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# The Impact of the Municipal Form of Government on Financial Conditions in the Municipal Government

## : The Impact of Administrative Professionalism on Fiscal Health and Efficiency

### 지방정부형태에 따른 재정 건전성과 효율성에 대한 연구:

#### 시지배인 제도 형태의 지방 정부가 재정 성과에 끼치는 영향에 대한 고찰

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Does the form of government make an essential difference in financial conditions? This paper tests six hypotheses that the council-manager system of city government produces better fiscal performance than that of the mayor-council system. Most previous works tried to test the assumption of progressive reformers that professional management systems in local government are more financially healthy and efficient than political leadership systems. However, the empirical test results have coalesced. This paper challenges the previous research using the size of government variables such as the size of expenditure, revenue, and taxation in order to assess the financial effects of government form. Besides, the study uses well-defined alternative variables to evaluate the effects of government form on fiscal performance in the city. Overall, the council-manager system improves fiscal health and efficiency in city government, especially regarding the fiscal self-reliance ratio, revenue-expenditure ratio, and debt service ratio.

□ Keywords: The Form of Municipal Government, Council-manager Form, City-mayor Form, Municipal Fiscal Health and Efficiency

정부의 형태는 어떻게 지방재정 상태에 영향을 미칠 것인가? 기존의 지방정부 형태에 대해 진보적인 학자들은 정치적 영향력이 적은 시지배인 제도가 지방 정부의 재정 건전성과 효율성을 높일 것이라는 전제를 세우고 연구해 왔다. 하지만 이러한 연구들은 시지배인 제도가 어떻게 지방재정의 건전성과 효율성에 영향을 미치는지에 대한 일관된 결과를 내놓지 못하였다. 이에 본 연구는 두 가지 점에서 기존의 연구 발전에 이바지 하고자 한다. 첫 번째로, 기존 양적연구들이 일치된 결과를 얻지 못한 것에 대해 지방정부의 재정 건전성과 효율성을 측정하는 변수가 한정되어 있다고 결론을 내고 좀 더 세분화된 변수들을 사용하였다. 변수 측정을 위해 미국 플로리다 주의 시 단위 지방정부가 제공하는 예산 및 지출에 관한 데이터를 이용하였다. 두 번째로 이론적 발전에 이바지하기 위해 전통적인 재정 모델 이론과 거래 비용 이론을 통합하여 시지배인이 행정 전문가로써 지방재정에 어떠한 변화를 미치는지 이론적 설득이 가능하도록 하였다. 그 결과, 시지배인 제도를 선택한 플로리다의 지방정부의 경우 재정 자립, 세입과 세출, 그리고 세수 증가와 같은 측면에서 시장-의회형 정부보다 재정 성과가 높은 것으로 나타났다. 이러한 결과는 연방제에 준하는 지방분권 시대를 열어갈 문재인 정부에게 가장 큰 문제로 작용하고 있는 지방정부 재정 건전성 및 효율성에 대해 제도적 측면에서 새로운 해결책을 제시해 줄 수 있을 것이다.

□ 주제어: 지방정부의 형태, 시지배인 제도, 시장-의회형 제도, 지방정부 재정 건전성과 효율성

# Ⅰ. Introduction: Municipal Reform and Its Promise

In August of 2017, Korean President Moon officially announced his administration's roadmap to raise the autonomy of Korean local governments in the first press conference marking his 100 days. He promised that central government would delegate power to local government and emphasize the independence of their administrations as much as the "U.S. federal system" through enforcing the amendments of the Constitution. The autonomy of local government guaranteed by the Constitution can increase administration capability of local officials as a partner with the Korean central government. With legal support, Moon's administration strongly argues that financial independence of local government is essential and can practically intensify the autonomy of local government.

As President Moon mentioned in his speech, the United States had a long history of helping the development of local government systems. The U.S. Constitution guarantees the autonomy of local government on both the municipal and county levels. State law determines the range of autonomy of their local governments. One of the most interesting aspects of the U.S. federal system is that the state governments delegate authority to local governments to decide in which way they want to govern themselves. This authority can increase their capability to efficiently administer their governments and provide public services with which citizens can be mostly satisfied.

