Local Government Consolidations in Hokkaido: Elected Officials as an Obstacle

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Abstract

This paper investigates local government consolidations with a focus on public choice aspects in the decision-making. Politicians could lose future payoffs if their locality merges with a larger counterpart, and may sabotage the merger process. The analysis with data from a Japanese prefecture reveals that a long-serving mayor would present an obstacle for consolidations.

1. Introduction

Merger and break-up of political units takes place at two levels. One is undertaken by sovereign states, and the other is assumed by local governments within individual countries. Although the former has drawn substantial interests among researchers,[1] the latter is no less significant since it directly affects the welfare of local residents. Reorganization of local jurisdictions also represents an event of considerable importance for politicians. When municipality boundaries are re-drawn, the local political landscape cannot remain intact. If a small village is absorbed by a large neighboring city with dominant presence in the region, for instance, it is unlikely that the village mayor can successfully contest in the post-merger city mayoral election. Similarly, the council members have substantial interests in the municipal merger and division, as that would inevitably affect the prospect of maintaining their positions.

There is a growing body of literature that tests public choice hypotheses with data from local governments. Veiga and Veiga (2007), for example, identify the political business cycle through information from Portuguese municipalities. Foucault, Madies and Paty (2008) find the pre-election opportunistic behavior of the French local governments. Past inquiry into the municipality reorganization has, however, mainly focused on the efficiency of public goods provision under alternative jurisdictions (Deller and Edward, 1992; and Vojnovic, 2000).[2] This paper attempts to fill the gap, and takes an explicit account of politicians' incentives in the decision of localities to engage in merger.

There are cases in which consolidation partners can be classified into "senior/leader" and "junior/subordinate" members, where senior localities are likely to be large and fiscally more stable, while the junior partners could be smaller and in difficult economic situations. Reflecting their differences, they may not share the same determinants for their respective consolidation choice. Small municipalities facing financial constraints may find it a viable option for their survival to seek merger with larger counterparts. It may not, however, constitute an attractive option for elected officials in those localities since uncertainty arises as to their post-merger positions. Thus

[1] See, for example, Alesina and Spolaore (1997), Bolton and Roland (1997), and Wittman (1991).
[2] An exception is Sørensen (2006), in which political factors are examined as part of determinants of consolidation decision of Norwegian municipalities.

consolidation initiatives would be sabotaged by the local politicians if they calculate that joining the municipal merger as a junior partner would reduce their future personal payoffs. This is the hypothesis to be tested in this paper with data from Japan, where the central government managed to substantially reduce the number of municipalities in the first half of the 2000s.

The rest of the paper is organized as follows. The next section gives a brief background of the local government consolidation in Japan, and presents the prefecture of Hokkaido as the choice of the case study. The third section describes the data and empirical analyses, and reports regression estimates. In the concluding section are suggested areas of further investigation.

2. Local Government Consolidations in Japan

There were two waves of municipal mergers in the post-war Japan. The first took place in the mid-1950s, when the central government enacted the Law to Promote Town and Villages Mergers in 1953. This law was an attempt to reorganize local governments, mainly through mergers, so that they could assume greater responsibilities for public service provisions in the area of compulsory education, firefighting, and law enforcement. The number of local authorities decreased from 9,868 in 1953 to 3,975 by the time the law expired in 1956, which amounts to the reduction of 59.7%.

Four decades later, the central government launched another round of municipal mergers in order to strengthen their capacities for autonomous operation. This is in anticipation of the greater demand for local welfare services in the face of aging population. The central government provided fiscal incentives for voluntary consolidation in the form of the Law to Promote Municipal Mergers in 1999, and specified that local authorities should engage in merger by March 31, 2006 to qualify for the incentives.[3] As is demonstrated in Table 1, the municipalities that stood at 3,232 on March 31, 1999 were reduced to 1,821 by the deadline.

Although the Law to Promote Municipal Mergers requested that prefecture governments would take a leading role in promotion of the merger (Articles 59-64), they were not uniformly motivated to meet the requirements. It follows that, for the analysis of municipalities across different prefectures, factors specific to individual prefectures need to be isolated, which is beyond the agenda of this research. The following analysis uses data from all the local authorities in Hokkaido Prefecture, Japan, because Hokkaido has the largest number of municipalities among the 47 prefectures in Japan. As of the end of March 1999, it had 212 municipalities, i.e., 6.6% of the nation's local units. This is due to its large area, with 22.1% of the country's acreage, which was home to 4.5% of the total population at that time.

As shown in Table 1, the number of local governments in Hokkaido was reduced by 32 between 1999 and 2006.[4] This is the result of 21 cases of consolidations that involved 53 municipalities. Out of the 21 cases, 5 are incorporations in which 4 towns and 6 villages were absorbed by their larger neighboring authorities (4 cities and 1 town). The other 16 cases engaged 38 governments, and merged 2 to 4 localities to create new cities and towns.

