Nonprofit Policy Forum

Volume 1, Issue 1

2010

Article 6

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Recommended Citation:

Okuyama, Naoko; Ishida, Yu; and Yamauchi, Naoto (2010) "Public Private Partnership between Local Governments and Nonprofits in Japan," *Nonprofit Policy Forum*: Vol. 1: Iss. 1, Article 6.

DOI: 10.2202/2154-3348.1011

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Abstract

In the framework of public sector reform and the recently popularized concept of a “new public sphere,” attention has been focused on the significance and effectiveness of public private partnership (PPP). However, the smooth operation of PPP practice is yet to be realized, and the nonprofit sector still faces challenges in becoming a government partner in public service provision. We examine government behavior in PPP practice and its stance on partnership practice and collaborative relations with contemporary nonprofit organizations. Through public finance statistics and a unique set of variables, an empirical analysis reveals that the existence of nonprofit organizations (NPOs) positively affects local government decisions to implement PPP practices and outsource to NPOs for public service provision. Other influential factors include local governments’ budgetary conditions, attitudes towards public administration and finance, local chief executive characteristics, and neighboring local government behaviors.

KEYWORDS: public private partnership, outsourcing, neighborhood effect, governance

A NEW TREND IN POLITICS AND PUBLIC POLICIES IN JAPAN

Today's popularized concept of a "new public sphere," the emergence of the private sector as a public service provider, plus social demographic changes and local government fiscal challenges, has created a looser mode of public service provision. "Public private partnership" (PPP) established its conceptual and practical value during the last 30 years in Japan with changes in the mode of its practice. Privatization of simple office work, maintenance of government facilities, and public corporation involvement in maintaining infrastructure were typical examples during the 1980s. In the early 2000s, the Koizumi administration developed a new strategy to achieve smaller government through the international trend of New Public Management. The strategy included postal privatization as its main objective as well as drastic structural reform to develop a national infrastructure and spatial planning (Ministry of Land, Infrastructure, Transport and Tourism, 2008). Since the Democratic Party of Japan came to power after an historic epoch-making landslide victory in the national general election during the summer of 2009, the new government administration openly takes a supportive and amicable stance toward the nonprofit sector as a key player in the new public sphere. In the official report of the round-table meeting organized by the government, the government proposed several stimulus tax policies as a notable and ambitious change of policy to achieve a new way of public governance and practice (Cabinet Office of Government of Japan, 2010).

In principle, PPP provides a broader framework that takes advantage of the government and private sectors in service provision than conventional government outsourcing of services to the private sector. However, practice fails to provide hard evidence of this being the case. Outsourcing remains a dominant and growing tool for public service provision by the private sector. Local governments have questions that remain to be solved to manage contracts and regulations for the private sector.

In addition, to be a partner to government in public service, the nonprofit sector faces challenges. Since the enactment of the Law to Promote Specified Nonprofit Activities (NPO Law) in 1998, grass-root nonprofit organizations have the right to incorporate legally as "NPO Corporations" (NPOs). This contemporary type of nonprofit organization is growing quickly with the expansion of civil society in terms of institutional perspectives as well as the rapid growth of NPOs. Since 1999 outsourcing to nonprofit organizations has increased rapidly with the legal and institutional infrastructure provided by such developments as the NPO Law, the Long-Term Care Insurance Act, and the block grant system started in Tokyo Prefecture. In addition, the launch of the emergency special grants program for promoting local employment in 2000 encouraged the government to recognize NPOs as possible partners and contractors. A growing

need for locally-oriented services in the fields of long-term care, community environment, as well as the desire to encourage civic engagement in the public administration process, gave credence to nonprofit organizations as emerging public service providers. It also increased the awareness of local governments of the potential capabilities of NPOs (Kotagiri & Urasaka, 2005). Statistics support such movements and reveal that most local governments, at both the prefectural (regional district in Japan administered by a governor) and municipal levels, experience outsourcing and contracting with nonprofit organizations (Bureau of Citizens and Cultural Affairs at Tokyo Metropolitan Government, 2002). However, the nonprofit sector suffers from small scale operations, revenue instability, and budget constraints, limiting their activities and impact (Yamauchi et al., 2007).

This paper empirically examines government behavior in PPP practice and its stance in practicing partnership and collaborative relations with contemporary nonprofit organizations. Findings from this analysis offer an opportunity to consider public governance and its practical management, as well as local governments' strategies to cope with institutional constraints and challenges in the exercise of PPP. The next section provides a brief explanation of trends in PPP policy and its current status in local governments in Japan. The third section reviews previous studies of the factors that influence implementation of PPP among local governments. The fourth section introduces the data and empirical model used in our analysis, and the fifth section presents the results of the estimation. The concluding section summarizes the findings of the analysis, and discusses its policy implications.