This study assesses managerial, mainly financial, effects of municipal reform. It is assumed that municipal reform leads to operating efficiencies and managerial improvement. "The Progressive ideology of the separation of politics and administration, institutionalized in the council-manager plan, allows administrators and elected officers to have the ability to more easily resist opportunistic behavior (Feiock, Jeong, & Kim, 2003)." During the Progressive-era, the scope of the reform included the state, county, and city governments as well (Morgan & Kickham, 1999). The key of the municipal reform movement was "efficiency and scientific management." It tried to create "nonpolitical, essentially technical organization and management (Knott & Miller, 1987, p.3)." Reformers tried to minimize the political machine's influence by diffusing the professional management system into all levels of government.

For the city government to form, it means the change from the mayor-council government to council-manager government is necessary. A traditional proposition of Progressive reformers is that professional management systems in municipal government can stimulate managers to act more businesslike and to generate efficient policy outcomes more so than political leadership systems do. Additionally, new institutionalism scholars have demonstrated the logic of changing a form of government by actors' rationality and/or an environment in which actors are embedded. This research tries to yield implications for financial management by looking at whether the form of government is an essential factor affecting fiscal health in municipal governments by applying an institutional theory.

From this study, we attempt to provide three contributions. First, this study contributes to developing a theoretical framework which can explain why political institution can lead municipal managers' actions to increasing their managerial professionalism. Second, we analyzed previous studies which empirically investigated the financial effect of council-manager municipal governments and revealed that the results from these studies are not consistent. This study concludes that the inconsistent research results were generated by merely measuring financial management outcomes. In order to fill out this gap, we more specifically define municipal fiscal conditions with multiple variables such as the revenue-expenditure ratio, fiscal self-reliance, and debt service ratio. Third, conclusive empirical results from this research provide lessons on how the Korean central government can improve the autonomy of local governments to increase the capability of the local government administrations, especially that of financial management.

# Ⅱ. Theoretical Framework

## 1. Fiscal Models of Local Government

There have been two competing views of fiscal result from the nature of government. First, one view focuses on an adverse fiscal outcome from the nature of government. For example, the Leviathan model (Brennan & Buchanan, 1977) describes potential inefficiency in government's fiscal behavior. Brennan and Buchanan (1977, p. 748) argue that "a monolithic government seeks to exploit its citizenry through the maximization of the tax revenues." Second, another view focuses on the possibility of positive fiscal results from governments. For example, Tiebout (1954, p. 416) argues that the local expenditures and revenues for public goods and services reflect the preferences of the residents. In the Tiebout model, residents choose their local governments using the method called 'foot-voting,' and local governments compete to attract residents. The median voter model predicts that if voters can choose their governments and competition among governments exists in the political market, government officials will be forced to adopt budgets in consonance with the median preferred level (Deno & Mehay, 1987; McEachern, 1978; Megdal, 1983).

While each fiscal model may be governmental-level (i.e., federal, state, and local)—specific, each model focuses on an aspect or possibility of the multifaceted nature of the government. We argue that regardless of the level of government, they (i.e., all governments) have an inherent nature of leading to positive fiscal results. However, the government also has an inherent nature of leading to negative fiscal results at the same time. Under a particular condition(s), the financial results could be determined in a positive way or a negative way.

In this research, we argue that the government form can describe the nature of the government and be an important factor in determining the fiscal results of that said government. A government form may incentivize the individuals to run everything more professionally. On the other hand, the other form of government may lead to opportunistic behavior of the individuals who operate these governments. The transaction cost theory elaborates these two competing possibilities in more detail.

