

Mayor Term as a Determinant of Municipality Budget

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abstract

This paper investigates behavior of multi-term elected officials. Based on the tenure-ability linkage, long-serving, multi-term incumbents are hypothesized to have incentives to increase public resources under their control. This hypothesis is tested with budget data of municipalities in Japan. Results of regression analysis are consistent with the hypotheses regarding incentives of multi-term incumbents. Incumbent's additional term increases the municipality's expenditure per capita by 1.64% - 1.74% over the municipalities' average. This finding constitutes a significant policy implication in favor of adoption of term limits, since public policies under long-serving incumbents are biased to the direction of excessive presence of government activities

I. Introduction : Incentives of multi-term incumbents

Democratic elections endow the successful candidate with the authority to formulate public policy for a fixed length of time, usually a certain number of years. The requirement to hold elections periodically gives rise to issues related to tenure.

Among them, term limit has received particular attention from a number of researchers.¹ This paper is an attempt to revisit the term issue from a new perspective by investigating the effects of cumulative terms on the incentives of elected officials. Miquel and Snyder (2006) is a pioneering research into the impacts of politicians' cumulative tenure. They find that legislators become more effective as they gain experience, and attribute this to the influence of learning-by-doing.

This paper argues that the relationship between tenure and ability must be also evident among elected mayors of municipalities. A multiple of terms not only makes mayors increasingly familiar with executive and legislative mechanisms for policy implementation, but also provides them with opportunities to promote the local government personnel that understand and assist their priorities. The longer officials serve, the more effective they become at translating their priorities into public policy, which includes the allocation of public funds.² To the extent that they can derive payoffs, including personal benefits, from public policy, the potential payoffs available to them increase with their length of service. It can thus be hypothesized that long-serving, multi-term incumbents have incentives to increase public resources under their control.

¹ Johnson and Crain (2004) and Besley and Case (1995) examined the effects of term limits on economic policy based on a reputation-building model of political behavior, while Reed and Schansberg (1994) simulated the empirical consequences of the six-term tenure limit on members of the U.S. House of Representatives. Predictions on related institutional effects, such as average seniority, of the same term limit reforms are presented in Franklin and Westin (1998), and Lott (1990) investigated a mechanism by which shirking of duties could be reduced among politicians leaving office.

² It is also likely that municipality mayors are in an advantageous position to improve their political effectiveness from cumulative tenures in comparison with their counterpart politicians in the local assemblies. Mayors are full-time officers in most cases, while local assembly members are often part-time in their duties. In contrast, elected officials of the federal/central governments are usually full-time both in the executive and legislative branches.

This hypothesis concerning municipality mayors' behavior will be tested with budget data of Japanese municipalities. In this hypothesis testing is another contribution of the paper. There is a growing body of empirical literature that investigates local government decision-making from the political dimension. For example, Sørensen (2006) examine political factors in Norwegian municipality consolidations, and found that the party affiliation of local council members is a determinant in mergers. Coelho, Veiga and Veiga (2006) and Veiga and Veiga (2007a) examine the political business cycle in Portuguese municipalities, while Foucault, Madies and Paty (2008) look at pre-election opportunistic behavior in French local governments. Veiga and Veiga (2007b) observe that Portuguese mayors are rewarded for fiscal opportunism in their re-election campaigns, and Sakurai and Menezes-Filho (2008) reach a similar conclusion regarding the re-election of Brazilian mayors. This paper joins these studies to shed light on the public choice aspect of local government behavior.

II. Determinants of Municipality Budget

The following empirical analysis will use all municipalities existing as of March 31, 2003, as a sample, and investigate the determinants of their budget size. Since incentives of incumbent mayors are the focus of the inquiry, TERM that represents the mayor's cumulative term is the principal variable.³ It captures the incentives of mayors who were incumbent as of the end of 2002. Since there are no statutory term limits for municipal mayors in Japan, the range of TERM is not bounded.⁴ The breakdown of municipalities based on their TERM values is presented in Table 1 together with their average expenditure per capita for the fiscal year 2002. The table confirms that there are general tendencies for the localities with multi-term mayors to exhibit greater expenditures. For example, for municipalities whose mayors have 1-6 cumulative terms, the average expenditure does not exceed YEN 660,000 per resident. For the localities with 7-12 term mayors, however, the equivalent value does

