> This conforms to a sociological perspective as well. According to Tolbert and Zucker (1983), the diffusion of civil service reform among municipal governments from 1880 to 1935 was quicker and more complete in states that adopted the requirement for all cities than in states that had no such requirement. In the latter, the diffusion curve was a typical S-shaped one.

<sup>12</sup> For the EHA techniques, see Allison (1984), Singer and Willett (1993), Yamaguchi (1991). See also Berry and Berry (1990).

**Table 2.** *Definition of independent variables*

<i>Political variables</i>	
CONSUMER ADVOCATES	Number of consumer advocate groups per million residents.
ENVIRONMENT NGO	Number of environment protection groups per million residents.
CONSERVATIVE ASSEMBLY	Equals 1 if more than a half of legislators belong to the LDP, 0 otherwise.
PROGRESSIVE GOVERNOR	Equals 1 if a governor is supported by progressive parties or progressive coalitions at his/her first election, 0 otherwise.
MOHA GOVERNOR	Equals 1 if a governor is a former MOHA bureaucrat, 0 otherwise.
PREELECTION YEAR	Equals 1 in a year before a gubernatorial election, 0 otherwise.
<i>Diffusion Variables</i>	
REFERENCE GROUP ADOPTION	Cumulative number of prefectures and DCs in the reference group that had already adopted the policy by the preceding year. <sup>1</sup>
NATIONAL TOTAL ADOPTION	Cumulative number of adopters in the entire nation by the preceding year. <sup>2</sup>
<i>Controls for socioeconomic conditions</i>	
POPULATION	Population of a prefecture in millions of residents
BUDGETARY SLACK	Per capita expenditure in 0.1 million yen (in real).
NATIONAL SUBSIDY	Percentage of national subsidy occupying the total revenue of a prefecture.
POPULATION CHANGE	Percentage of population change during the preceding year.
MANUFACTURING PRODUCT	Per capita real value (in million yen) of manufacturing product in a prefecture. <sup>3</sup>

*Notes:* <sup>1</sup> This cumulative number includes not only the number of prefectures but also the number of DCs that had adopted the policy.

<sup>2</sup> The dependent variable is the instantaneous probability for a focal unit to adopt the policy in question. The cumulative number of adopters does not have a direct relation with the dependent variable, as is the case of survival table analysis. Therefore this variable does not cause problems for estimation.

<sup>3</sup> Note that the data of independent variables except those concerning governors are lagged by one year. For example, as for Kanagawa in 1982, the data of POPULATION is that of 1981. The reason is that preparation for policy adoption takes at least a year and therefore it is reasonable to think that the decision to enact the law is made when the preparation begins. The data of governors are those of the year in question because the governors basically make decision only when the policy is to be adopted during their terms. Although the dependent variable begins from the year of the first adoption, some independent variables use data beginning from one year before the first adoption, and URBANIZATION SPEED uses data beginning from two years before the first adoption.

in order to test the above individual-level hypotheses. Each analysis deals with 47 prefectures. It deals with observations between the year of the first adoption and the end of 1997.<sup>13</sup> The conceptual dependent variable is the hazard rate, or the probability that each unit in each year adopts the policy. The observed dependent variable is dichotomous: 1 for adoption and 0 otherwise. After adoption, the prefecture is eliminated from the observations. Dependent variables are summarized in Table 2.

### Results at the individual-level analyses

The results of discrete event history analyses using LOGIT are presented in Table 3. Although a series of analyses tested all variables listed above, the final model reported in the Table 3 eliminated insignificant variables (whose p-values exceed 10%)<sup>14</sup> except diffusion variables and year dummies.<sup>15</sup>