This research uses the population criterion in order to identify "senior/leader" and "junior/subordinate" consolidation members. If one of the merging localities dominates the post-consolidation municipality with more than half the total population, it is designated as the senior

[3] It guaranteed that the amount of the transfer to municipalities (Local Allocation Tax) would be maintained at the pre-merger level even if a consolidation results in improvement of fiscal conditions (Article 17). This constituted a substantial incentive for the local authorities, as the central government forecasted that the total fund of the Local Allocation Tax would decline, while the tax base in many local economies was shrinking. The government also gave merging localities an option to issue special municipal bonds on the condition that it would bear 70 % of the principal repayments.

[4] The first consolidation took place in 2004, in which the third most populous city absorbed three towns and a village. Seven mergers followed in 2005, and 13 in 2006.

Table 1. Number of Municipalities in Japan and Hokkaido Prefecture

		March 31, 1999	March 31, 2006
Total		3,232	1,821
	City	670	777
	Town	1,994	846
	Village	568	198
Hokkaido		212	180
	City	34	35
	Town	154	130
	Village	24	15

partner.[5] The presence of a senior locality renders the other partners"junior". In the Hokkaido consolidations sample, all 21 cases had a senior entity, and 32 municipalities were in the category of junior members. Entering the merger as a junior partner would present considerable uncertainty for the political survival of their politicians. Among the first mayors of 16 newly created municipalities, for example, only one was a former mayor of the "junior" local government. In the five cases of consolidations through incorporation, mayors of absorbing localities were all re-elected in the first post-consolidation mayoral election.

3. Empirical Analysis

The regression analysis investigates determinants of a local government's decision to be a junior merger partner. Politicians' behavior is identified through four variables. The first is the incumbent mayor's term (Mayor). It is hypothesized that long-serving mayors have vested interests in maintaining their positions, and thus are more likely to object to consolidations as a junior partner. The council chairperson's term (Chair) captures the same incentives for a chairperson. The average term of the incumbent councilors (Council) and the number of local councilors per 1,000 residents (Council Size) reflect behavior of local representatives as a group. Local assembly members, particularly those with long-serving records in over-represented municipalities, may find it in their interests to avoid merger with larger localities as that would lead to loss of their seats in the post-consolidation local councils.

Two size variables, the municipality's geographical area (Area) and its population (POP) are among the explanatory variables since expanding the size of local entities was one of the principal objectives of the central government's consolidation initiative. Independent variables also include a local government's ratio of "standard financial revenues" to "standard financial needs" (Fiscal) and its current budget balance (Current) alternately in order to incorporate its financial position as a determinant of the consolidation decision. The former, Fiscal, variable gauges the extent to which local governments depend on transfers from the central government to balance their budget. The central government allocates the Local Allocation Tax to local governments whose standard levels of revenue are below that of expenditures in order to assist them by filling the shortfall. The amount of the "standard financial needs" is the total expenditure of a local government necessary for its basic public service provisions (including firefighting, police, welfare, road construction, and education) calculated according to a set of formula specified by the central government. The "standard financial revenues" represent the total of (i) the estimated amount of revenue from local taxes computed on the basis of standard tax rates and

[5] It is possible for a consolidation to take place without a senior/dominant locality. When a consolidation occurs among three municipalities with similar population size, it does not have a senior member.

(ii) the Local Transfer Taxes from the central government. This ratio measures the degree to which local governments depend on the Local Allocation Tax to balance their budget. The latter, Current, represents the percentage share of public expenditure disbursed for the local government's current operation, such as wages, out of its total current revenue. As this share increases, the local authority loses flexibility in its fiscal management.

These explanatory variables are as of 1999 since policy measures to encourage local government mergers were legislated in that year.[6] Table 2 presents summary statistics of these variables. The longest-serving mayor was in its 8th term, while the counterpart chairperson was in its 13th term as a councilor. The relative size of the municipal council (Council Size) shows a large variance in the degree to which residents were politically represented within respective localities. The smallest value of 0.04 takes place for the prefecture's capital city with almost 1.8 million residents who elected 68 assembly members. On the contrary, the greatest representation, 9.16, is observed for a village that chose 12 local councilors from the population of 1,310. For the Fiscal variable, the local government with the minimum value of 0.08 depends on the central government for 92% of its essential outlays. Similarly as to the Current variable, the maximum value of 109.4 means that current revenues alone cannot cover the municipality's obligatory expenditures. These figures represent financial crisis for some local authorities.