## 2. Transaction Cost Theory

New institutionalism scholars argue that institutions are human-made devices to constrain human behavior (North, 1990; Ostrom, 2005). According to North (1990, p.3), "institutions are the rules of the game in a society, or more formally, are the humanly devised constraints that shape human interaction." This perspective suggests that institutions shape individual's and institutional agents' incentive structures, and in turn, their behaviors, and, in turn, their behaviors' outcomes depending on their rational decision-making process.

Based on the perspective of Neoclassical economists, in the transaction cost theory, it is assumed that participants change the rules of the game by allocating resources that are related to price, quantities, and incentive alignment (Williamson, 2000). That is, all participants in the transaction cost theory take their actions based on their rational decisions. The transaction cost theory is useful to operationalize factors which can influence the change in actors' decisions depending on multiple types of costs resulting in their actions.

Persson and Tabellini (2005) argue that "the forms of government determine how powers can be exercised once in office and how conflicts among elected representatives can be resolved." In institutional frameworks, 'constitutional choice rules' have been analyzed by the transaction cost theory as mentioned above. According to Williamson, the constitution produces a governance mechanism for cooperation. Williamson (2000, p. 599) mentions, "Governance is an effort to craft order, thereby to mitigate conflict and realize mutual gains. So conceived, a governance structure obviously reshapes [or shapes] incentives." Transaction costs are the main source of problems, hindering cooperation. Maser (1998) sees the constitution as a relational contract to secure cooperation. Maser (1998) mentions, "…uncertainty is costly; avoiding it is costly. The objective of contracting is to facilitate cooperation by minimizing the sum of the costs of uncertainty and the costs of avoiding it. This object—economizing on transaction costs—expresses the principle that motivates behavior in the transaction resource theory of relational contract." Transaction costs are coming from uncertainty or risk due to the lack of information between parties for transactions. "The parties have an incentive to craft procedural safeguards-such as allocating authority across decision makers in government-as with an executive veto; varying electoral rules, as with district versus at-large elections; and providing for direct democracy, as with initiatives, referenda, and recalls (Maser, 1998, p. 527)." According to Maser, analysis of a municipal charter is considered a contract for providing governance mechanisms to economize transaction costs. The charter constitution provides procedural safeguards to resolve the problems of cooperation, coordination, division, and defection problems.

In the perspective of the transaction cost theory, these constitutional rules are contracts to economize transaction costs, in turn, to mitigate uncertainty, and, in turn, to cooperate for mutual gains between parties. With incomplete information, people want to reduce the cost of uncertainty. The constitution deals with this uncertainty. Uncertainty or risk is a core criterion for credit ratios in credit agencies. So, transaction costs due to risk or uncertainty are the core element for financial assessment. The transaction cost theory and fiscal status would be highly correlated.

This study focuses on governance—especially in the form of government—as the third level of the institution (Williamson, 2000) and the constitutional choice rule (Ostrom, 2005) because both of them explain how political institutions influence incentive structure, shaping a particular behavior. The national or state constitutions and municipal charters in local government embody this government form.

### 3. Combining Fiscal Models and Transaction Cost Theory

The notion of power incentives is the clue for combining municipal government's fiscal models and their transaction costs theories. The constitution provides forms of government as a governance structure shaping power incentives (Feiock et al., 2003). "Different forms of constitutional government structure can provide high powered-incentives or low-powered incentives (Feiock et al., 2003)." Elected local officials cannot be free from high-powered incentives which can lead to political opportunism and rent-seeking incentives such as their reelection (Frant, 1996; MaCabe & Feiock, 2005). Meanwhile, low-powered incentive reduces the possibility of non-elected local officials to consider politicization of fiscal issues and lead them to pursuing the interest of citizens and working toward professional goals (Feiock, Mattew & Khdor, 2003). "The institutional reforms of the Progressive movement reduce transaction costs and high-powered incentives (Feiock et al., 2003, p. 622)." The progressive movement in municipal levels tried to lessen a politician's power through replacing high-powered incentive systems like elected mayors with low-powered incentives systems like an appointed professional manager (Frant, 1996; MaCabe & Feiock, 2005).

