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DOES CHIEF EXECUTIVE'S EXPERIENCE MODERATE CONSOLIDATION'S IMPACT ON MUNICIPAL PERFORMANCE

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ABSTRACT

A profound structural change is municipal merger. This come about through absorption of small units or merge of units to create a new entity. Both are intended to improve efficiency by taking advantage of economies of scale and scope. However, consolidation may temporarily and negatively affect other dimensions of performance. Nevertheless, experienced chief executives should mitigate the transitional challenges. This study tests the moderating effect of chief executive's public experience on the consolidation-performance relationship. This proposition is tested using data for all the 807 city-level Japanese municipalities for the 2006-2010 period. Two dimensions of performance are studied: efficiency in operational costs, and effectiveness in revenue collection. Findings reveal that merger through municipal absorption increases efficiency in operational costs but reduces revenue expansion. Merger through creation of a new municipality reduces municipal own revenue collection. Chief executive's past experience neither mitigate nor accelerate the effects of municipal consolidation on performance.

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Introduction

Worldwide, scholars and practitioners have searched for the factors and practices that improve governmental performance. This search has intensified since the early 1980s with the advent of New Public Management (Osborne and Gaebler, 1992), which generate greater concern for government performance and led to the adoption of market practices (Hood, 1991, Walker et al., 2011). As a result, private sector practices and strategies have been promoted and implemented in public organizations with the goal of boosting performance. One of these strategies involves changes in the organizational structure such as consolidating two or more organizations into a single one in order to capitalize on the potential benefits of both economies of scale and combined human resource and thus to boost performance (Hirsch, 1967, Lomax, 1952, Whetten, 1978).

A profound change in public organizational structure is municipal merger.[1]This may come about through public organizations absorbing other small units or merging with additional units to create new entities. Both types of consolidation are intended to improve efficiency by taking advantage of economies of scale and scope (Lomax, 1952, Whetten, 1978, Christenson and Sachs, 1980). Municipal merger is uncommon in the U.S. (Feiock and Carr, 2000, Leland and Thurmaier, 2005, Savitch and Vogel, 2004). However, it has been a major reform in other developed countries. In the last 15 years, municipal consolidations have been planned or implemented in half of OECD member countries (OECD, 2014).

While consolidation may improve efficiency, this restructuring may not always beneficial for performance due to the emergence of coordination problems, bureaucratic distance, and administrative overload (Tullock, 1965), as well as delays in both service delivery and response to changes in environment and citizens' demands (Andrews and Boyne, 2012). Moreover, there exists the possibility that consolidation benefits organizational efficiency but hinders other dimensions of performance such as equity, effectiveness, output quality, responsiveness, etc.

On the other hand, public management research has consistently argued for the performance effects of chief executives' background experience. The notion is that experience endows managers with autonomy, decisiveness, networking skills, intuitive and technical knowledge, and how-to wisdom for decision-making (Doig, 1990, Hambrick and Mason, 1984, Lynn, 1981, Lynn, 1996, Salanick and Pfeffer, 1977, Wilson and Doig, 2000, Wernerfelt, 1984). In the public sector, studies

[1] In this paper, the words "municipal consolidation", "merger", and "amalgamation" are used interchangeably.

have reported considerable evidence for the direct effects of top managers' credentials on organizational performance (Avellaneda, 2009, Avellaneda, 2012, Boyne and Dahya, 2002, Boyne and Meier, 2009, Boyne et al., 2011, Carmeli, 2004, O'Toole and Meier, 2003, Ricucci, 1995, Petrovsky et al., 2015). By contrast, scarce attention has been given to how chief executives' background experience may moderate the impact that structural changes may have on organizational performance. Specifically, we contend that when organizations undergo a consolidation, the expected performance impacts of a structural reform are moderated by the chief executive's background experience. Experienced chief executives are expected to mitigate the negative impacts of structural reforms by taking advantage of their acquired craft and knowledge when dealing with new and unforeseen challenges.

We test the direct effect of consolidation as well as the moderating effect of chief executive's background experience on the consolidation -performance relationship at the municipal level. Specifically, we focus on Japanese municipal mergers and mayoral experience and expertise. Japanese municipalities are appropriate settings because many of these mayor-led local governments have undergone a change in their structural context by (1) absorbing other localities and/or (2) merging with other localities to create new municipalities. Indeed, the number of all levels of Japanese municipalities (including cities, towns and villages) decreased from 3,229 in 1999 to 1,727 in 2010. We use a data set covering all the 807 city-level Japanese municipalities during the 2006-2010 period to test the moderating effects of chief executive's background experience on the consolidation-performance relationship.

Three indicators of municipal performance are studied: (1) efficiency in operational costs, (2) effectiveness in revenue collection through non-tax sources, and (3) effectiveness in property tax collection. After controlling for political and economic factors, we find that municipal merger through absorption of localities increases efficiency in operational costs but reduces revenue expansion through non-tax sources. Municipal merger through a creation of new municipality reduces both municipal own revenue collection through both non-tax sources and property tax collection. Furthermore, chief executive's previous experience neither mitigate nor accelerate the effects of municipal consolidation on performance. These results have practical implications for public management by suggesting that the impact of structural reform on performance varies depending on both the dimension of performance that is being assessed as well as the nature of structural reform (absorption or creation of a new municipality).

This research contributes to the public management literature in three ways. First, the study adds to the understanding the influence of both chief executives and structural reform in local govern-

ments. Second, by testing the propositions across two dimensions of performance (efficiency and effectiveness), this research explores whether the effects of both managerial attributes and structural change vary across performance dimensions. Third, in addition to testing linear relations, this study assesses the indirect or moderating effects of managerial quality on the structural reform-performance relationship.

This study is organized into five sections. The first section introduces the concepts of consolidation and executive/managerial attributes, provides the rationale for testing these characteristics and derives the testable hypotheses. The second section provides background information on Japanese municipalities and their experience with municipal merge/consolidation. The third section describes the research design and variable operationalization, followed by a fourth section containing results and analysis. The fifth section presents conclusions, limitations, and suggestions for future research.

The Impact of Consolidation on Performance

Municipal merge/consolidation/amalgamation is an administrative and structural reform, whose implementation can be either mandatory or voluntary. Consolidation means "[t]he action or process of combining a number of things into a single more effective or coherent whole"(Oxford University Press, 2016). Consequently, municipal consolidation reduces the number of units by combining two or more municipalities. The resulting consolidated units will increase their scale in terms of area and population. Municipal amalgamation has been common in developed countries such as Australia, Denmark, Finland, the United States, and Japan(OECD, 2014). On the contrary, transitional economies have opted for fragmentation(Avellaneda and Gomes, 2015).