Let us begin by examining the analysis of FOIA. The significant variables among political variables are CONSUMER ADVOCATES and CONSERVATIVE ASSEMBLY. The former supported the hypothesis that the more intense the activity of consumer advocates, the higher the probability of FOIA adoption. The coefficient of CONSERVATIVE ASSEMBLY is negative, which confirms the hypothesis that a conservative-dominated assembly tends to be an obstacle for FOIA adoption. Both REFERENCE GROUP ADOPTION and NATIONAL TOTAL ADOPTION are positive and significant. This result suggests that both regional cue taking and bandwagon competition occurred in FOIA adoption at the same time. The coefficient of the former is bigger than the latter. Let us compute the impact of the two diffusion variables on FOIA adoption although the probability estimation is not the central theme of the paper. When independent variables are set at the mean,<sup>16</sup> the predicted probability of adoption is 0.456. One unit increase of reference group adoption raises the probability to 0.488. By contrast, when total national adoption increases by one unit, the probability increases to 0.478. This means that an adoption by a reference group member has larger impact on the focal unit's adoption probability than an adoption by a non-member. Among controls, POPULATION and BUDGETARY SLACK are significant at least at the 5% level. The result suggests that a larger unit with abundant budgetary slack is more likely to adopt FOIA.

As for EPA, the coefficient estimate for NATIONAL DIFFUSION is positive and

<sup>13</sup> Only for EIAA, the period is not from the first adoption, but from 1976 when the second adoption occurred.

<sup>14</sup> Because correlations among variables are sufficiently low and each variable does not become significant when it is tested separately, it is concluded that multicollinearity does not cause inefficiency for estimation.

<sup>15</sup> An EHA in general includes a set of dummy variables representing each year when adoptions occur because duration dependence is of interest for researchers using an EHA. Although many subnational governmental studies do not include these dummy variables, the present paper includes them following the convention of EHA. As a result, we do not observe any increasing or decreasing duration dependence, although the years when many adoptions occur become significant.

<sup>16</sup> Dummy variables are set at the value nearest to the mean. Year dummy is set at 1986.

**Table 3.** *The results of event history analysis (LOGIT)*

Policy	FOIA	EPA	EIAA	CDA
<i>Political variables</i>				
CONSUMER ADVOCATES	0.04* (1.96)			
CONSERVATIVE ASSEMBLY	-0.99* (-1.98)	0.91 (1.74)		
PROGRESSIVE GOVERNOR			1.65** (3.27)	
MOHA GOVERNOR			1.07** (2.77)	
PRE-ELECTION YEAR				1.03* (2.01)
<i>Diffusion variables</i>				
REFERENCE GROUP ADOPTION	0.13* (2.21)	-0.02 (-0.31)	0.20** (3.58)	0.03 (0.38)
NATIONAL TOTAL ADOPTION	0.09** (3.03)	0.15** (4.46)	0.05 (1.19)	0.09** (2.63)
<i>Controls</i>				
POPULATION	0.53** (3.66)			
BUDGETARY SLACK	0.67* (2.06)			
NATIONAL SUBSIDY		-0.09** (-3.94)		-0.06** (-3.05)
URBANIZATION SPEED	1.02 (1.86)			
MANUFACTURING PRODUCT			0.40 (1.89)	
<i>Year dummies</i>				
YEAR96	-0.88 (-0.57)	3.63** (4.68)	1.56 (0.87)	1.39* (2.29)
YEAR95	-0.71 (-0.49)	4.63** (4.44)	1.03 (0.59)	2.07** (2.75)
YEAR94	0.03 (0.29)	2.76* (2.32)	1.88 (1.27)	-0.48 (-0.46)
YEAR93	-1.42 (-0.96)			-0.76 (-0.61)
YEAR92	-1.33 (-0.91)		3.60** (3.33)	
YEAR91	-1.32 (-0.92)		3.82** (4.24)	
YEAR90	0.30 (0.27)		2.85** (3.01)	
YEAR89	0.31 (0.28)		1.82 (1.64)	
YEAR88	1.40 (1.46)			
YEAR87	1.60 (1.65)			
YEAR86	3.98** (4.10)		0.85 (0.64)	
YEAR84	1.77 (1.61)		1.81 (1.60)	
YEAR83			1.88 (1.62)	
YEAR82			0.98 (0.71)	
YEAR81			1.67 (1.37)	

**Table 3.** (cont.)

Policy	FOIA	EPA	EIAA	CDA
YEAR80			2.97* (2.38)	
YEAR79			2.48 (1.73)	
YEAR78			2.63 (1.71)	
CONSTANT	-9.12** (-4.71)	-2.66* (-2.26)	-7.92** (-4.96)	-1.07 (-1.05)
Number of observations	381	316	606	227
-2(Log likelihood Ratio) test	83.32**	111.74**	90.03**	53.66**
Log likelihood	-98.69	-62.21	-107.60	-69.04

Note: \*  $p < 0.05$ . \*\*  $p < 0.01$ . Numbers in parentheses represent  $t$  statistics.

significant. This result supports the hypothesis that bandwagon competition holds in EPA diffusion. Although it was not expected, the percentage of national subsidy is negative and significant. This suggests that prefecture's fiscal dependence on national subsidy slows down the adoption of FOIA.