MaCabe and Feiock (2005) provide a new theoretical framework to analyze the institutional effects of government forms on city fiscal behaviors associated with property taxes by connecting city government forms, power incentive mechanisms, and fiscal behaviors. According to their research, mayor-council city governments shape high-powered incentives resulting in the fiscal behaviors of the Leviathan model of budget maximization, under which government officials maximize expenditure and tax for their political interest such as their reelection. On the other hand, council-manager city governments shape low-powered incentives resulting in fiscal behavior of the median-voter model, under which government officials maximize the community-wide benefits characterized as the preferences of the median voters who are willing to pay taxes for public services. Table 1 shows the causal mechanism and propositions drawn from the transaction cost theory and municipal government's fiscal models.

〈Table 1〉 Causal Mechanism and Propositions

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Institutions | → | Incentive structures in individual | → | Decision making behavior | → | Managerial outputs in government | → | Policy outcomes in community |
| Causal Mechanism | | | | | | | | |
| Government forms | → | Executive's incentive structures | → | Fiscal behavior outputs | → | Fiscal managerial | → | Policy outcomes |
| Hypotheses | | | | | | | | |
| Council-Manager | → | Low power incentives | → | Median-voter model Tiebout model | → | More efficient (More fiscally healthy) | → | Increase welfare in community |
| Mayor-Council | → | High power incentives | → | Leviathan model | → | Less efficient and less fiscally healthy | → | Decrease welfare in community |

Source: This causal process is developed by MaCabe, Barbara and Richard C. Feiock. (2005). Nested Levels of Institutions: State Rules and City Property Taxes, Urban Affairs Review, Vol. 40, No. 5, May 643-654.

# Ⅲ. Hypotheses and Research Design

## 1. Hypotheses

The different orientations toward fiscal management between the city manager and the mayor are likely to lead to different fiscal performances. There are recent empirical works and findings on the economic or fiscal effects of political institutions. Since Sherbenou (1961) has empirically studied the effects of the city government form on fiscal outcomes, many previous works have tried to test the assumption of Progressive reformers empirically. Their theories being that the council-manager form of municipal government would likely lead to better fiscal performance than the mayor-council form of municipal government. Most prior empirical studies about fiscal effects of city political forms have dominantly used levels of spending and tax to measure financial performance. However, the empirical results are mixed as Table 2 shows. We attempted to analyze all previous studies regarding the financial effects of city manager-council form in order to find out which factors have caused the inconsistent results from the previous studies.

〈Table 2〉 Analyzing Previous Studies Findings

| Author | Year | Fiscal Performance | Finding |
|---|---|---|---|
| Sherbenou | 1961 | Spending, tax, and debt | Significant (+) |
| Banfield and Wilson | 1963 | Spending | Significant (+) |
| Booms | 1966 | Spending | Significant (−) |
| Lineberry and Fowler | 1967 | Spending and tax | Significant (−) |
| Clark | 1968 | Spending | Significant (−) |
| Goldstein and Ehrenberg | 1976 | Spending and tax | Significant (+/−) |
| Lyons | 1978 | Spending and tax | Significant (−) |
| Morgan and Pelissero | 1980 | Spending and tax | Not significant |
| Deno and Mehay | 1987 | Spending | Not significant |
| Farnham | 1987 | Spending | Not significant |

| Author | Year | Fiscal Performance | Finding |
|---|---|---|---|
| Farnham | 1990 | Spending | Not significant |
| Hayes and Chang | 1990 | Spending and bond rating | Not significant |
| Stumm and Corrigan | 1998 | Spending and tax | Significant (−) |
| Campbell and Turnbull | 2003 | Spending | Not significant |
| MacDonald | 2008 | Spending | Not significant |
| Coate and Knight | 2011 | Spending | Significant (+) |