The promoters of consolidation contend that aggregating small units improves service coordination and produces economies of scale and scope(Christenson and Sachs, 1980, Hirsch, 1968, Lomax, 1952, Shepherd, 1990, Whetten, 1978).These arguments assert that larger organizations (1) have greater control over the external environment (Pfeffer and Salancik, 1978); (2) spread administrative costs across a larger set of services(Stigler, 1958); (3) avoid administrative duplication (Andrews and Boyne 2009; Lomax 1952); and (4) lower input prices through their greater purchasing power (Andrews and Boyne 2009). Therefore, municipal consolidation should lead to efficiency in administrative/operational costs.

Empirical evidence about the benefits of consolidation is however inconclusive (Allers and Geertsema, 2014, Vojnovic, 2000, Reingewertz, 2012). Holzer et al.'s review of 65 studies related to municipal size and performance states that "there is little correlation between size and efficiency for municipalities with populations between 25,000 and 250,000," and "larger municipalities with populations over 250,000 are clearly less efficient" (2009, 1). Likewise, Boyne's review (2003) of 23 studies testing the size–performance relationship in public organizations finds that the results are neither robust nor conclusive. Given that most of the existing empirical work has been done in the United States and European countries, this study presents an additional tests of the administrative efficiency of municipal consolidation in the Japanese context. Therefore,

H1a: Municipal consolidation is expected to be positively correlated to performance in terms of efficiency in operational costs

On the other hand, in the 1980s, New Public Management scholars, along with public choice theorists, argue against consolidation, for it hinders government responsiveness by (1) reducing government–citizen proximity(Pollitt et al., 1998); (2) discoursing heterogeneity in service provision (Grosskopf and Yaisawarng, 1990), (3) increasing bureaucratic absenteeism (Bhatti et al., 2015), coordination problems, administrative delays and duplication (Tullock 1965), and (5) failing to respond to changed environments (Andrews and Boyne 2012). As mentioned above, empirical evidence supports neither side of the story.

However, municipal consolidation should positively contribute to expansion of revenue collection for several reasons. For one, consolidation automatically increases both the number of tax payers and the size of the area being taxed. For two, merged units should capitalize on both administrative expertise and experience of their pooled human capital as well as on the combined equipment, facilities, and technological assets. Consequently,

H1b: Municipal consolidation is expected to be positively correlated to performance in terms of revenue expansion

Chief Executives' Background

The background of chief executives in public settings vary greatly, resulting in significant implications for organizational performance (Avellaneda, 2012, Becker and Gerhart, 1996, Fernandez, 2005, Moore, 1995, Meier and O'Toole, 2002, O'toole and Meier, 1999). According to Bhagat, Bolton, and Subramanian (2010, 1), "CEO ability is the composition of observable and quantifiable

characteristics such as education and work experience as well as unobservable and potentially non-quantifiable characteristics such as leadership and team-building skills." Moreover, according to Hambrick and Mason's "upper echelons theory" (1984, 193), organizational outcomes reflect the values and cognitive frames of powerful actors in the organization, and managers' attributes, such as education and sectorial background, serve as proxies for their cognitive frames (see also (Finkelstein and Hambrick (1996), Hambrick (2007)).[2] This research focuses on two observable chief executive attributes –experience and expertise – and considers their moderating effect on the government performance-consolidation relationship.

Public sector experience: Some scholars argue that education is not an appropriate proxy for CEO ability (Bhagat et al., 2010), while others claim that managers' experience acquired from uncodified, intuitive, and artistic knowledge also influences performance (Lynn, 1996). The Resource-Based View highlights the key role that an organization's resources have on performance (Wernerfelt, 1984). Chief executives' experience contributes to the sustainable competitive advantage of the organization given its uniqueness and distinctiveness (Barney, 1991, Wernerfelt, 1984). Experience likely affects a leader's performance by (a) providing job-related knowledge; (b) empowering leaders to cope with demanding conditions; (c) granting self-confidence and control of situations (Fiedler 1987, 32); (d) increasing ability to deal with task difficult (Littlepage et al. 1997, 134), (e) familiarizing leaders with procedures, strategies and key actors; and (f) facilitating decision-making processes. Empirical evidence of the experience-performance relationship in the public sector is inconclusive. Fernandez (2005)'s systematic study of the influence of superintendents' total years of experience on school performance in the USA, for instance, yields no statistical evidence for the expected positive relationship. On the other hand, Avellaneda and Gomes' (2015) study of Brazilian municipalities reports that mayors' age, a proxy for experience, is positively correlated with property tax collection. The inconclusiveness of results calls for more research on the influence of a chief executive's experience on performance, this time in an understudied developed setting such as Japanese municipalities. Thus,

H2a: Organizations whose chief executives have public sector experience will have higher performance (e.g., in administrative efficiency and effectiveness in increasing revenue collection) than those whose chief executives do not.

[2] Demographic indicators of executives and top management teams have been employed to explain organizational performance in the private (Boker 1997, Matsunaga and Yeung 2008; Bamber et al. 2008; D'Aveni 1990) and public sectors (Carmeli 2004, 2006; Avellaneda 2009a,b, 2012; Sebaa et al. 2009; Damanpour and Schneider's 2009; Meier and O'Toole 2002).

Expertise: According to Ericsson et al. (1993), expertise refers to the "domain-specific skills and knowledge that are important to attainment of expert performance" (365), and "is acquired slowly over a very long time as a result of practice" (366). That is, with extensive practice a chief executive can become very good at a particular thing or job, whether technical, non-technical, or both. "Experts are faster and more accurate… and their memory for representative stimuli from their domain is vastly superior to that of lesser experts, especially for briefly presented stimuli" (Ericsson et al. 1993, 365). Experience on a particular task leads chief executives to accumulate (1) wisdom, (2) in-depth knowledge, (3) the ability to respond to situations, and (4) group experience, which together constitute expertise (Avellaneda 2016, see also Littlepage et al. 1997). Empirical evidence has shown that experts' superior performance is acquired through long experience, and that the effect of practice on performance is large (Ericsson et al. 1993: 365–368, see also Glaser et al. (1988)). Moreover, expertise also contributes to the organization's competitive advantage since "[a] member's expertise is an important resource that can greatly impact on group performance" (Littlepage et al. 1997: 133; see also Laughlin (1980). Therefore,

H2b: The longer a chief executive has been performing the same task, the higher the organizational performance (e.g., in administrative efficiency and effectiveness in increasing revenue collection)

The Moderating Role of Chief Executive's Experience on the Consolidation-Performance Relationship

As mentioned before, empirical studies testing the effect of municipal consolidation on performance have led to inconsistent results. This inconsistency may be due to the fact that existing studies have focused on the direct rather than the indirect effects of consolidation. The consolidation of units entails new organizational demands, structure, culture, and context as well as a more diverse group of customers. Managing a larger population, satisfying the needs of a more demographically and socio-economic heterogeneous target, and dealing with a more diverse economy and set of interest groups are some of the new job demands arising from consolidation. Similarly, supervising a larger and more diverse bureaucracy; restructuring organizational units; coordinating with different bureaucrats, who used to work in different cultural environments; bargaining with more members and more ideologies in the city council; and managing a larger budget are some of the new organizational demands resulting from consolidation.