In the Analysis of EIAA, the two variables concerning governors have positive and significant coefficient estimates. The result confirms that it is more likely for a prefecture to adopt EIAA when the governor is progressive and/or a former MOHA bureaucrat. As for diffusion variables, only REFERENCE GROUP ADOPTION is significant as we expected.

In the Analysis of CDA, the PRE-ELECTION YEAR is significant. It is confirmed that it is more likely for CDA to be enacted just before a gubernatorial election. The significant NATIONAL DIFFUSION suggests that bandwagon competition occurs. In addition, the percentage of national subsidy has a negative coefficient as in the EPA analysis. The result suggests that a government with its own resources is more likely to adopt CDA.

### Testing the integrated hypothesis

The main purpose of this paper is to examine whether the integrated hypothesis is supported through comparison between the EHA results of the four policies. Let us begin by comparing FOIA and EPA. Both policies address valence issues that do not cause a conflictual policy process. At the same time, the timings of national intervention are opposite and, in turn, they showed contrasting diffusion patterns: the former showed a typical horizontal diffusion pattern without national intervention, the latter a typical vertical diffusion caused by the early intervention. Therefore we can expect to extract the effect of national intervention from the comparison, controlling for the effect of policy attributes.

In the analysis of FOIA, political variables concerning interests and the assembly are significant. On the contrary, no significant political factor is identified in the EPA analysis. Among socioeconomic controls, variables relating size and budgetary slack are significant in the FOIA analysis, while only a variable concerning national subsidy

works in the EPA analysis. As for diffusion variables, while the total number of adopting prefectures is significant for both policies, reference group adoption matters only for FOIA adoption. In all, this result conforms to the integrated hypothesis: political factors and adoption by reference group members determine policy outcomes when national intervention is absent while bandwagon competition obscures the effects of these factors when intervention occurs. The significant national total adoption in the FOIA analysis is not what we expected. We suspect that, even when national intervention is absent, it is possible for the policy in question to be legitimized and as a result bandwagon competition occurs. The sources of legitimization may be media coverage, public discourse, and the like. But we need further investigation.

Similar differences are found between EIAA and CDA. Both policies address position issues. As for the timing of national intervention, the national government was not able to adopt the national EIAA almost until the end of diffusion among prefectures, while it enacted the national CDA at the early stage of diffusion. The former showed a horizontal diffusion pattern while the latter a vertical one.

The significant diffusion variables are REFERENCE GROUP ADOPTION in the EIAA analysis and NATIONAL TOTAL ADOPTION in the CDA analysis. There is a clear contrast as the integrated hypothesis predicts. As for political variables, governors' attributes matter in EIAA while the timing of gubernatorial election matters in CDA. At a first glance, this result is not what the integrated hypothesis predicts, in the sense that election matters for CDA adoption despite national intervention. Here we need to take policy attributes into account. The effect of some internal determinants still remained under the national influence because CDA is a position issue policy. Let us make this point clearer by comparing policies of a position issue and a valence issue.

First, let us compare FOIA (position issue) with EIAA (valence issue): both policies had late national interventions. They share a similar pattern with significant REFERENCE GROUP ADOPTION. The difference is that the effects of gubernatorial variables are very strong in EIAA. We consider that this result derives from the position issue attribute: political leadership was essential to overcome the deadlock caused by the clash of social interests in the position issue policy process.