PUBLIC-PRIVATE PARTNERSHIP POLICIES IN LOCAL GOVERNMENT

The development of PPP policies

Since the 1990's, administrative reform has been promoted as a way to build relationships between governments and private organizations. The Subcommittee on Public Private Allotment organized by the Government reported that entrusting public tasks to private organizations with the necessary capabilities should be the standard administrative commitment (Cabinet Office of Government of Japan, 1996). It requested the introduction of market mechanisms, an unknown for public administrations. Formally, the Basic Law on Reforming Government Ministries in 1998 indicates "[t]he functions regarding the planning of policies and the functions regarding the execution of those policies are required to be separate (article 4:4)." Additionally, "the central government must assign their

clerical workers and projects to private organizations with the necessary capabilities as much as possible (article 4:3).” This policy promotes private use as it is then unnecessary for government to manage and execute projects.

The Omnibus Decentralization Act, approved in July 1999, requested local governments to show originality. It created an environment and conditions for local governments to use private organizations more easily. The legal status of PPP’s individual components was advanced by enactments such as the approval of the PFI law in July 1999 and the creation of the Designation System of the Manager of Public Facilities through revision of the Local Autonomy Law (article 244:2) in June 2003. In March 2005, the Ministry of Internal Affairs and Communications set out “[a] new policy for promoting administration reform in local governments,” including the use of PPP. The new policy requests local governments to promote all works and projects, including outsourcing, PFI, and local partnerships, using the PDCA cycle as a means of public administration reform.

Moreover, the Law for Promotion of Administration Reform to Achieve Simple and Efficient Governments provided PPP policy in May 2006. This law relates to the management of administrative organizations and states as its aim to achieve privatization of public agencies and reduce the number of civil servants. In addition, the Market Test Law, officially named the Law on Reform of Public Service by Introduction of Competition, was enacted in May 2006 and in August 2006 extended a target of the market test in “[a] new policy for further promoting administration reform in local governments.”

In sum, PPP policy was expected to cut public expenditures and facilitate the more efficient provision and increased quality of services by using private organizations.

The current status of PPP

Government statistics and several national surveys show the level of awareness and status of public private partnerships in Japan. Figure 1 illustrates the trends in outsourcing expenditures and the ratio of outsourcing expenditures to total expenditures from 1996 to 2006 using statistics from municipal governments’ accountings. In 1996 the sum of the outsourcing expenditures of all municipal governments was approximately 19 billion US dollars (1.9 trillion yen), 5.3% of total expenditures; this grew to 26 billion dollars (2.6 trillion yen) in 2006, which is 6.4% of all expenditures.

Figure 1: Transition of outsourcing

Source: Ministry of Internal Affairs and Communications (n.d.b)

Mitsubishi Research Institute (2007) conducted a survey of local governments regarding the introduction of PPP, the form of PPP used, and local governments' awareness of PPP. Results illustrate the degree of importance given to the engagement of PPP by local governments: 1% of respondents answered that PPP is "extremely important" and the sum of "very important" and "important" responses was over 75%. This result indicates that local governments are interested in building partnerships with the private sector.

Nikkei Research Institute of Industry and Regional Economy (2004) describes the extent of advancement of local government privatization of 35 kinds of administration work such as information desk staffing, salary calculation, and so on. Its score is from 5 for "totally privatized" to 0 for "totally under public management." As regards the total score, the local governments in the highest range acquired over 50 points, but those in the lowest range got less than 10 points, revealing a wide disparity in the promotion of privatization among local governments.

PREVIOUS RESEARCH AND VARIABLE SELECTION

Previous research and financial status

Previous research finds the financial condition of local governments an influential factor in promoting PPP. Conceivably, local governments with large deficits might consider PPP implementation a means of reform to reduce costs and improve efficiency. This research suggests that most local governments expect a reduction of financial expenditures as an effect of PPP practice (Mitsubishi

Research Institute, 2007). The relationship between the elasticity of fiscal structure and fiscal discipline is discussed in numerous studies from the perspective of public finance and administration. Indicators representing the fiscal conditions and flexibility of local governments, such as financial capability index, debt expenditure ratio, ratio of recurring profit, and limit ratios for the flotation of bonds, were tested to discover if they influence sound administrative and financial practice (Akai, 2006; Nakano, 2002; Yamashita, 2001).