Within this new structural context, the expected positive contributions of consolidation on performance may not be seen in the first place. Indeed, instead of positive effects, consolidation may

result in negative performance, for bureaucrats may not be fitted to undertake the new task, which calls for a transition period of learning and adjustment. Kristof (1996) defines person-job fit as "the fit between the abilities of a person and the demands of a job (i.e., demands-abilities)," where job refers to the tasks and characteristics of the tasks a person is expected to accomplish (Kristof 1996, 8). However, the potential negative impact of consolidation on municipal performance should be mitigated by a chief executives' public sector experience and expertise,

The moderating impact of a chief executive's background experience on the consolidation-performance relationship may work through several mechanisms. For instance, chief executives may dedicate time to outreaching activities to meet new actors, interest groups, and constituents. In addition, experienced chief executive should capitalize on their accumulated knowledge to be more proactive and innovative in dealing with new challenges posed by consolidation. Finally, experienced managers are expected to have more connections in other entities and levels of governments, which should facilitate both decision-making and implementation of policies and programs. In sum, chief executives of municipalities that have experienced a merge operate in a different context than those whose municipalities that have not undergone a merge or consolidation. Although some studies have tested the effect of managerial quality (e.g., experience and expertise) on performance (Andrews and Boyne, 2009), to our knowledge, empirical studies testing the conditioning effect of managerial quality on the consolidation-performance relationship are scarce. Our study fills the gap in the literature and seeks to contribute to our understanding of the conditioning effect of managerial quality and expertise on the consolidation-performance relationship. Therefore,

H3: The chief executive's experience and expertise condition the municipal consolidation–performance relationship.

Case Selection: Japanese Local Governments

In this study, we focus on the local governments of Japan to test our hypotheses. The unit of analysis is municipality-year. We select Japan for the following reasons. First, Japanese considerable experience with municipal consolidation provides us with an excellent opportunity to test its effect on government performance. Second, data on the variables of our interest are available for all city-level municipalities, allowing us to conduct a nationwide analysis. Third, despite their long experience with democracy, Japanese local governments have been understudied. Finally, by focusing on within-country variation, institutional, historical, and macroeconomic factors are held constant, facilitating identification of local drivers of performance.

Japanese subnational governments consist of two units, prefecture (regional units) and municipality (local units). Municipalities, in turn, are categorized into cities, towns, and villages. As of April 2014, Japan has 47 prefectures and 1,718 municipalities, and of these 790 are cities, 745 are towns, and 183 are villages (Ministry of Internal Affairs and Communications, 2014). Japanese local government structure consists of the legislative branch and the executive branch. Members of local assemblies, governors, and mayors are directly elected by the people. Local assemblies have voting rights in matters including budget and ordinances, and can conduct a no-confidence vote in mayors. Mayors and local assembly members are directly elected by residents for four-year terms. Mayors cannot concurrently hold posts in the National Diet and local assembly. Mayors' rights include enacting regulations, preparing budgets, proposing bills, and appointing or dismissing municipal staff.

Japanese Municipal Structural Context: Municipal merger

Declining birthrate and tough financial conditions are among the drivers that led the Japanese central government to promote consolidation (Yokomichi, 2007). Municipal merges were conducted on a voluntary basis. However, the central government set 1,000 as the target number of municipalities and asked prefecture/regional governments to promote consolidation within their jurisdictions (Yokomichi, 2007) by providing strong financial and economic incentives. All Japanese territory is divided into municipalities, and there are no unincorporated jurisdictions or areas directly governed by a prefectural (or regional) government. Japanese municipal consolidation takes place horizontally only among cities, towns, and/or villages (all of which are municipalities). This is in contrast to the United States, in which consolidations may involve units from different levels of governments such as city-county consolidations (Feiock and Carr, 1997).

During the period of the Great Heisei Municipal Consolidation, the number of Japanese municipalities decreased from 3,229 in 1999 to 1,821 in 2006 (Yokomichi, 2007), and this number continues decreasing. Two types of consolidation have been adopted: (1) municipal absorption, in which a core municipality absorbs other partners, and (2) creation of a new municipality by merging units (Miyazaki, 2014). Through absorption, the core municipality retains both its mayor and legal status, while the absorbed municipalities forego theirs. In many cases, names of core municipalities are maintained, and city offices of core municipalities continue to serve as the headquarters for the consolidated unit. Newly created municipalities, by contrast, are granted a new legal status, and the comprising units have to decide on both a new name and office location for the created municipality (Ehime Prefecture, n.d.). The same principles generally apply for the composition of the munici-

pal council, with members of the core municipality retained in the case of annexation and with a new council formed for a new municipality. From April 1999 to April 2014, there were 649 cases of municipal consolidation:[3] 461 cases of creation of a new municipality, and 188 cases of municipal annexation.[4] Both consolidation types bring changes to local government structure, and these changes are expected to condition the managerial background effects on municipal performance.

Data Collection and Variable Operationalization

In this study the unit of analysis is the municipality-year. We target all city-level municipalities from 2006 to 2010, covering 807 cities. However, by May 2015 this number has decreased to 790 due to further consolidations taken place after 2010. As the mayoral term is four years, the panel contains data from two mayoral administrations. Towns and villages were excluded because of data unavailability on mayors' demographics and backgrounds. The two main datasets we used are 1) Japanese Research Institute for Local Government (2004-2010) and 2) Research Institute on Local Administration and Finance (2004-2010). These datasets provide information about mayors' demographic (e.g., name, age, education, job history) and political data (e.g., party affiliation, reelection times, vote share, political party's vote share). We collect data on municipal consolidation from Ministry of Internal Affairs and Communications (n.d.3). Local socioeconomic and financial data come from Ministry of Internal Affairs and Communications (2015) and Ministry of Internal Affairs and Communications (n.d.4). Our dataset covers five fiscal years from 2006 to 2010. All city-level municipalities that exist at the end of each fiscal year (2006, 2007, 2008, 2009, and 2010) are included in the dataset, numbering 807. Among city-level municipalities, 477 municipal consolidations took place from 1999 to 2010: 422 cases before 2005 and 55 cases after 2005 and before 2010. Since most of the municipal consolidations took place before 2005, our dataset, which covers 2006-2010, enables us to test how municipal consolidation conditions the mayoral ability- performance relationship few years after the merge took place. We acknowledge that comparing pre-merger and post-merger data in the post-merger unit is ideal. However, mayor's demographic and background data is not available for pre-merger municipalities in the post-merger unit. The pre-merger municipality consisted of at least two municipalities, having two mayors. We think that the averaged mayoral data at the post-merger unit is not an appropriate measurement.

[3] Among them, 582 consolidations were conducted during the period of the Great Heisei Consolidations from April 1999 to March 2006.
[4] This number includes duplicated consolidations, in which municipalities conducted municipal consolidations more than twice.