Then, let us make a comparison between EPA (position issue) and CDA (valence issue): the early national intervention led the subnational adoption of both policies. Both policies have the same significant diffusion variable: NATIONAL TOTAL ADOPTION, not REFERENCE GROUP ADOPTION. The difference is that the CDA analysis has a significant political variable: gubernatorial election. In the CDA policy process, the conflict between owners of public facilities and the associations of disabled people occurred. But it was overcome with the help of the public support. It is such public support that governors managed to capitalize on in their elections. From these comparisons, it is concluded that despite national intervention the intrinsic patterns of policymaking are not completely obscured, and political

institutions in subnational arenas do function in the position issue policy process. As a whole, we can conclude that the integrated hypothesis was supported.

### **Conclusion**

In this paper, the systematic hypothesis testing at the individual level confirmed that political variables determine subnational policy outcomes under certain conditions, which previous studies did not systematically confirm. This result has two meanings. First, it offers counterevidence against the claim that socioeconomic factors determine most of the policy outcomes. Second, it showed that subnational political institutions have the potential to function independently of national policy priorities. The analysis also identified the positive effects of diffusion factors on subnational policy adoptions, which have not been sufficiently explored by the previous studies.

More important, the analysis of this paper confirmed that political variables and the reference group cue taking mechanism worked especially when national intervention was absent. This finding has an implication for the models of center–local relations. According to the model that emphasizes administrative control from the center, subnational governments cannot do anything even when they perceive social problems to which the national government is not ready to respond. In this model, policies are exclusively formulated at the center. According to Muramatsu’s models, subnational governments would apply pressures to the national government and try to extract necessary resources to solve these problems in such situations. In his models, resources are concentrated in the center, though localities have their own preferences. By contrast, the finding of this paper suggests that there should be another mode of subnational activities: they formulate their own policies to solve these issues using their own resources. In such a process, whether they successfully adopt the new policies depends on the political and socioeconomic conditions in the regions. Political leadership, party balance in assemblies, activities of interest groups, as well as the need for the policy all determine the policy outcomes of the regions. Moreover, the activities of other prefectures adopting the policies facilitate the focal prefecture’s effort. Although national intervention could blur such intrinsic process, we found that political factors still make a difference in such a process, as policies address position issues and cause conflicts among social interests. This finding suggests that there remains the potential for a intrinsic subnational policy process that cannot be completely masked despite national intervention.

One might argue that local autonomy depends on national action, after all. It is partly true and in this sense the previous models still apply. However, it is only a part of the story. As we have observed in FOIA and EIAA cases, policy diffusion among subnational governments preceded national enactment. Even in EPA and CDA cases, we observed that innovative prefectures adopted policies as harbingers of the national government. These observations imply that increasing subnational policy adoptions facilitate national adoption. Even if such subnational action might not have a direct



impact on the national government, it has at least an indirect impact: increasing subnational adoptions enhances public attention and legitimizes the policy in question, thereby nurturing the political conditions under which the national government is ready to adopt a similar policy (Ito, 2001a). In addition, this claim conforms to the findings by the recent study that the effects of policy innovation flow in multiple directions between localities and the national government (Maclachlan, 2000).

The findings of this paper suggest that combining two levels of analyses is promising in order to understand the dynamism of policymaking at the subnational arenas. A single use of an individual-level analysis of one policy only scrutinizes the effect of internal determinants and at most diffusion variables. Combining multiple analyses in the population-level perspective, as we did in this paper, revealed that national intervention and policy attributes influenced the degree to which these determinants work in the policy process at the individual level, and thereby shaping policy diffusion at the population level. The governmental policymaking process is an open system to the extent that subnational governments interact with each other and that their organizational boundaries are permeable by external influences. A synthesis of individual-level and population-level perspectives would lead to new findings that reveal the dynamism of policymaking in such open governmental systems.