Kornai et al. (2003) note that, as a post-bailout measure, based on fairness, efficiency and political concerns, the central government provides public funds to cover payment failures of local governments. Giving such financial aid is a problem because it creates a disincentive for local governments with low tax revenues to reduce spending or increase their own tax revenues. The soft budget constraint problem is discussed often in the context of Japanese public finance. Several theoretical and empirical studies confirm this disincentive (Sato, 2001; Tajika & Miyazaki, 2008; Yamashita et al., 2002).

Neighborhood effects

Case et al. (1993, 1994) verifies the effect of “yardstick competition” (voice model) on the decisions for public service provision. The authors develop an empirical model in which the utility functions of local residents are formulated by including the public service level of neighboring local governments. They clarify the process of decision-making by local governments that reference the level of public service of their neighboring local governments. Brueckner (2003) also provides empirical strategic interaction models among local governments’ decisions on public service provision, and demonstrates these models as generating jurisdictional reaction functions. Regional disparities of public service provision for level and quality may influence local residents’ preferences and demands for public services. Disparities might also influence local governments’ competitiveness or lock-step mentalities to meet the same service provision level as their neighboring local governments (Staley & Blair, 1995). Such neighborhood or demonstration effects in local government decision-making would likely occur in PPP practices.

Previous empirical literature demonstrates that local governments with either the highest or an average expenditure are pioneers, providing benchmarks for neighboring local governments (Nakazawa, 2007; Saito & Nakai, 1991; Sugawara & Kunizaki, 2005; Tsukahara, 1992). The demonstration effect may aggravate the financial condition of poor local governments reaching for a service level beyond their financial constraints.

Attitudinal and behavioral awareness of local governments in administrative financial reform

Potentially, organizational transparency encourages efficient public administration. The measure of accountability in public finance and administration is an indicator of transparency. Transparency in local government improves administrative and financial accountability, increases budget allocation understanding, and improves the welfare of local residents. Akai (2006) reports that improved decision-making rules in internal administration may promote lower costs in public administration. Increased awareness, transparency, and improved decision-making might lead administrators and staff to better understand the objectives and significance of public business, raising their awareness of and responsibility for public governance (Yamashita et al., 2002).

Political characteristics

Political power, such as a governor's influence and the strength of local councils, affect local governments' selection of government services. Several previous studies suggest that the distribution of legislative seats in a council (conservative- or progressive-dominated) has an impact on policy-making for public reform (Kuroda, 1986; Muramatsu & Ito, 1986; Akuto & Sato, 1985; Soga & Machidori, 2001). Furthermore, characteristics of local chief executives, such as term of office, share of the vote, working experience as a bureaucrat, and age at the time of becoming governor, may be significant in terms of their preferences and positive attitudes toward reform of public administration and finance (Fujisawa, 2004). Different studies, including López-de-Silanes et al. (1997), focus on the behavior of government employees and taxpayers. They indicate that privatization inhibits government employees dependent on political patronage, whereas taxpayers interested in improving administrative efficiency welcome it.

Relations among government, nonprofit and for-profit organizations

A large number of preceding works have analyzed the relationship between government and nonprofits (Boris & Steuerle, 1999; Young, 2000; Salamon, 1995; Matsunaga et al., 2010). PPP practice reduces the role of government and increases the role of the private sector, including nonprofits and for-profits, in public service provision (Savas, 1999). Recently, Japan's PPP empirical research developed nonprofit performance assessments in service provision, focusing on particular services and forms of practice (Kanaya, 2003; Kotagiri & Urasaka, 2005; Maenaka & Noguchi, 2005). These findings indicate that nonprofit organizations are inclined to become service providers. However, a competitive

environment that welcomes for-profit organizations into practice does not guarantee nonprofits a comparative advantage. NPOs are heterogeneously distributed by region in Japan and predominantly located in urban areas. Commercial profit-making corporations are located universally. Conceivably, the regional distribution of NPOs and the availability commercial enterprises might be a determining factor in local government decisions.

Data and variables

We examine factors influencing local government decisions on PPP practice in Japan using a municipal aggregated cross-sectional dataset for the year 2004. However, to examine the trends of public-private partnerships in local governments over the past decade, only the outsourcing expenses included in annual local government expenditures are available for our empirical analysis. This includes expenses for outsourcing to the private sector, from conventional to modern. However, distinguishing them in the dataset is difficult. Although such a data constraint is a problem, it is evident that conventional types of outsourcing have been implemented in almost all local governments (Nikkei Research Institute of Industry and Regional Economy, 2004). Presumably, expenses for such conventional types of outsourcing remain constant. Also, a disparity in the proportion of outsourcing expenses to overall expenditures is caused by the difference in the degree to which modern outsourcing is practiced and believed to achieve cost efficiency and improve service provision quality.