Measuring Municipal Performance

In this study, we focus on the following three measurements: efficiency in operational costs, and effectiveness in revenue expansion through (1) non-tax sources and (2) property tax collection. Revenue collection is considered an input, which is expected to lead to more both outputs and outcome. Municipal mergers were carried out mainly between the 2000-2006 period, therefore assessing outcomes with our data set covering the 2006-2010 period is premature. The first indicator of performance seeks to test the argument of administrative efficiency that comes from consolidation. This measure refers to the percentage of total municipal budget that is spent on administrative costs (e.g. salary, supplies, equipment, and other mandatory expenses). The data come from Ministry of Internal Affairs and Communications (2015).

This study also assesses performance in terms of effectiveness in revenue collection, allowing us to tests the effect of consolidation across two different dimensions of performance. Due to increasing debt and declining population and economic conditions, many Japanese local governments began to consider revenue expansion as a primary goal (Research Institute for Local Government, 2010). Major tools for revenue expansion include (1) enhancing tax revenue collection, (2) sales, (3) leases and management of municipal properties, and (4) increasing fees and charges. An amendment to the Local Autonomy Act in 2006 granted power to localities to obtain revenues by utilizing their own assets such as landed property and movable property (e.g. leasing, sales).

Effectiveness in revenue expansion is operationalized with two distinct indicators: municipal revenue collection through (1) property tax collection and (2) non-tax sources such as rents, fees, donations, sale of assets, and charges and allotments. Property collection rate is calculated as the percentage of property tax actually collected out of the amount expected to be collected. Collection of revenues through non-tax sources is reported in thousand Japanese yens per capita, and these values were obtained from Ministry of Internal Affairs and Communications (n.d.4; 2015). Table 1 provides the descriptive statistics for all the variables.

[Table 1 about here]

Independent Variables: Our key independent variables are 1) municipal consolidation and chief executives' experience and expertise. Municipal consolidation is a categorical variable, consisting of three groups. The first category is the baseline, denoting the municipalities that experience no merger in the 1999-2010 period. The second category describes whether a municipality has experienced

any consolidation through absorption. That is, if a locality absorbed at least one municipality during 1999-2010, it falls within this category. Finally, the third category represents municipalities that were created as a new municipality through consolidation of two or more units at any point during 1999-2010[5].

A chief executive's experience is assessed with mayoral experience at the state (or prefecture) and national level.[6] It is a dummy variable giving a value of "1" to those mayors who had working experience in prefectural and/or national government such as being a prefecture assembly member, National Diet member, and/or state and/or national government employee. A chief executive's expertise is captured with mayors' reelection occurrences, for long-term experience with the same task enables mayors to accumulate expertise. In Japan, mayors may be reelected for an indefinite number of terms[7]. We use a dummy variable, which gives a value of "1" to those mayors who have been reelected consecutively, at least one period; otherwise, it takes the value of "0". In order to test the conditioning effects of mayoral experience and expertise on the consolidation-performance relationship, we create interaction terms between each of the consolidation types (absorption and creation of new municipality) and each of the mayoral qualities: experience and expertise.

Control variables: This study controls for other factors expected to affect our dependent variables. We control for two political factors: 1) mayors' vote share and 2) number of political parties supporting the elected mayor in mayoral elections. Mayors' vote share is a continuous variable, reported in percentage. As many mayoral candidates run without party affiliation, we control for the number of political parties that publicly support the elected mayor. It is a continuous variable, ranging from 0 to 6. This data were s obtained from Japanese Research Institute for Local Government (2004-2010).

We control for two other factors related to the consolidation: (a) the years elapsed since the municipal consolidation took place and (b) the number of municipalities involved in each municipal consolidation. We assume that the more years have passed since the municipal consolidation took place, the more likely a municipality has been able to cope with the structural change, thus affecting its performance. Moreover, mayors' performance may improve as municipalities adjust to new administrative/organizational structures. If a municipal consolidation took place in 2004, that mu-

[5] The Japanese municipal reform began in 1999. Hence, all recent municipal mergers took place after 1999. That is why our base-year is 1999 and not 2006--which is the first year covered in our data set.
[6] Our dataset contains mayor's education information. However, we dropped the education variable because there is little variation in mayor's education.
[7] The Ministry of Internal Affairs and Communications established a study group in 2006 to consider establishing term limits. However, very few municipalities have established their own term limit ordinances.

nicipality receives a value of "3" in 2006, "4" for 2007, "5" for 2008, "6" for 2009, and "7" for 2010. If no consolidation has taken place in a particular municipality, for any particular year, the municipality-year observation gets a value of "0." The numbers of municipalities involved in the consolidation should also matter for performance. Having more merger partners may generate more coordination problems. If municipal consolidation did not take place, we code "1" for the municipality. If a municipal consolidation took place in 2004 and involved five municipalities, for instance, we give a value of "5" for that municipality in years 2006-2010.[8]

We also control for the percentage of previous year's total revenues (out of total municipal revenue) that come from transfers. The expectation is that the more a municipality relies on transfers, the fewer incentives a municipality has to increase its own revenue collection through both non-tax sources and property tax collection. The specification models for the second and third dependent variables also control for the amount of municipal land property, as this is the area available for leasing or selling. This measure is in m^2. Municipal population (logged) as a control is included in the specification model for the property tax collection. This variable is not included in the other models, for their dependent variables are already standardized by population size. As performance may change year by year, the three estimated models include year dummies. Table 2 reports the correlations matrix for all variables.

[Table 2 about here]

Analysis and Results

Our dataset is a panel data of 807 city-level municipalities from 2006 to 2010. Some key variables, such as types of municipal consolidations, number of merger partners, mayors' education, and public sector experience, do not vary across for a particular locality. Having time-invariable measures impedes us from reporting fixed-effect estimations. Moreover, we are interested in cross-unit, rather than within-unit, variation. Therefore, we use random-effects estimations with White-Huber

[8] In our sample of 807 municipalities, 42 cities have undergone more than one consolidation through annexation. This implies that for the studied period (2006-2010), they still keep their legal status and continue reporting municipal indicators for the core entity, which would be the case if experiencing consolidation through the creation of a new municipality. Given the low number of these multi-consolidation cases, our study tests the effect of first consolidation at the city-level. However, we did run the analysis after excluding the multi-consolidation cases, and the findings show no significant changes in terms of both statistical significance and size of coefficients. We also created a dummy variable, assigning the value of "1" to the multi-consolidation units. Again, findings show no considerable changes after including this multi-consolidation dummy.

standard errors clustered at the municipal level.[9] We use three models. Model 1 is a base-line model, which estimates the direct effects of merger type. Model 2 adds mayoral experience and expertise variables. Model 3 includes the interaction terms to text H3. The correlation matrix shows a high correlation between years elapsed since the municipal merger and municipal structural context (0.82). However, the variance inflation factors (VIF) for the regression models ranges between 1.21 and 8.66, suggesting that multicollinearity is not an issue in our models. Furthermore, results are robust across several specification models.