First, all previous studies have measured spending levels with expenditure size to assess the fiscal efficiency of municipal governments. Sherbenou (1961) found that a manager city is likely to spend more than a non-manager city. Also, Banfield and Wilson (1963) concluded that the city managers tend to increase spending because of the upper-middle class's view-regarding ethos support for public programs and projects. Afterward, Goldstein and Ehrenberg (1976) confirmed that city-managers, especially with a financial incentive, are likely to increase the level of spending to provide more public goods and services. The most recent study (Coate & Knight, 2011) verified the beginning of these studies (Sherbenou, 1961; Banfield & Wilson, 1963) by finding that spending is higher under the city council-manager form again. However, other empirically successive studies (Booms, 1966; Lienberry & Fowler, 1967; Clark, 1968; Lyons 1978; Stumm & Corrigan, 1998) argued that the council-manager form (i.e., reformed city) is likely to lead to lower spending because the professionally trained city manager is more cost-conscious due to depoliticization. Since 1980, most empirical studies (Morgan & Pelissero, 1980; Deno & Mehay, 1987; Farnham, 1987 and 1990; Hayes & Chang, 1990; Campbell & Turnbull, 2003; and MacDonald, 2008) even found that there is no significant difference between the council-manager form and the mayor-council form in terms of spending levels.

Second, several studies that used the level of spending also defined the size of taxation as one of the indicators to measure municipal fiscal efficiency. However, their results are mixed as well. Sherbenou's (1961) study showed that manager cities are more likely to levy higher property taxes than non-manager cities. In contrast, other studies (Lienberry & Fowler, 1967; Goldstein & Ehrenberg, 1976;

Lyons, 1978; Stumm & Corrigan, 1998) found that the council-manager form is likely to reduce the level of tax. However, Morgan and Pelissero (1980) concluded that a municipal form of government has no impact on the level of tax.

Finally, Hayes and Chang (19901) used bond rating as an alternative measure of fiscal performance. However, they failed to test the significant effect of city manager-council forms on bond rating. In short, when using levels of spending and taxes, the existing literature shows that the form of city government and its effect on fiscal outcomes are inconclusive.

We hypothesize that municipal forms of government affect the fiscal health of city government. Specifically, the council-manager form is more likely to improve the financial condition in municipal governments than the mayor-council form. In this research, we test six hypotheses. In the first three hypotheses, we use traditional financial indicators, which have been used through previous studies to test the impact of government forms on fiscal efficiency. From the financial point of view, an increased financial resource is a good sign for the organization. Also, a decreased cost (i.e., spending) is another good signal for the organization (Finkler, Smith, Calabrese, & Purtell, 2016). As we mentioned in the previous section, the council-manager form of city government provides a system of financially professional management.

*H1: Cities with a council-manager form would have higher the revenue per capita than cities with a mayor-council form*

*H2: Cities with a council manager form would have higher the tax revenue per capita than cities with a mayor-council form*

*H3: Cities with a council manager form would have less expenditure per capita than cities with a mayor-council form*

We argue that these inconclusive mixed results would be due to a measurement issue for fiscal performance. Previous studies viewed the level of expenditure and tax as the level of cost that a city spends to supply public goods and services. In this paper, we argue that the size of expenditure or level of tax alone may not be a proper measure of fiscal efficiency to evaluate the effect of the city manager's managerial expertise and fiscal attitudes on municipal financial management. With the model of budget maximizing, bureaucrats view the size of expenditure and level of tax as indicators of the inefficient spending behavior of the government. Spending level alone or the level of tax alone does not provide enough information to measure fiscal health.

Instead, the level of spending and the level of tax are more likely to reflect the size of the economy, exogenous economic shocks, the level of public service demand (Booms, 1966), or political preference of residents and elected officials' responses (Tiebout, 1956) rather than reflecting the fiscal health (the level of wasting money) of municipal governments. As Morgan and Kickham (1999: 322) mentioned, "if reformers advocate pushing reorganization as a way of controlling taxes and spending, they are likely to be disappointed……the impact of county reorganization may be more subtle than some might have assumed." The spending level and tax level are very limited proxies of fiscal health. To mitigate this measurement issue, this study attempts to measure the value of professional fiscal management of the city council-manager system using alternative fiscal condition indicators such as the ratio of revenue and expenditure, debt service ratio, and the fiscal self-reliance ratio.