We use a unique set of indices as proxies for local governments' attitudinal and behavioral awareness of administrative reform. Indices are obtained from the evaluation report issued every two years by Nikkei Research Institute of Industry and Regional Economy. As it is time consuming for local governments to review and reconstruct administrative structures and resources to document efficiency and transparency, indices for 2002 are used in our analysis. Indices are analyzed and rated by fifteen key quantitative and qualitative key indicators. Each indicator is given an individual weighting. The final composite rating ranges on a scale of 30 to 80, with nine as the criterion of progress toward administrative reform on each indicator. These numerical ratings correspond to alphabetical ratings (AAA, AA, A, BBB, BB, B, CCC, CC, C). For reference, the indicators of each index include the following:

- *Index for Transparency*: The existence of an information disclosure system, the existence of freedom of information disclosure for extra-governmental affiliated bodies, the existence of appointments of private sector experts as local government auditors, etc.
- *Index for Efficiency*: The state of implementing the administrative evaluation system, the existence of calculated financial statements of administrative costs,

- the existence of a system reflecting financial statements to an administrative comprehensive evaluation system, methods for making out a balance sheet, etc.
- *Index for Civic Engagement*: Ensuring public comments are included in policy formation, the state of open recruitment of civic commissioners in local government councils, the state of enactment of the NPO tax support system, etc.

Table 1: Descriptive statistics

	Observation	Mean	Standard	Minimum	Maximum
Percentage of outsourcing expenses	707	6.336	2.167	1.470	14.560
Experience of outsourcing to NPOs	399	0.729	0.445	0	1
Local government not receiving local allocation tax	839	0.288	0.453	0	1
Debt expenditure ratio	646	15.373	4.036	3.8	32.5
Population	788	137249.800	246615.200	5221	3579628
Population squared	788	7.96E+10	5.87E+11	2.73E+07	1.28E+13
Population density	785	1965.282	2406.280	79.09122	14002
Percentage of population aged under 15	788	13.939	1.508	7.861	20.464
Percentage of population aged over 65	788	22.243	5.287	9.145	39.689
Neighborhood effect (outsourcing)	831	6.713	1.225	4.364	9.867
Neighborhood effect (NPO)	831	0.433	0.992	0	5.647
Administrative reform index (transparency)	621	47.222	9.387	30	70
Administrative reform index (efficiency)	620	47.5	9.441	30	70
Administrative reform index (citizen participation)	620	47	9.610	35	80
Former occupation of mayor	635	62.195	8.103	36	82
Percentage of enterprises in tertiary industry	704	0.634	0.107	-0.692	0.864
Number of NPOs per 100 thousand people	653	10.122	5.936	0	37.683

Data sources: Cabinet Office of Government of Japan (n.d.), Ministry of Internal Affairs and Communications (n.d.a), Ministry of Internal Affairs and Communications (n.d.b), Mitsubishi Research Institute (2007), Nikkei Research Institute of Industry and Regional Economy (2004).

It is necessary to define “neighborhood” to generate an outsourcing variable representing the neighborhood effect on individual local governments. Here, municipal cities in the same prefecture (Japan is divided into 47 prefectures) are defined as the reference group for public service provision and the process of policy-making. A coefficient of outsourcing expenses variation represents outsourcing measurements by neighboring local governments. If a local government uses its neighboring local governments in the same prefecture as a reference, the disparity among local governments in the same prefecture may be less than among all local governments (including other prefectures).

We adopted several other variables for our estimates with a review of prior research, study of trends on PPP policies and the current status of Japanese local governments and nonprofit organizations, and consideration of data availability. The descriptive statistics of variables used in the following two estimates are shown in Table 1

Several hypotheses are tested. First, we expect that local governments not receiving local allocation tax grants will outsource more to reduce administrative costs and maintain fiscal integrity. We also expect that local governments with higher proportions of debt-expenditure ratios will outsource more to reduce costs. Second, we expect a strategic interaction effect where local governments tend to respond positively to their neighbors' practices. Third, government awareness and efforts in performing administrative reform and development presumably encourages use of the private sector. Therefore, it is anticipated that local governments with a higher score on the administrative reform indices outsource more. Fourth, mayors coming from the private sector are expected to be highly-motivated to outsource because they recognize the need to reduce costs, provide quality, meet local demands, and assess and improve local government performance. Fifth, we expect that greater prominence of the private sector in a given region increases outsourcing since local governments have access to more potential partners for PPP practices.