Explaining municipal operational costs

Models 1, 2, and 3 in Table 3 report the estimations for municipal operational costs. Recall that the dependent variable is operational costs per capita in thousand yen. The municipal absorption measure is negative and statistically significant across the three models. Compared to the non-merged units, municipalities that absorbed other municipality (ies) report lower operational costs, ranging from - 16.67 to -15.95 thousand yen per capita (approximately -$159 to -$152), holding other variables fixed. That is, municipal merger through absorption contributes to higher efficiency in administrative costs, thus supporting H1a. Mayor's state or national experience is negative and statistically significant in model 2 and model 3. That is, municipalities whose mayors come to office with public sector experience report lower operational costs (-3.17 to -2.14 thousand yen per capita, approximately -$30 to -$20), holding other factors constant. Therefore, H2a receives empirical support. Mayor's expertise fails to receive statistical significance.

None of the interaction terms show statistical significance. Therefore, H3 receives no empirical support. The three control measures operationalizing municipal contexts are positive and statistically significant at the 95 level. The more years elapse since the municipal merger, the lager the municipal operational costs. In addition, and as expected, having more merger partners increases operational costs. The coefficient on the lag of external revenue sources is positive and statistically significant. This makes sense because municipalities that rely on external revenue sources tend to have less incentives to increase efficiencies in operational costs.

[9] In random-effects estimations, the *b1* estimation is a matrix-weighted average of between-effects (cross-section) and within-panel effects (time-series), under the assumption that *b1* really does have the same effect in the cross-section as in the time-series.

Explaining municipal revenue expansion through non-tax sources

Models 1, 2, and 3 in Table 4 report the estimations for local revenue expansion/per capita through non-tax sources. Both types of municipal merger (absorption and creation of new municipality) are negative and statistically significant at the 95 and 99 percent level respectively. Therefore, H1b receives empirical support. Municipalities that absorbed other municipality (ies) tend to collect less revenue (-3.06 to -2.89 in thousand yen per capita, approximately -$29 to -$28) through non-tax sources compared to those that experienced no merger, holding all else constant. New municipalities also tend to have lower revenue collection through non-tax sources (-3.09 to -2.87 in thousand yen per capita, approximately -$29 to -$27), compared to those that experienced no merger. Neither mayoral experience nor expertise nor any of the interaction terms report statistical significance. Consequently, H2a, H2b, and H3 fail to receive empirical support.

Findings also show that reliance on central transfers does not discourage municipalities from expanding their revenues through non-tax sources. Results also suggest that municipalities with more land tend to collect more revenues through non-tax sources, assuming all else is equal.

Explaining municipal effectiveness in property tax collection

Models 1, 2, and 3 in Table 5 report the estimations for local property tax collection. Recall that the dependent variable is the effectiveness in property tax collection. Results show that localities resulting from the creation of a new municipality tend to collect less property tax (-0.34 to -0.29%) compared to those municipalities that experience no merger, holding all else constant. Therefore, H1b receives empirical support. Neither mayoral experience nor expertise reports statistical significance across three models. Therefore, H2a and H2b fail to receive empirical support. Likewise, none of the interaction terms reports statistical significance. Therefore, H3 fails to receive empirical support.

Two of the control variables report statistical significance at the 99 level .across three sets of estimations. The coefficient on the service sector workers is negative and statistically significant. That is, the more urbanization, the less effectiveness in property-tax collection, holding all else constant. Moreover, the larger the population, the higher the effectiveness in property-tax collection.

Conclusions

This study explores whether consolidation type affects municipal performance and whether chief executives' experience and expertise moderates the impact of consolidation on performance. Consolidation is operationalized through absorption and creation of new municipalities. The study focuses on all the 807 city-level Japanese municipalities from 2006 to 2010, covering two mayoral administrations. Japan's experience with consolidation makes their municipalities appropriate settings to test the direct and indirect effect of consolidation on performance. Moreover, given the considerable variation in terms of mayors' qualifications and expertise, this study also test the effect of chief executive's experience and expertise (e.g., reelection) on municipal performance.

In this study, performance is assessed across two different dimensions: efficacy in operational costs and effectiveness in revenue expansion. By doing so, we test whether the effects of both consolidation and mayoral quality vary across the dimension of performance that is assessed. This study also explores whether chief executive's quality moderates the effects of consolidation on performance. Findings reveal that merger through municipal absorption increases efficiency in operational costs but reduces revenue expansion. Merger through creation of a new municipality reduces municipal own revenue collection. Chief executive's past experience neither mitigate nor accelerate the effects of municipal consolidation on performance.

The results for property tax collection contrast sharply with those reported in developing municipalities (Avellaneda, 2009, Avellaneda and Gomes, 2015). Specifically, in Japan, mayoral quality has no impact on property tax collection. Instead, Japan's culture of compliance, enforcing mechanisms, and/or more favorable economic conditions seem to explain variation in property tax collection.

Findings also indicate that the type of consolidation matters for municipal performance. However, its impact varies depending the dimension of performance that is being explained. Specifically, consolidation through absorption improves efficiency in operational costs but discourages revenue expansion through non-tax sources. On the contrary, consolidation through the creation of a new municipality discourages, in general, revenue expansion through both property tax collection and non-tax resources. This may be explained by fact the creation of a new entity implies new rules, norms, culture, procedures, identity all of which disrupt the normal functioning of the administration. While absorption also implies a shock, this one is less drastic, for there is partial continuation

of organizational culture, norms, procedures, rules. Moreover, in municipal absorption, the relationship between local government and citizens may not be altered considerably.

Political factors play no role in explaining municipal performance in the Japanese local context. This contrast with studies in developing and transitional settings where politics does matter for performance. Future studies should assess the effect of other political factors, such as electoral competitiveness (e.g., margin of victory and number of mayoral candidates), party alignment, and divided government, on municipal performance. Findings also indicate that intergovernmental transfers do not discourage municipalities from expanding revenue through non-tax sources.

This study is one of few efforts to explore the combined effect of managerial quality and consolidation in explaining performance in an understudied developed setting, Japanese local governments. Our results suggest that organizational structure does influence both revenue expansion and property tax collection. Future research should explore whether these findings hold when explaining other dimensions of performance (e.g., equity, efficiency, service delivery, etc.).

REFERENCES

ALLERS, M. A. & GEERTSEMA, J. B. 2014. *The Effects of Local Government Amalgamation on Public Spending and Service Levels: Evidence from 15 Years of Municipal Boundary Reform*, University of Groningen, Faculty of Economics and Business.

ANDREWS, R. & BOYNE, G. 2012. Structural change and public service performance: The impact of the reorganization process in English local government. *Public Administration,* 90**,** 297-312.

ANDREWS, R. & BOYNE, G. A. 2009. Size, structure and administrative overheads: An empirical analysis of English local authorities. *Urban Studies,* 46**,** 739-759.

AVELLANEDA, C. N. 2009. Municipal Performance: Does Mayoral Quality Matter? *Journal of Public Administration Research and Theory,* 19**,** 285-312.