## References

- Allison, Paul D. (1984), *Event History Analysis: Regression for Longitudinal Event Data*, Newbury Park, CA: Sage Publications.
- Aqua, Ronald (1979), 'Politics and Performance in Japanese Municipalities', Ph.D. Dissertation, Cornell University.
- Aqua, Ronald (1980), 'Political Choice and Policy Change in Medium-Sized Japanese Cities, 1962–1974', in Kurt Steiner, Ellis S. Krauss, and Scott C. Flanagan (eds), *Political Opposition and Local Politics in Japan*, Princeton, NJ: Princeton University Press.
- Becker, Marshall H. (1970), 'Sociometric Location and Innovativeness: Reformulation and Extension of the Diffusion Model', *American Sociological Review*, 35(4): 267–282.
- Berry, Frances S. and William D. Berry (1990), 'State Lottery Adoptions as Policy Innovations: An Event History Analysis', *American Political Science Review*, 84(2): 395–415.
- Campbell, John C. and Steven R. Reed (1981), 'Progressive Local Government, Policy Innovation, and the Diffusion of Programs for the Aged in Japan', Paper prepared for Washington and Southeast Regional Seminar on Japan, College Park, Maryland.
- Canon, Bradley C. and Lawrence B. Baum (1981), 'Patterns of Adoption of Tort Law Innovations', *American Political Science Review*, 75: 975–987.
- Eyestone, Robert (1977), 'Confusion, Diffusion, and Innovation', *American Political Science Review*, 71: 441–447.
- Feller, Irwin and Donald C. Menzel (1978), 'The Adoption of Technological Innovations by Municipal Government', *Urban Affairs Quarterly*, 13: 469–490.
- Freeman, Patricia K. (1985), 'Interstate Communication Among State Legislators Regarding Energy Policy Innovation', *Publius*, 15: 99–111.
- Gray, Virginia (1973), 'Innovation in the States: A Diffusion Study', *American Political Science Review*, 67: 1175–1185.
- Gray, Virginia (1994), 'Competition, Emulation, and Policy Innovation', in Lawrence C. Dodd and

- Calvin Jillson (eds), *New Perspectives on American Politics*, Washington DC. Congressional Quarterly Press.
- Hayes, Michael T. (1981), *Lobbyists and Legislators: A Theory of Political Markets*, New Brunswick, NJ: Rutgers University Press.
- Hays, Scott P. and Henry R. Glick (1997), 'The Role of Agenda Setting in Policy Innovation: An Event History Analysis of Living-Will Laws', *American Politics Quarterly*, 25(4): 497–516.
- Hori, Kaname (1988), 'Seijishisutemu no Jishshobunseki', in Nose Tetsuya and Kawasaki Shunji (eds), *Chihozaiseisaku no Suryobunseki*, Tagashuppan.
- Hujimoto, Yukio *et al.* (1983), 'Yosanhaibun to Seijitekiyoso', *Kokyosentaku no Kenkyu*, 3: 56–67.
- Ishi, Hiromitsu *et al.* (1983), *Jueki to Hutan no Chikibetsukichaku to Hojokin no Yakuwari*, Keizaikakakucho kenkyusho.
- Ito, Shuichiro (1999), 'Jichitai no Seisakuketteiyoin: Johokokajirei Hakyu no Shiten kara', *Nenpo Gyosei Kenkyu*, 34.
- Ito, Shuichiro (2001a), 'Seisakuhakyu to Ajendasettei', *Rebaisan*, 28.
- Ito, Shuichiro (2001b), 'Bottom-up and Top-down Reform: Diffusion of Information Disclosure and Administrative Procedure Ordinances in Japan', Paper prepared for delivery at the 2001 APSA meeting, San Francisco.
- Ito, Shuichiro (2002), *Jichitai Seisakukatei no Dotai*, Tokyo: Keio University Press.
- Ito, Shuichiro and Kikuhara Junya (2001), 'Kankyokihonseisaku no Sinka to "Hakyu"', *Kikan Gyoseikanrikenkyu*.
- Iwagami, Yasukuni (1991), 'Chihojichitai heno Yosanhaibun no Keiryobunseki', in Kobayashi Yoshiaki (ed.), *Seijikatei no Keiryobunseki*, Ashishobo.
- Knocke, David (1982), 'The spread of Municipal Reform: Temporal, Spatial, and Social Dynamics', *American Journal of Sociology*, 87: 1314–1339.
- Krauss, Ellis S. (2000), 'Local Politics In Japan: Welcoming the Third Wave', in Sheila A. Smith (ed.), *Local Voices, National Issues: The Impact of Local Initiative in Japanese Policy-Making*, Ann Arbor, Michigan: Center for Japanese Studies, University of Michigan.
- MacDougall, Terry E. (1975), 'Political Opposition and Local Government in Japan: The Significance of Emerging Progressive Local Leadership', Ph.D. dissertation, Yale University.
- Maclachlan, Patricia L. (2000), 'Information Disclosure and the Center-Local Relationship in Japan', in Sheila A. Smith (ed.), *Local Voices, National Issues: The Impact of Local Initiative in Japanese Policy-Making*, Ann Arbor, Michigan: Center for Japanese Studies, University of Michigan.
- Menzel, Donald C., and Irwin Feller (1977), 'Leadership and Interaction Patterns in the Diffusion of Innovations among the American States', *Western Political Quarterly*, 30: 528–536.
- Mintrom, Michael (1997), 'Policy Entrepreneurs and the Diffusion of Innovation', *American Journal of Political Science*, 41(3): 738–770.
- Moony, Christopher Z. and Mei-Hsien Lee (1995), 'Legislating Morality in the American States: The Case of Pre-Roe Abortion Regulation Reform', *American Journal of Political Science*, 39(3): 599–627.
- Murakami, Hiroshi. (2000), 'Nihon no Chihojichi to Seisakuhatten', in Misuguchi *et al.* (eds), *Henka wo Dou Setsumeisuruka*, Bokitakusha.
- Muramatsu, Michio (1988), *Chiho jichi*. Tokyo Daigaku Shuppankai, translated by Betsey Scheiner and James White (1997), *Local Power in the Japanese State*, Berkeley, CA: University of California Press.
- Nelson, Barbara J. (1984), *Making an Issue of Child Abuse*, Chicago: University of Chicago Press.
- Pavalko, Eliza K. (1989), 'State Timing of Policy Adoption: Workmen's Compensation in the United States, 1909–1929', *American Journal of Sociology*, 5(3): 592–615.
- Reed, Steven R. (1983), 'Patterns of Diffusion in Japan and America', *Comparative Political Studies*, 16(2): 215–234.
- Reed, Steven R. (1986), *Japanese Prefectures and Policymaking*, Pittsburgh: University of Pittsburgh Press.
- Rogers, Everett M. (1995), *Diffusion of Innovations*, 4th edn, New York: Free Press.