WHAT FACTORS PROMOTE PPP IN THE LOCAL GOVERNMENT?

Empirical model

We examine the factors affecting the level of outsourcing as a means of PPP using a Feasible Generalized Least Square model (see Appendix). The dependent variable is a local government's percentage of outsourcing expenses measured as a natural log. The independent variables include financial characteristics of local government such as a dummy variable representing local government not receiving local allocation tax, the debt-expenditure ratio, and socio-demographic characteristics such as population, squared population, population density, percentage of population aged under 15 and over 65, percentage of enterprises in tertiary industry, and number of NPOs. Also, variables representing local government attitudes toward administrative reform are included in the list of independent variables, as well as the level of outsourcing of neighboring local governments and a dummy variable representing the former occupation of the mayor.

Estimation results

Results are reported in Table 2. The coefficient of debt-expenditure ratio has negative explanatory power on the level of outsourcing. The smaller the debt-expenditure ratio becomes, the more positive local government is about outsourcing. Thus, our hypothesis that a higher debt-expenditure ratio promotes outsourcing has been rejected. Also, the coefficient of the dummy variable

representing local government not receiving local allocation tax is positive and statistically significant. This is another result indicating that local governments do not favor outsourcing if they are in poor fiscal condition. The central government is compelled to provide post-compensation of the fiscal deficits of local governments. As a result, local governments expect such financial support from the central government, and thus are not motivated to promote outsourcing. Thus, government-financed bailouts of inefficient local public finance may create a moral challenge. The magnitudes of both variables are small: if the debt-expenditure ratio increases by 1%, the percentage of outsourcing expenses is predicted to decrease by 0.01%, and the percentage of outsourcing expenses for local governments not receiving local allocation tax is 0.07% more than that of local governments receiving local allocation tax on average. Considering the average proportion of outsourcing expenses of all municipal local governments, as well as the minimum and maximum levels, these variables still have some influence on the level of outsourcing.

Table 2: Estimation result of outsourcing function

Percentage of outsourcing expenses	Coefficient	S.E.
Constant	-0.0858 ***	0.0278
Local government not receiving local allocation tax	0.0701 *	0.0402
Debt expenditure ratio	-0.0105 ***	0.0032
Population	0.4259 **	0.1816
Population squared	-0.0222 ***	0.0072
Population density	0.0192	0.0191
Percentage of population aged under 15	-0.0241 *	0.0124
Percentage of population aged over 65	-0.0293 ***	0.0053
Neighborhood effect	0.0503 ***	0.012
Administrative reform index (transparency)	0.0034 *	0.0018
Administrative reform index (efficiency)	0.0071 ***	0.0015
Administrative reform index (citizen participation)	-0.0020	0.0014
Former occupation of mayor	0.0018 *	0.0011
Percentage of enterprises in tertiary industry	0.1335 *	0.0765
Number of NPOs per 100 thousand people	0.0399 *	0.0243
Observations	589	
R-squared	0.4219	
F-statistics	31.65 ***	
Ramsey's RESET	0.38	

RESET is conducted using powers of the fitted values of the independent variable.

* significant at 10%; ** significant at 5%; *** significant at 1%

The coefficient of the neighborhood effect is statistically significant, and positively affects local government decisions on the level of outsourcing. Local governments have incentives for reaching at least the average standard level of outsourcing, responding to the average level of outsourcing of neighboring local governments. However, the magnitude of the coefficient is small. Nakazawa (2007) mentions that the impact of the neighborhood effect may be different among public services due to the level of availability of various service providers and the governments' policy priorities. In this sense, we should interpret the result cautiously since the services outsourced include a range of types.

Three administrative reform indices represent attitudinal and behavioral awareness of local governments in promoting PPP. The coefficients of administrative reform indices of transparency and efficiency are statistically significant, and their signs indicate that outsourcing is promoted more in local governments with higher scores on these two indices. Local governments highly motivated to review and improve their administrative and organizational structures and systems manifest the idea of New Public Management, implementing specific approaches such as outsourcing, privatization, and administrative evaluation systems. Local governments that reform administrative practices and financial structures to raise transparency and efficiency may be more progressive in promoting outsourcing. The coefficient of the index for administrative efficiency is larger than the coefficient for administrative transparency. The index for efficiency relates to measuring and evaluating performance and adopting [government] employee proposals, whereas the index for transparency relates to structural changes and accountability. Local governments anticipate that PPP practice improves efficiency, reduces spending and raises the quality of public service. This result indicates that local governments concerned with improving public services by assessing the costs-benefits of their performance are inclined to outsource. The coefficient of the mayor's former occupation is positive and statistically significant. Local governments tend to outsource more if their mayors are from the private sector rather than the public sector. Presumably, mayors from the private sector are concerned about efficiency and profitability and providing public services in a business-like way. They are positive about implementing ideas such as market competition and performance-based evaluation. They are more likely to use private sector power and potential to affect efficient public administration and improved public service quality. As well, mayors from the private sector tend to reduce local government control.