Since the dependent variable is whether a municipality joined consolidation as a junior partner, i.e., a binary variable, the analysis employs the probit specification.[7] Coefficient estimates are shown in Table 3. The variable for the mayor term (Mayor) has estimates that are negative and statistically significant. Long-serving mayors are linked to smaller probabilities to become a junior merger member. For example, an increase in the mayoral term from two to three would lower the probability from 1.77 to 1.08 percent in the regression I.[8] As mayors are repeatedly re-elected, vested interests for themselves as well as for their associates may be generated. To the extent that mayors can influence the local public decision, their self-serving motives may stand in the way for mergers if they judge that their own political survival is at stake.[9]

This is in a clear contrast with the results for

Table 2. Summary Statistics of Variables

Variable	Mean	Std. Dev.	Minimum	Maximum
Mayor	2.45	1.52	1	8
Chair	5.44	1.86	2	13
Council	3.26	0.62	1.83	5.15
Council Size	2.71	1.70	0.04	9.16
Area	370.07	256.16	24.92	1408.10
POP	26.85	128.68	1.20	1792.17
Fiscal	0.24	0.16	0.08	1.60
Current	80.77	6.89	55.40	109.40

Note: Data sources are in the Appendix. The Fiscal variable is expressed as the average of the past three fiscal years, which is 1997-1999 in this case, as the central government publishes the index in this form.

[6] Broadly similar results are obtained from analyses with 1998 data.
[7] The logit specification has produced similar results.
[8] These probabilities correspond to probit scores, -2.10 and -2.30, which are derived by multiplying coefficient estimates presented in Table 2 by Mayor=1 and 2 and mean values for other variables.
[9] The mayor term is not a factor for a merger decision as a senior partner. The null hypothesis that the coefficient of the mayor term variable is zero cannot be rejected in probit regressions for the choice to be a senior consolidation member.

Table 3. Decision for Joining Consolidations as a Junior Partner: Probit Analysis

	I	II
Mayor	-0.193**	-0.161*
	(2.11)	(1.73)
Chair	0.049	0.054
	(0.63)	(0.67)
Council	0.160	0.178
	(0.73)	(0.79)
Council Size	0.263*	0.183
	(1.70)	(1.35)
Area	-0.001**	-0.001*
	(2.09)	(1.70)
POP	-0.051	-0.080
	(0.68)	(1.19)
Fiscal	14.493	
	(1.06)	
Fiscal-SQ	-38.205	
	(1.12)	
Current		1.375*
		(1.73)
Current-SQ		-0.008*
		(1.71)
Constant	-2.666	-57.287*
	(1.38)	(1.78)
Log Likelihood	-67.56	-65.72
Pseudo R^2	0.249	0.270
N	212	212

Note: z-statistics are in parentheses. ** Statistically significant at the 5% level. *Statistically significant at the 10% level.

council member variables. Although the assembly members, including its chairperson, could share the same incentives with the mayor, coefficients of Chair and Council are not statistically significant. These results may reflect the relative political power of municipal mayors over council members. The number of assembly member per 1,000 residents, Council Size, has a statistically significant positive coefficient in the first regression, which contradicts with the presumed motivation of council members in over-represented localities. One interpretation is that this variable captures two factors: One is the public choice element in the councilors' behavior, and the other is the room for rationalization of public resources management that is reflected in the relatively large size of an assembly. The positive coefficient implies that municipalities seek for consolidation, even as a junior partner, in order to reduce expenditures over the potential resistance from assembly members.

Between the two size variables, the geographical size (Area) coefficient is negative and significant. A smaller municipality is more likely to become a junior partner. Although coefficients of the other size variable, POP, are of expected negative sign, they are not significant. Between the fiscal position variables, Current has statistically significant coefficients both for itself and its squared form, Current-SQ. The combination of their coefficients indicates that the propensity for a municipality to be a junior merger partner increases until its Current value reaches 81.87 and that it decreases thereafter. In view of the variable's average value of 80.77, this shows that, across the financial condition spectrum, the localities with the average financial standing are more likely to find a merger partner than others. Financially sound authorities do not need consolidation: Municipalities facing severe financial

constraints cannot find a willing merger partner.

4. Concluding Remarks

This paper has investigated the determinants of a local government's consolidation decision. One of the findings is that a long-serving mayor could become an obstacle when the combination of potential merging localities requires that its municipality be a subordinate member. This observation constitutes an important policy implication: It may be desirable to install a procedure, in the case of mayoral veto in the consolidation negotiations, for the referendum among municipality residents to reach the final decision on the issue.

As the sample in this study contains municipalities in Hokkaido Prefecture alone, it is of significance to extend the scope of the inquiry to other prefectures. That would help to verify the results of this research, while providing greater insights on the public choice aspect of the municipality restructuring process. One potential area of further research that could emerge from this exercise is the source of differences among prefectures, if any, as to the degree of mayor/council member manipulation. Among the candidates are residents' political participation that would check opportunistic behavior of politicians, and adverse economic situations that might render municipal consolidation an urgent agenda in the region.

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Appendix: Data Source

Mayor;
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Chair, Council, Council Size;
Hokkaido Kohosha, Hokkaido Shichoson Gikai Giin Meibo (Directory of Local Assembly Members in Hokkaido), Sapporo, 1999.

Area, POP, Fiscal, Current;
Chiho Zaimu Kyokai (Institute of Local Finance), *Shichoson-Betsu Kessan Joukyo Shirabe (Annual Report of Municipalities)*, Tokyo, 1999.