Table 1. Municipality expenditure per capita by mayors' cumulative term: 2002

Term	Number of municipalities	Expenditure per capita	
		Mean	Std. Dev.
1	1196	632,087.6	520,216.0
2	910	622,039.1	416,739.3
3	622	606,924.0	427,110.2
4	283	657,870.5	465,159.8
5	108	616,744.3	406,424.9
6	51	646,582.5	365,345.1
[1-6	3170	626,277.8	463,402.6]
7	20	737,531.7	446,316.4
8	10	1,063,457.0	1,632,171.0
9	7	1,360,295.0	1,267,787.0
10	4	805,252.7	737,603.9
11	0	-	-
12	1	875,192.4	-
[7-12	42	928,654.0	1,003,855.0]
Total	3212	630,231.6	475,374.3

Note : Mayor's cumulative term is that of an incumbent as of December 31, 2002.

³ The source of TERM is Shichoson Jichi Kenkyukai (Municipal Autonomy Research Group), *Zenkoku Shichoson Yorán (National Municipality Databook)*, Tokyo, various issues.

⁴ To the author's knowledge, no municipality had term limit rules as of the end of 2002. Since 2003, such rules have been adopted by a small number of cities and towns. For example, the cities of Kawasaki and Nakatsu and the town of Shiroyama introduced them in 2003. However, all these rules simply specify that efforts should be made to avoid multiple terms, and are not legally binding.

not fall below YEN 730,000. The expenditure gap is largest between local governments of 3rd term mayors and those with 9th term mayors: The budget outlay per person in the latter is 2.24 times greater than in the former. When the local governments are divided by their mayor term into 1-6 (3170 municipalities) and 7-12 (42 municipalities), the mean difference of expenditure per capita among two groups is statistically significant at the 1% level.

The regression analysis is conducted to test whether the relationship between the mayor's cumulative term and expenditure stands after other factors that potentially affect municipality expenditure are controlled. If the hypothesis about tenure and payoffs holds, the TERM variable has a positive estimated coefficient as a determinant of expenditure. Other explanatory variables are AREA, POP, AGRI_share and TOWN-VILLA. The size variables AREA and POP, for the municipality population and the acreage in 2002 respectively, enter the regression because the size of local authorities is presumed to affect their budget.⁵ The acreage variable AREA depicts the effect of the municipality's geographical size on its expenditure. It is expected that a larger area is associated with greater resources necessary to provide public services to its residents. The larger value in the population variable POP, however, may not necessarily lead to a greater per capita municipality budget due to the presence of economies of scale. AGRI_share measures the percentage share of local employment in the primary sector, and the TOWN-VILLA dummy is one for towns and villages, and zero for cities. Summary statistics for the dependent

and explanatory variables are presented in Table 2.

Coefficient estimates of ordinary least squared (OLS) regressions are shown in Table 3. Squared terms of AREA and POP are also included in the regression, as it is relevant to examine whether a quadratic relationship exists between these variables and the dependent variables. The first column shows results with no prefecture dummies among the dependent variables, and the second with prefecture dummies.

The coefficient estimates for TERM are positive and statistically significant at the 10% level in the first specification and at the 5% level in the second. Incumbent's additional term increases the municipality's expenditure per capita by YEN 10,364–10,985, which is 1.64% - 1.74% of the average per capita expenditure of YEN 630,231. Long-serving mayors are associated with larger public activities, which are consistent with the hypothesis concerning incentives of multi-term incumbents.