We are also interested in how the distribution of profit-making enterprises and the number of NPOs influence local government decisions on PPP practice. The estimation results show positive signs for the percentage of enterprises in tertiary industries and the number of NPOs. This suggests that outsourcing is

more probable in local governments when well-distributed commercial enterprises and NPOs are visible as partners for PPP practice. The magnitude of the coefficient of NPOs is such that if the number of NPOs increases by 1 unit per one hundred thousand people, the percentage of outsourcing expenses is expected to increase by 0.04%. Compared with the coefficient of the percentage of enterprises in tertiary industries, this is small but it is still a substantial impact, considering that NPOs in Japan are still developing into sustainable and capable service providers.

WHAT TYPES OF LOCAL GOVERNMENTS ARE MORE HIGHLY MOTIVATED TO OUTSOURCE TO NPOS?

Estimation model

One of the objectives of our analysis is to examine the propensity of local governments to partner and collaborate with nonprofit organizations in public service provision. Thus, we also examine the characteristics of local governments that affect their decisions to outsource to NPOs. The dependent variable is binary (to outsource or not), and a probit model is therefore employed for the estimation (see Appendix). Independent variables include local government financial and socio-demographic traits as well as the attitudinal and political characteristics employed in the previous estimation.

Estimation results

The estimation result is reported in Table 3. The dummy variable representing local government not receiving local allocation tax is significantly positive, whereas the coefficient of the debt-expenditure ratio is negative but not significant. These results suggest that local governments in good financial condition tend to be more positive about partnerships with NPOs. The marginal effect is relatively large: local governments not receiving local allocation tax spend an average of 12.8% more on outsourcing than those receiving local allocation tax. Local allocation tax is distributed according to the difference between basic fiscal demands, for example, the amount of general financial resources required by a local government to maintain the standard level of administrative public services and basic local tax revenue. Local governments not receiving local allocation tax must increase tax revenues or reduce spending on public service provision. Hence, the relatively large marginal effect can have two possible interpretations. One is that local governments with sufficient or substantial tax revenue secure independent revenue sources to finance their administrative services, which makes them more positive and flexible in their decisions on using the private

sector. Another is that such local governments with a decrease of expenditure on administrative public services maintain or reduce their public spending, which encourages them to outsource. Local governments in large metropolitan cities with the resource of abundant tourism generally do not receive local allocation tax. NPOs are predominantly located in urban areas where tourism flourishes, and their presence is significant. This is an environment where local governments not receiving local allocation tax are more likely to outsource.

Table 3: Estimation result of decision of outsourcing to NPOs

Experience of outsourcing to NPOs	Marginal effect	Robust S.E.
Local government not receiving local allocation tax	0.1280 ***	0.0379
Debt expenditure ratio	-0.0059	0.0050
Population	0.1900	0.7269
Population squared	-0.0037	0.0313
Population density	0.0085	0.0282
Percentage of population aged under 15	0.0213 *	0.0117
Percentage of population aged over 65	0.0095 *	0.0052
Neighborhood effect	0.0963 *	0.0562
Administrative reform index (transparency)	0.0168	0.0131
Administrative reform index (efficiency)	-0.0024	0.0126
Administrative reform index (citizen participation)	0.0308 ***	0.0112
Former occupation of mayor	0.0091 ***	0.0025
Percentage of enterprises in tertiary industry	0.0124	0.1194
Number of NPOs per 100 thousand people	0.0152 ***	0.0042
Observations	302	
Log likelihood	-108.2187	
Wald statistics	66.96 ***	
Pseudo R-squared	0.32	

* significant at 10%; ** significant at 5%; *** significant at 1%

The positive signs of the population percentage coefficients aged under 15 and aged over 65 indicate that outsourcing to NPOs is favored by local governments where a greater diversity of demands for public services exists. This result makes sense because populations served by these governments have higher demands for social welfare and health public services.