In this research, we attempt to measure the impact of different forms of city government on fiscal performance. Mainly, we assess the fiscal efficiency and fiscal health in city governments. First, fiscal efficiency refers to simultaneous consideration of both fiscal output and fiscal input. We use the ratio of revenue of expenditure as an alternative financial indicator to measure fiscal efficiency. Second, fiscal health refers to what is the extent to which the government has its financial resources. To measure the level of fiscal health, we look at the level of debt via debt service ratio. Also, we look at the level of financial support from other upper-level governments such as state and federal government (i.e. grant) via the fiscal self-reliance ratio. In the following three hypotheses, we use alternative financial indicators to test the impact of the government form on fiscal performance.

*H4: Cities with a council-manager form would have higher the revenue-expenditure* *ratio than cities with a mayor-council form.*

*H5: Cities with a council-manager form would have less the debt service ratio than cities with a mayor-council form*

*H6: Cities with a council-manager form would have higher the fiscal self-reliance ratio than cities with a mayor-council form*

## 2. Research Design and Methodologies

To empirically test these hypotheses, we examine differences of fiscal inputs and outputs among cities in Florida using pooled cross-sectional data from 1991, 1996, 2001, 2006, and 2011. The six pooled cross-sectional regression models are as follows:

Fiscal Health and efficiency = $\alpha$ + $\beta_1$ Council-Manager Form of Municipal Government + $\beta_2$ Population + $\beta_3$ Property Value + $\beta_4$ Budget Maker,

where i= 1 to 6 such as:

Fiscal Health1 = Revenue per capita

Fiscal Health2 = Expenditure per capita Tax

Fiscal Health3 = Tax revenue per capita

Fiscal Health4 = Revenue-Expenditure ratio

Fiscal Health5 = Debt service ratio

Fiscal Health6 = Fiscal self-reliance ratio

Appendix 1 shows details about all variables, descriptions, and data sources. The dummy variable defined as the legal form of city governments in Florida indicates whether it is council-manager (coded 1) or mayor-council (coded 0). The data comes from the International City/County Management Association's (ICMA) Municipal Form of Government survey from 1991 to 2011. Appendix 2 presents a survey questionnaire which identifies institutionalized forms of respondents' governments. This study dropped other forms of governments such as commission and town meeting because about 93% of Florida cities adopt the council-manager and the mayor-council forms.

To measure the fiscal performance of the city, six financial condition indicators are used as dependent variables. First, revenue per capita indicates demand for resources, the government's administrative ability to provide public service addressing what citizens want, and their willingness to provide the resource. The revenue encompasses tax revenue and non-tax revenues (e.g., fees and charges). Second, expenditure per capita indicates a cost of providing service per capita. A higher ratio may indicate inefficiency or that the cost of services may eventually exceed residents' ability to pay for those services. Third, tax revenue is measured by dividing total tax size into a population, giving us a tax per capita. Fourth, the revenue-expenditure ratio indicates a relationship of financial inflow from revenues to outflow for expenditure. This ratio is equal to the government's operating expenses divided by its revenue. A higher ratio is needed to evaluate the efficiency of fiscal behavior performances of city managers. Fifth, the debt service ratio indicates the extent of the government's fixed costs for paying principal and interest on its debt. The ratio permits us to ask how much a city government can pay on its debt service requirements when due. Additionally, when the ratio is high, a government may be forced to reduce some of the public services that they are operating. Sixth, the fiscal self-reliance ratio indicates the extent of the fiscal self-reliance of municipal governments on external governments. The ratio was computed by dividing their resource revenue into a total revenue size. A high ratio represents the positive fiscal health of municipal governments as it means that municipal governments are not reliant on revenues from external government organizations.