- Samuels, Richard J. (1983), *The Politics of Regional Policy in Japan: Localities Incorporated?* Princeton, NJ: Princeton University Press.
- Singer, Judith D. and John B. Willett. (1993), 'It's About Time: Using Discrete-Time Survival Analysis to Study Duration and the Timing of Events', *Journal of Educational Statistics*, **18**(2): 155–195.
- Stokes, Donald E. (1963), 'Spatial Models of Party Competition', *American Political Science Review*, **57**: 368–377.
- Strang, David and Nancy Tuma (1993), 'Spatial and Temporal Heterogeneity in Diffusion', *American Journal of Sociology*, **99**: 614–639.
- Steiner, Kurt (1980a), 'Toward a Framework for the Study of Local Opposition', in Kurt Steiner, Ellis S. Krauss, and Scott C. Flanagan (eds), *Political Opposition and Local Politics in Japan*, Princeton, NJ: Princeton University Press.
- Steiner, Kurt (1980b), 'Progressive Local Administrations: Local Public Policy and Local-National Relations', in Kurt Steiner, Ellis S. Krauss, and Scott C. Flanagan (eds), *Political Opposition and Local Politics in Japan*, Princeton, NJ: Princeton University Press.
- Tolbert, Pamela S., and Lynn G. Zucker (1983), 'Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform, 1880–1935', *Administrative Science Quarterly*, **28**: 22–39.
- Tsukahara, Yasuhiro (1992), 'Shakaihukushi Shisaku no Dounyu to Denpa', *Shakaihoshokenkyu*, **28**(2).
- Walker, Jack L. (1969), 'The Diffusion of Innovations among the American States', *American Political Science Review*, **63**: 880–899.
- Welch, Susan and Kay Thompson (1980), 'The Impact of Federal Incentives on State Policy Innovation', *American Journal of Political Science*, **24**(4): 715–729.
- Yamaguchi, Kazuo (1991), *Event History Analysis*, Newbury Park, CA: Sage Publications.