The neighborhood effect also positively and significantly influences local governments' outsourcing to NPOs. The results suggest that local governments exploring PPP become increasingly aware of the actions of neighborhood local governments in partnership with NPOs. Also, the coefficient of the number of NPOs is positive and statistically significant. This suggests that the higher the

number of public service provider NPOs, the easier it is for local governments to participate in PPP.

The only administrative reform index that positively and significantly influences local government outsourcing is the citizen participation indices. Thus, local governments that are more highly motivated about enacting regulations for supporting NPOs are also positive about using NPOs. Interestingly, indices representing administrative transparency and efficiency are not statistically significant influences on outsourcing to NPOs.

Here again, the distribution of commercial enterprises and NPOs is of primary interest. The coefficients on the percentage of enterprises in tertiary industries and on the number of NPOs are positive. However, only the number of NPOs is statistically significant. It is conceivable that local governments with more experience outsourcing to NPOs view NPOs as available partners for PPP-oriented service provisions.

DISCUSSION

This paper focuses on PPP and government-nonprofit relations, an issue of growing interest in Japan as well as in many other countries. We sought to understand the behavior of local governments regarding PPP by empirical analysis using statistics of public finance. In particular, we are interested in the significant factors that promote outsourcing in local governments. We investigated local governments with NPO outsourcing experiences. We now turn to policy implications based on these two sets of estimation results.

We found that geographical and demographical factors have interesting influences on PPP. In Japan, when the population increases beyond a certain number, local governments have authority over a wider range of services. They then expand discretionary administration for more projects. As a result, larger local governments have an incentive to advance administration reform, including PPP. The estimation results also indicate that demographic factors including population percentages both under 15 and over 65 negatively affect the amount of outsourcing. Social services for children and the elderly particularly need to be provisioned by local governments, not by NPOs. However, our results show that nonprofits play certain roles in PPP. Specifically, the number of NPOs in the area affects the outsourcing experiences of local governments positively. Nonprofit are players in the niche industry of special programs for children and the elderly. In Japan, NPOs are viewed in this way.

We explain the effects of budgetary conditions, administrative orientation, mayors' characteristics, and neighbors' behavior on the local governments. We expected budgetary conditions and public debt to increase PPP implementation; however, results indicate the opposite effect. This may be the influence of soft

budget constraints on local governments' decision-making. More precisely, the system of tax allocation reduces the incentive for local governments to decrease expenditures through outsourcing. (Kornai et al., 2003; Akai et al., 2003).

We also found that transparency and efficiency of local government administration positively affect local government outsourcing to the private sector. Recently, greater financial assistance was directed to local governments to avoid their collapse. This development encourages local governments to improve their transparency and efficiency behavior. Increasingly, people from the private sector are elected as mayors, indicating that citizens tend to favor representatives who favor reform. These trends may indirectly affect the promotion of PPP.

Our results indicate that securing civic participation in the policymaking process promotes outsourcing. Civic participation provides opportunities for NPOs as grassroots organizations to advocate. This may lead to partnerships with local governments. In addition, our results suggest that mayors from the private sector promote the role of nonprofits.

Though, not all local governments are motivated to cooperate with nonprofits, they may be affected by neighboring local governments which are so motivated. More precisely, local governments try to achieve the average standard of services of neighboring governments in order to avoid residents' complaints. Also, PPP may be influenced by the neighborhood effect in two ways. First, local governments may maintain low levels of PPP promotion when no single government promotes PPP. Second, local governments promote PPP when other local governments increase the average standard. We believe our results confirm the latter.

Our results show that the number of NPOs positively affects both the percentage and the level of outsourcing to NPOs. In Japan, NPOs have grown rapidly in number since 1998, but have been unevenly distributed geographically. Large differences in the number of NPOs among cities have caused gaps in understanding of the role of NPOs. Thus, the number of NPOs may positively affect the awareness and attitudes of local governments toward NPOs as partners for PPP. However, our analysis suggests that NPOs should have financial and managerial capacity to develop strong and sustainable relations with local governments. They can, however, become public service providers as they develop these capacities.

Various financial, political and external factors influence the decisions and performance of local governments. This study examined factors of exploring PPP practice in Japan not studied before. Specifically, we provide new findings for competition and interaction between local municipalities. Despite an emerging awareness of NPOs as a potential partner for public service provision, there are few empirical studies in Japan on this subject.