AVELLANEDA, C. N. 2012. Do Politics or Mayors' Demographics Matter for Municipal Revenue Expansion? *Public Management Review,* 14**,** 1061-1086.

AVELLANEDA, C. N. 2016. Government Performance and Chief Executives' Intangible Assets: Motives, Networking, and/or Capacity? *Public Management Review,* 18**,** 918-947.

AVELLANEDA, C. N. & GOMES, R. C. 2015. Is Small Beautiful? Testing the Direct and Nonlinear Effects of Size on Municipal Performance. *Public Administration Review,* 75**,** 137-149.

BARNEY, J. 1991. Firm resources and sustained competitive advantage. *Journal of management,* 17**,** 99-120.

BECKER, B. & GERHART, B. 1996. The impact of human resource management on organizational performance: Progress and prospects. *Academy of management journal,* 39**,** 779-801.

BHAGAT, S., BOLTON, B. J. & SUBRAMANIAN, A. 2010. CEO education, CEO turnover, and firm performance. *Available at SSRN 1670219*.

BHATTI, Y., GØRTZ, M. & PEDERSEN, L. H. 2015. The Causal Effect of Profound Organizational Change When Job Insecurity Is Low—A Quasi-experiment Analyzing Municipal Mergers. *Journal of Public Administration Research and Theory***,** muv006.

BOYNE, G. & DAHYA, J. 2002. Executive Succession and the Performance of Public Organizations. *Public Administration,* 80**,** 179-200.

BOYNE, G. A. 2003. Sources of public service improvement: A critical review and research agenda. *Journal of public administration research and theory,* 13**,** 367-394.

BOYNE, G. A., JAMES, O., JOHN, P. & PETROVSKY, N. 2011. Leadership succession and organizational success: when do new chief executives make a difference? *Public Money & Management,* 31**,** 339-346.

BOYNE, G. A. & MEIER, K. J. 2009. Environmental change, human resources and organizational turnaround. *Journal of Management Studies,* 46**,** 835-863.

CARMELI, A. 2004. Strategic human capital and the performance of public sector organizations. *Scandinavian Journal of Management,* 20**,** 375-392.

CHRISTENSON, J. A. & SACHS, C. E. 1980. The Impact of Government Size and Number of Administrative Units on the Quality of Public Services. *Administrative Science Quarterly,* 25**,** 89-101.

DOIG, J. W. 1990. *Leadership and innovation: Entrepreneurs in government*, JHU Press.

EHIME PREFECTURE. n.d. *Ehimeken Shichoson Gappei Q&A [Municipal Consolidation in Ehime Prefecture, Q&A]* [Online]. Available: http://www.pref.ehime.jp/h10800/gappei/faq/documents/faq_all.pdf [Accessed May 18 2015].

ERICSSON, K. A., KRAMPE, R. T. & TESCH-RÖMER, C. 1993. The role of deliberate practice in the acquisition of expert performance. *Psychological Review,* 100**,** 363.

FEIOCK, R. C. & CARR, J. B. 1997. A reassessment of city/county consolidation: Economic development impacts. *State & Local Government Review***,** 166-171.

FEIOCK, R. C. & CARR, J. B. 2000. Private incentives and academic entrepreneurship: The promotion of city-county consolidation. *Public Administration Quarterly***,** 223-245.

FERNANDEZ, S. 2005. Developing and testing an integrative framework of public sector leadership: Evidence from the public education arena. *Journal of Public Administration Research and Theory,* 15**,** 197-217.

FIEDLER, F. E. & GARCIA, J. E. 1987. *New approaches to effective leadership: Cognitive resources and organizational performance*, John Wiley & Sons.

FINKELSTEIN, S. & HAMBRICK, D. C. 1996. *Strategic leadership: Top executives and their effects on organizations*, South-Western Pub.

GLASER, R., CHI, M. T. & FARR, M. 1988. *The nature of expertise*, Lawrence Erlbaum Associates.

GROSSKOPF, S. & YAISAWARNG, S. 1990. Economies of scope in the provision of local public services. *National Tax Journal***,** 61-74.

HAMBRICK, D. C. 2007. Upper echelons theory: An update. *Academy of Management Review,* 32**,** 334-343.

HAMBRICK, D. C. & MASON, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of management review,* 9**,** 193-206.

HIRSCH, W. Z. 1967. *About the supply of urban public services*.

HIRSCH, W. Z. 1968. The Supply of Urban Public Services. *In:* PERLOFF, H. & WINGO, L. (eds.) *Issues in Urban Economics*. Baltimore: Johns Hopkins University Press.

HOLZER, M., FRY, J., CHARBONNEAU, E., RYZIN, G. V., WANG, T. & BURNASH, E. 2009. *Literature Review and Analysis Related to Optimal Municipal Size and Effi ciency. Report prepared for the Local Unit Alignment, Reorganization, and Consolidation Commission* [Online]. Available: http://www.nj.gov/dca/affiliates/luarcc/pdf/final_optimal_municipal_size_&_efficiency.pdf [Accessed August 9 2016].

HOOD, C. 1991. A public management for all seasons? *Public administration,* 69**,** 3-19.

JAPANESE RESEARCH INSTITUTE FOR LOCAL GOVERNMENT 2004-2010. *Zenkoku Shucho Meibo [List of mayors in Japan]*, Japanese Research Institute for Local Government.

LAUGHLIN, P. R. 1980. Social combination processes of cooperative problem-solving groups on verbal intellective tasks. *Progress in social psychology,* 1**,** 127-155.

LELAND, S. & THURMAIER, K. 2005. When efficiency is unbelievable: Normative lessons from 30 years of city-county consolidations. *Public Administration Review*, 475-489.

LITTLEPAGE, G., ROBISON, W. & REDDINGTON, K. 1997. Effects of Task Experience and Group Experience on Group Performance, Member Ability, and Recognition of Expertise. *Organizational Behavior and Human Decision Processes,* 69**,** 133-147.

LOMAX, K. 1952. A criterion of efficiency in local administration. *Journal of the Royal Statistical Society. Series A (General),* 115**,** 521-523.

LYNN, L. E. 1981. *Managing the public's business: The job of the government executive*, Basic Books New York.

LYNN, L. E. 1996. *Public management as art, science, and profession*, Chatham House Pub.

MEIER, K. J. & O'TOOLE, L. J. 2002. Public management and organizational performance: The effect of managerial quality. *Journal of Policy Analysis and Management,* 21**,** 629-643.

MINISTRY OF INTERNAL AFFAIRS AND COMMUNICATIONS. 2014. *Shichouson No Suii Hyou[Table of change in thw number of local municipalities, 2014]* [Online]. Available: http://www.soumu.go.jp/main_content/000283329.pdf [Accessed May 18, 2015 2015].

MINISTRY OF INTERNAL AFFAIRS AND COMMUNICATIONS 2015. Regional Statistics Database.