Additionally, in order to capture the time effects on fiscal performance, five-year variables such as 1991, 1996, 2001, 2006, and 2011, are added to the final six models. The time variables are measured as dummy variables. For instance, when dependent and other independent variables are measured in 1991, the time variable is coded as one otherwise, zero. To isolate the effects of a municipal form of government on financial performance from demographic, economic, financial, or administrative characteristics of the city, the following three variables are controlled: population, property value, and budget maker. Population indicates the level of demand for public services. Property value indicates a potential capacity of city government's financial resources. A budget maker indicates administrative support for the city to develop and implement city budgets. Therefore, we expect that the existence of a budget maker has a positive effect on the financial condition of the city. OLS estimation techniques are used to estimate the effects of government form on the following six financial condition measures. Six regression models are separately estimated for each dependent variable. Table 3 provides the descriptive statistics for each variable.

〈Table 3〉 Descriptive Analysis

| Model | Variable | Observation | Mean | Standard Deviation | Min. | Max. |
|---|---|---|---|---|---|---|
| Model 1 | Rev. Per Capita | 785 | 1294.89 | 2611.381 | 168.79 | 55434.35 |
| | Form of Government | 785 | 0.90 | 0.296 | 0 | 1 |
| | Population | 785 | 27021.33 | 41300.213 | 23 | 359076 |
| | Property Value | 785 | 424.92 | 1973.293 | 0 | 52353.22 |
| | Budget Maker | 785 | 0.95 | 0.228 | 0 | 1 |
| Model 2 | Tax Rev. per capita | 786 | 637.49 | 1984.89 | 46.99 | 52353.22 |
| | Form of Government | 786 | 0.90 | 0.30 | 0 | 1 |
| | Population | 786 | 27001.84 | 41277.52 | 23 | 359076 |
| | Property Value | 786 | 424.38 | 1972.09 | 0 | 52353.22 |
| | Budget Maker | 786 | 0.95 | 0.23 | 0 | 1 |
| Model3 | Exp. per Capita | 784 | 1305.49 | 2670.72 | 40.41 | 54920.70 |
| | Form of Government | 784 | 0.90 | 0.30 | 0 | 1 |
| | Population | 784 | 26977.75 | 41326.98 | 23 | 359076 |
| | Property Value | 784 | 424.74 | 197460 | 0 | 52353.22 |
| | Budget Maker | 784 | 0.95 | 0.23 | 0 | 1 |
| Model4 | Rev.-Exp. Ratio | 783 | 105.65 | 98.97 | 9.70 | 2780.73 |
| | Form of Government | 783 | 0.90 | 0.30 | 0 | 1 |
| | Population | 783 | 26997.27 | 41349.78 | 23 | 359076 |
| | Property Value | 783 | 425.28 | 1975.80 | 0 | 1 |
| | Budget Maker | 0783 | 0.95 | 0.23 | 0 | 1 |

| Model | Variable | Observation | Mean | Standard Deviation | Min. | Max. |
|---|---|---|---|---|---|---|
| Model 5 | Debt Service Ratio | 785 | 3.74 | 6.78 | 0 | 86.20 |
| | Form of Government | 785 | 0.90 | 0.30 | 0 | 1 |
| | Population | 785 | 26984.90 | 41301.10 | 23 | 359076 |
| | Property Value | 785 | 424.54 | 1973.35 | 0 | 52353.22 |
| | Budget Maker | 785 | 0.95 | 0.23 | 0 | 1 |
| Model 6 | Fiscal Self Reliance Ratio | 785 | 80.41 | 10.89 | 27.52 | 98.97 |
| | Form of Government | 785 | 0.90 | 0.30 | 0 | 1 |
| | Population | 785 | 27921.33 | 41300.21 | 23 | 359076 |
| | Property Value | 785 | 424.92 | 1973.29 | 0 | 1 |
| | Budget Maker | 785 | 0.95 | 0.23 | 0 | 1 |

# Ⅳ. Findings

Table 4 reports on results of the six different regression models representing six hypothesized effects. The overall fit of the six models is statistically significant at $p<0.00$. It indicates that findings from the six models are statistically reliable to test the assumption regarding the effect of the city managers' professionalism on fiscal health and efficiency in their city governments.