In Japan, most NPOs are financially vulnerable though social supports such as memberships, charitable giving, and private and public funds are growing. Due to this, many local government bureaucrats question the effectiveness of NPOs to serve as partners for PPP. In view of current policy developments, we anticipate NPOs will improve financially. We need a future-oriented vision of suitable PPP governance that will overcome the issues created by more diversified society.

The conclusions of this study are limited by data used for the analysis. We used a cross-sectional dataset, so issues of causality remain. Nonetheless, considering the components and indicators of each administrative reform index employed here, as well as previous research on public governance and local government behavior, we comfortably assume that local governments' positive attitudes and efforts toward administrative reform lead to outsourcing and partnerships with NPOs. It is conceivable that local governments' favorable attitudes toward the practice of public private partnership will develop stronger nonprofits to serve as reliable and sustainable service providers. Therefore, we need to interpret and evaluate the findings of our research carefully and leave room for further exploration. Also, with cross-sectional data, it is impossible to eliminate potential omitted factors that can influence local government characteristics and their outsourcing choices. We cannot generalize the results beyond the year targeted here. Future empirical research using panel data will permit greater understanding of these remaining issues.

APPENDIX

Model specification

When an estimation of spatial interactions is conducted, there are issues to expect; namely, a bias in the estimated regression coefficient of the variable representing neighborhood effect and its standard error. First, there is the problem of endogeneity in which the outsourcing level of individual local governments is simultaneously decided by that of neighboring local governments. However, since public fiscal decision-making is made during budget development, a model of joint decision may not be reasonable. Therefore, we consider that local governments decide their level of outsourcing referring to that of local governments in the previous year, and employ a variable lagged period, treated as an exogenous variable so as to avoid the endogeneity problem. Second, another problem is that spatial interaction can exist in the error term of the econometric model which we cannot capture completely even after employing an independent variable representing social interaction. This can cause inconsistency of variables if OLS estimation is conducted. Researchers have coped with this problem by employing estimation models such as generalized least square (GLS)

and maximum-likelihood procedure in the spatial econometric analysis (Anselin, 1998; Anselin et.al., 2004; Nishikawa & Hayashi, 2006). However, there may be factors causing heteroscedasticity apart from issues on spatial interactions which is extremely difficult to specify. Also, giving due consideration to the unknown functional form of heteroscedasticity expressed by independent variables, the weights given are Feasible Generalized Least Square disturbance terms for our estimation. The FGLS estimator is consistent and asymptotically more efficient than the OLS estimator.

$$Y_i = \lambda + \eta_1 X'_i + \eta_2 \sum_{j \neq i} w_j \bar{K}_j + \mu_i \quad (1)$$

Y_i is a local government i 's percentage of outsourcing expenses measured in a natural log, and X'_i denotes a vector of independent variables. $\bar{K}_j$ denotes the weighted level of outsourcing of neighboring local governments j representing the neighborhood effect on local government i . A coefficient of variance of outsourcing expense is used as its proxy, and the weight w_j is computed by $1/n_i$, and w_i is zero. n_i is the number of local governments other than i 's local government located in the same prefectures as i 's local government. The weight w_j is admeasured in evenly to each local government within the same prefecture, and hence $\sum_{j \neq i} w_j \bar{K}_j$ represents the mean value of the level of proportion of outsourcing of local governments within the prefecture.

The LM statistics of the equation (1) by OLS regression is $LM = 241.85$, and this is the outcome of a chi-square random variable at the 1% critical value with 14 degrees of freedom. It is very strong evidence of heteroscedasticity.

We also examine what characteristics of local governments affect their decision to outsource to NPOs. The dependent variable is binary, and a probit model is therefore employed for the estimation.

$$\begin{aligned} y_i^* &= \alpha + \beta X_i + \varepsilon_i \\ \varepsilon_i &\sim i.i.d.(0, \sigma^2) \\ y_i &= 1 \text{ if } y_i^* \geq 0, \quad 0 \text{ if } y_i^* < 0 \end{aligned} \quad (2)$$

The marginal effects are estimated as follows;

$$\begin{aligned} \partial P(y_i = 1 | \chi_{i,k}) / \partial \chi_{i,k} &= \partial F(X_i \beta) / \chi_{i,k} \cdot \beta_k = \phi(X_i \beta) \cdot \beta_k \\ \phi(X_i \beta) &= \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{1}{2}(X_i \beta)^2\right) \end{aligned} \quad (3)$$

y_i^* is a latent variable representing the experience of outsourcing to NPOs, and X_i denotes local governments' economic and geographic variables. It also includes

the number of NPOs, neighborhood effects, local governments' administrative reform indices, and local governments' political traits.

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