MINISTRY OF INTERNAL AFFAIRS AND COMMUNICATIONS. n.d.3. *Shichoson Gappei Shiryoshu. [Information Packet of Municipal Consolidations]* [Online]. Available: http://www.soumu.go.jp/gapei/gapei.html [Accessed May 18 2015].

MINISTRY OF INTERNAL AFFAIRS AND COMMUNICATIONS n.d.4. *Shichoson Betsu Kessan Joukyou Shirabe* Heisei 18-22 nendo [Settlement of Municipality Finances: 2006-2010].

MIYAZAKI, T. 2014. Municipal consolidation and local government behavior: evidence from Japanese voting data on merger referenda. *Economics of Governance,* 15**,** 387-410.

MOORE, M. H. 1995. *Creating public value: Strategic management in government*, Harvard university press.

O'TOOLE, L. J. & MEIER, K. J. 1999. Modeling the impact of public management: Implications of structural context. *Journal of Public Administration Research and Theory,* 9**,** 505-526.

O'TOOLE, L. J. & MEIER, K. J. 2003. Plus ça change: Public management, personnel stability, and organizational performance. *Journal of Public Administration Research and Theory: J-PART,* 13**,** 43-64.

OECD 2014. *OECD Regional Outlook 2014 Regions and Cities: Where Policies and People Meet,* Paris, OECD Publishing.

OSBORNE, D. & GAEBLER, T. 1992. Reinventing Government: How the Entrepreneurial Spirit is transforming the Public Sector. Reading, Mass: Addison-Wesley.

OXFORD UNIVERSITY PRESS. 2016. *Oxford Dictionaries* [Online]. Available: http://www.oxforddictionaries.com/.

PETROVSKY, N., JAMES, O. & BOYNE, G. A. 2015. New leaders' managerial background and the performance of public organizations: The theory of publicness fit. *Journal of Public Administration Research and Theory,* 25**,** 217-236.

PFEFFER, J. & SALANCIK, G. R. 1978. *The external control of organizations: A resource dependence perspective,* New York, Harper & Row.

POLLITT, C., BIRCHALL, J. & PUTMAN, K. 1998. *Decentralising public service management*, Macmillan.

REINGEWERTZ, Y. 2012. Do municipal amalgamations work? Evidence from municipalities in Israel. *Journal of Urban Economics,* 72**,** 240-251.

RESEARCH INSTITUTE FOR LOCAL GOVERNMENT 2010. *Jichitai No Shunyu Zouka Ni Kansuru Kenkyu* [Study on Revenue Expansion of Local Government].

RESEARCH INSTITUTE ON LOCAL ADMINISTRATION AND FINANCE 2004-2010. *Zenkoku Chiji Shichosoncho Fairu.[Profiles of governors and mayors in Japan]*.

RICUCCI, N. M. 1995. Unsung heroes: Federal executives making a difference. Washington, DC: Georgetown University Press.

SALANICK, G. R. & PFEFFER, J. 1977. Constraints On Administrator Discretion The Limited I nfluence of Mayors on City Budgets. *Urban Affairs Review,* 12**,** 475-498.

SAVITCH, H. V. & VOGEL, R. K. 2004. Suburbs without a city power and city-county consolidation. *Urban Affairs Review,* 39**,** 758-790.

SHEPHERD, W. G. 1990. *The Economics of Industrial Organization,* Englewood Cliff s, NJ, Prentice Hall.

STIGLER, G. J. 1958. The Economies of Scale. *Journal of Law and Economics,* 1**,** 54-71.

TULLOCK, G. 1965. *The politics of bureaucracy*, Public Affairs Pr.

VOJNOVIC, I. 2000. The transitional impacts of municipal consolidations. *Journal of Urban Affairs,* 22**,** 385-417.

WALKER, R. M., BREWER, G. A., BOYNE, G. A. & AVELLANEDA, C. N. 2011. Market orientation and public service performance: new public management gone mad? *Public Administration Review,* 71**,** 707-717.

WERNERFELT, B. 1984. A resource-based view of the firm. *Strategic management journal,* 5**,** 171-180.

WHETTEN, D. A. 1978. Coping with incompatible expectations: An integrated view of role conflict. *Administrative Science Quarterly***,** 254-271.

WILSON, J. & DOIG, A. 2000. Local government management: A model for the future? *Public Management an International Journal of Research and Theory,* 2**,** 57-84.

YOKOMICHI, K. 2007. *The development of municipal mergers in Japan.* National Graduate Institute for Policy Studies.

TABLE 1, DESCRIPTIVE STATISTICS

	Obs	Mean	Std.Dev.	Min	Max
Dependent variables					
Operational costs/capita (in thousand yen)	4065	275.83	74.52	157.96	1,263.31
Revenue through non-tax sources /capita (in thousand yen)	4035	16.96	11.16	4.15	370.22
Tax correction rate (%)	3906	97.43	1.34	88.57	99.60
Independent variables					
Municipal structural context (0=No merger, 1=Municipal absorption, 2=New municipality)	4021	0.88	0.92	0	2
Mayoral background ability					
Mayor's state or national experience (1=Yes, 0=No)	4016	0.42	0.49	0	1
Mayor's expertise (1=Reelection, 0=No)	4098	0.45	0.50	0	1
Controls					
Political context					
Vote share (%)	4014	64.89	21.07	25.39	100
Political party support	4019	1.07	1.33	0	6
Administrative context					
Years since structural change	4021	2.32	2.56	0	12
Merging municipalities	4021	2.41	1.96	1	14
Lag of external revenue source (%)	4024	51.15	15.02	15.93	94.89
Land property/capita (m2)	4008	208.68	436.25	2.55	3,881.77
Socioeconomic context					
Population	4035	141,617.90	246,342.80	4425	3627000
Percentage of workers in the service sector (%)	4022	63.12	9.04	37.40	87.60
Year dummy (0=2006, 1=2007, 2=2008, 3=2009, 4=2010)	4035	2.00	1.41	0	4

TABLE 2, CORRELATION MATRIX

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Operational costs/capita	1														
2	Revenue through non-tax sources	0.59	1													
3	Tax correction rate	-0.20	-0.05	1												
4	Municipal structural context	0.32	0.05	-0.15	1											
5	Mayor's state or national experience	-0.06	-0.02	0.00	0.10	1										
6	Mayor's expertise	-0.16	-0.04	0.09	-0.40	-0.02	1									
7	Vote share	0.08	0.09	-0.03	0.03	0.05	0.29	1								
8	Political party support	-0.16	-0.04	0.05	-0.23	0.06	0.28	0.13	1							
9	Years since structural change	0.29	0.03	-0.08	0.82	0.12	-0.20	0.03	-0.19	1						
10	Merging municipalities	0.34	0.07	-0.10	0.69	0.12	-0.24	-0.02	-0.13	0.63	1					
11	Land property/capita	0.49	0.28	-0.18	0.20	-0.02	-0.10	0.01	-0.12	0.16	0.23	1				
12	Population	-0.08	0.02	0.19	-0.13	0.08	0.11	-0.11	0.17	-0.05	-0.04	-0.14	1			
13	Percentage of workers in the service sector	-0.23	-0.04	0.06	-0.40	0.02	0.19	-0.14	0.24	-0.30	-0.29	-0.13	0.33	1		
14	Lag of external revenue source	0.67	0.24	-0.44	0.47	-0.01	-0.23	0.09	-0.20	0.38	0.42	0.43	-0.27	-0.32	1	
15	Year dummy	0.14	-0.04	0.02	0.02	-0.01	0.12	0.01	-0.08	0.29	0.01	0.02	0.00	0.00	0.03	1