Both AREA and its quadratic variable have coefficient estimates that are statistically significant at the 1% level in each regression. Their coefficient combinations indicate that expenditure per capita increases until AREA reaches 727.31 km² in specification I and 668.62 km² in specification II. The number of localities that cover acreage of greater than 668.62 km² was 42 in the total sample of 3212, which dictates that budget was an increasing function of the geographical size for most of the local governments. Similarly, statistically significant coefficients of POP and POP_SQ imply that expenditure per capita decrease until POP is 1,385.74 (in I) and 1,371.33 (in II). Since there were

Table 2. Summary statistics (Number of sample: 3212)

	Mean	Std. Dev.	Min	Max
Expenditure_pc	630,231.6	475,374.3	219,214.5	7,737,505
TERM	2.24	1.38	1	12
AREA (km ²)	115.60	136.34	1.34	1,408.20
POP (1,000)	36.93	125.65	0.197	3,466.875
AGRI_share (%)	14.65	11.02	0.1	77.2
TOWN-VILLA	0.79	0.41	0	1

⁵ The source of AREA, POP and Agri_share are Chiho Zaimu Kyokai (Association of Local Finance), *Shichoson-Betsu Kessan Joukyo Shirabe (Annual Public Finance Records of Individual Municipalities)*, Tokyo, 2003.

only six municipalities with populations of this size in the sample, economies of scale persist in the municipality budget.

Local employment share in the primary sector, *Agri_share*, has positive coefficient estimates. The dummy for towns and villages also has positive coefficients. Analysis of their implications requires detailed examination of municipality expenditure items. Finally, among 46 prefecture dummies, 29 have coefficient estimates that are significant at least at the 10% level. Out of 29, 25 were of negative sign, which is consistent with the fact that the baseline prefecture is Hokkaido. The central government treats Hokkaido favorably with a dedicated bureaucracy, Hokkaido Regional Development Bureau in the Ministry of Land, Infrastructure, Transport and Tourism. Grants and subsidies from the central government must have

led to large budgets in municipalities in Hokkaido. Prefectures with positive dummies are: Tokyo, Nara, Shimane and Okinawa.⁶

III. Concluding Remarks

Results of the empirical analysis of local government budget in Japan are consistent with the hypotheses regarding incentives of multi-term incumbents. Multi-term incumbents have incentives to increase public resources under their control, and this tendency becomes greater as they are re-elected repeatedly. This finding constitutes a significant policy implication. To the extent that multi-term elected officials tend to expand public resources and programs, public policies under long-serving incumbents are biased to the direction of excessive

Table 3. Determinants of municipality expenditure per capita

Expenditure_pc	I	II
TERM	10.364 x 10 ^{3*} (1.89)	10.985 x 10 ^{3**} (2.08)
AREA	1.326 x 10 ^{3***} (10.82)	1.432 x 10 ^{3***} (10.75)
AREA_SQ	-0.912*** (5.76)	-1.071*** (6.82)
POP	-0.619 x 10 ^{3***} (4.47)	-0.546 x 10 ^{3***} (4.05)
POP-SQ	0.223*** (3.83)	0.199*** (3.54)
AGRI_share	8.848 x 10 ^{3***} (11.26)	9.018 x 10 ^{3***} (10.48)
TOWN-VILLA	0.216 x 10 ^{3***} (8.99)	0.223 x 10 ^{3***} (9.53)
Constant	0.201 x 10 ^{3***} (7.13)	0.276 x 10 ^{3***} (5.61)
Prefecture Dummy	NO	YES
Adjusted R ²	0.188	0.262
F-statistic	106.98	22.44
(p-value)	0.00	0.00)
Observations	3212	3212

Note : The figures in parentheses are absolute values of t-statistics. ***, **, and * denote coefficients estimates statistically significant at the 1%, 5% and 10% levels. Results for 46 prefecture dummies are not reported under II for brevity.

⁶ The factor behind the positive coefficient for Okinawa dummy could be a bureaucracy designed to assist the prefecture, Okinawa Development and Promotion Bureau, Cabinet Office.

presence of government activities.

An important question is whether this bias is justified on the basis of officials' tenure-ability linkage. For example, one could argue that multi-term mayors as effective executives are in a position to implement public policies beneficial for the welfare of municipality residents and that their capabilities should be fully utilized to oversee expanded local government services. This scenario is, however, not warranted for two reasons. First, their incentives partly reflect personal payoffs they can derive from office, which limits benefits that are presumed to accrue to local residents. Second, even if enlarged public programs are generally beneficial under multi-term incumbents, there is no mechanism to reduce their size at the time of incumbents' exit. New mayors who succeed them may not be sufficiently skilled to maintain the best use of extended public resources. These considerations lend support to term limits as an instrument to mitigate the adverse effects of multiple terms.

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