TABLE 3, EXPLAINING OPERATIONAL COSTS: 2006-2010

	Model 1	Model 2	Model 3
Independent variable			
Municipal structural context (H1a)			
Municipal absorption (baseline=No merger)	-15.95***	-16.00***	-16.67***
	(3.90)	(3.97)	(4.80)
New municipality	-2.33	-2.71	-3.60
	(5.21)	(5.34)	(5.84)
Mayoral background ability			
Mayor's state or national experience (H2a) (1=Yes, 0=No)		-2.14**	-3.70**
		(0.96)	(1.55)
Mayor's expertise (1=Reelection, 0=No) (H2b)		-0.74	-0.21
		(1.05)	(1.52)
Municipal absorption x Mayor's state or national experience (H3)			3.12
			(2.50)
New municipality x Mayor's state or national experience (H3)			2.35
			(2.30)
Municipal absorption x Mayor's expertise (H3)			-1.35
			(1.84)
New municipality x Mayor's expertise (H3)			-0.94
			(1.74)
Controls			
Political context			
Vote share (%)	0.03	0.03	0.04
	(0.03)	(0.03)	(0.03)
Political party support	-0.45	-0.35	-0.33
	(0.43)	(0.40)	(0.40)
Administrative context			
Years since structural change	1.08**	1.17**	1.21**
	(0.53)	(0.58)	(0.58)
Merging municipalities	6.68***	6.72***	6.70***
	(1.39)	(1.38)	(1.38)
Lag of external revenue source (%)	1.31***	1.31***	1.31***
	(0.12)	(0.11)	(0.12)
Socioeconomic context			
Percentage of workers in the service sector	-0.36	-0.34	-0.34
	(0.25)	(0.25)	(0.25)
Constant	203.63***	203.10***	203.37***
	(17.01)	(17.09)	(17.02)
Year fixed effects	Yes	Yes	Yes
Observations	4,012	4,008	4,008
Number of municipality	808	808	808
R-squared overall model	0.389	0.391	0.392

Robust standard errors in parentheses, Standard errors are clustered by municipalities
**** p<0.01, ** p<0.05, * p<0.1*

TABLE 4, EXPLAINING MUNICIPAL REVENUE EXPANSION THROUGH NON-TAX SOURCES:2006-2010

	Model 1	Model 2	Model 3
Independent variable			
Municipal structural context (H1b)			
Municipal absorption (baseline=No merger)	-2.89***	-2.95***	-3.06**
	(0.90)	(0.97)	(1.29)
New municipality	-2.96***	-3.09**	-2.87**
	(1.05)	(1.23)	(1.42)
Mayoral background ability			
Mayor's state or national experience (H2a) (1=Yes, 0=No)		-0.00 (0.31)	0.10 (0.50)
Mayor's expertise (1=Reelection, 0=No) (H2b)		-0.21	-0.39
		(0.40)	(0.62)
Municipal absorption x Mayor's state or national experience (H3)			0.63 (0.70)
New municipality x Mayor's state or national experience (H3)			-0.43 (0.67)
Municipal absorption x Mayor's expertise (H3)			-0.06
			(0.67)
New municipality x Mayor's expertise (H3)			0.71
			(0.61)
Controls			
Political context			
Vote share (%)	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)
Political party support	0.08	0.10	0.11
	(0.10)	(0.09)	(0.09)
Administrative context			
Years since structural change	0.25*	0.27*	0.22
	(0.13)	(0.16)	(0.14)
Merging municipalities	-0.06	-0.05	-0.06
	(0.16)	(0.16)	(0.16)
Lag of external revenue source (%)	0.07***	0.07***	0.07***
	(0.02)	(0.02)	(0.02)
Land property (ln)	2.09***	2.08***	2.09***
	(0.43)	(0.43)	(0.43)
Socioeconomic context			
Percentage of workers in the service sector	0.16***	0.16***	0.16***
	(0.06)	(0.06)	(0.06)
Constant	-4.25	-4.29	-4.29
	(5.02)	(5.07)	(4.94)
Year fixed effects	Yes	Yes	Yes
Observations	3,998	3,994	3,994
Number of municipality	807	807	807
R-squared overall model	0.108	0.108	0.109

Robust standard errors in parentheses, Standard errors are clustered by municipalities
**** p<0.01, ** p<0.05, * p<0.1*

TABLE 5, EXPLAINING EFFECTIVENESS IN PROPERTY TAX COLLECTION: 2006-2010

	Model 1	Model 2	Model 3
Municipal structural context (H1b)			
Municipal absorption (baseline=No merger)	-0.08	-0.09	0.01
	(0.08)	(0.08)	(0.12)
New municipality	-0.29**	-0.31**	-0.34**
	(0.13)	(0.13)	(0.14)
Mayoral background ability			
Mayor's state or national experience (H2a) (1=Yes, 0=No)		-0.00 (0.04)	-0.03 (0.06)
Mayor's expertise (1=Reelection, 0=No) (H2b)		-0.03	-0.02
		(0.02)	(0.03)
Municipal absorption x Mayor's state or national experience (H3)			-0.07 (0.10)
New municipality x Mayor's state or national experience (H3)			0.08 (0.08)
Municipal absorption x Mayor's expertise (H3)			-0.08
			(0.05)
New municipality x Mayor's expertise (H3)			0.01
			(0.05)
Controls			
Political context			
Vote share (%)	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
Political party support	0.01	0.01	0.02
	(0.01)	(0.01)	(0.01)
Administrative context			
Years since structural change	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)
Merging municipalities	-0.03	-0.03	-0.03
	(0.03)	(0.03)	(0.03)
Lag of external revenue source (%)	-0.01*	-0.01**	-0.01*
	(0.01)	(0.01)	(0.01)
Socioeconomic context			
Percentage of workers in the service sector	-0.02***	-0.02***	-0.02***
	(0.01)	(0.01)	(0.01)
Population (ln)	0.36***	0.36***	0.35***
	(0.07)	(0.07)	(0.07)
Constant	95.44***	95.45***	95.48***
	(0.87)	(0.87)	(0.88)
Year fixed effects	Yes	Yes	Yes
Observations	3,897	3,893	3,893
Number of municipality	785	785	785
R-squared overall model	0.154	0.155	0.154

Robust standard errors in parentheses, Standard errors are clustered by municipalities
*** p<0.01, ** p<0.05, * p<0.1.