First, three regression models used financial condition measures such as revenue per capita, tax revenue, and expenditure per capita that were used in previous studies on the financial impact of government form. Lastly, three regression models use alternative financial condition measures such as revenue-expenditure ratio, debt service ratio, and fiscal self-reliance ratio that this study has adopted to evaluate the impact of government form on fiscal health.

To provide robust regression models, we attempted OLS diagnostic tests such as residual normality, multicollinearity, and homoscedasticity. The autocorrelation is not considered as one of the diagnostic tests for this research because the pooled cross-sectional analysis applied in this research is not a statistical method to catch up time effects on dependent variables. Instead, regarding the time effect, the models contain five years of dummy variables.

To test a violation of the assumption of residual normality, we attempted two graphical tests such as pnorm and qnorm and one statistical test such as Shpiro-wilk W. As a result of these tests, residuals from five dependent variables, except for the fiscal self-reliance ratio variable, are not normally distributed. In order to resolve the non-normality assumption, log transformation was performed on five dependent variables.

To detect a violation of multicollinearity on the dependent variables, this research tested it with a variance inflation factor. Appendix 3 represents the results of this testing. According to results of this testing, any independent variables are not correlated with the others. In terms of variance of errors, unfortunately, heteroscedasticity was detected in all six models by performing the Breusch-Pagan test. To correct the problem of bias in the standard errors, the models are statistically analyzed with robust standard errors.

〈Table 4〉 Regression Estimates

| | Financial Condition Measures in Previous studies | | | Alternative Financial Condition Measures in this studies | | |
|---|---|---|---|---|---|---|
| | Rev. per capita (logged) | Tax Rev, per capita (logged) | Exp. per capita (logged) | Rev-Exp ratio (logged) | Debt service ratio (logged) | Fiscal self-reliance ratio |
| Council-Manager Form | 0.13** (2.26) | 0.18*** (2.39) | 0.14** (2.45) | -0.005 (-0.19) | 0.07 (0.58) | 4.049** (2.37) |
| Population | 1.35*** (4.20) | 3.92 (1.01) | 1.08** (3.26) | 2.62 (1.79) | 4.03*** (5.21) | 3.60 (0.57) |
| Property Value | 0.0001** (2.85) | 0.0001*** (2.79) | 0.001*** (2.85) | 1.86 (1.17) | -0.00001*** (-2.76) | 0.007** (2.27) |
| Budget Maker | 0.01 (0.18) | -0.08 (-0.92) | 0.02 (0.31) | -0.04 (-1,23) | 0.16 (0.96) | 0.784 (0.31) |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| R-sq. | 0.565 | 0.42 | 0.47 | 0.05 | 0.34 | 0.17 |
| Number of Obs. | 785 | 786 | 784 | 783 | 785 | 785 |

Note: robust standard error; ( ) t-value; p-value, *p 〈.10, **p 〈.05, ***p〈.01

Table 4 represents the results from six fiscal performance models. The dependent variable for the first OLS model is revenue per capital representing revenue size. A result from the first OLS model supports the first hypothesis that city governments with the council-manager form increase revenue from the city's perspective rather than the mayor-council form of city governments. This finding statistically confirms the fact that city managers have a more financially administrative capacity and have adequate resources to attempt to provide public services for citizens. Also, as a result of testing the second hypothesis, these findings provide a significant effect of the council-manager form on tax revenue. However, the statistical analysis does not support the third hypothesis representing a positive effect of a city manager's professional financial management on expenditure size. According to the finding, unlike the hypothesis, city managers are more likely to increase expenditure size than city mayors. This finding verifies the argument in which city managers increase spending to provide public services to satisfy citizens' demands rather than reducing cost due to depoliticization. This finding advocates the view of the Tiebout model to roles of government structures on the size of expenditure.

The alternative financial indicators which previous studies have not considered may reflect the well-defined fiscal health and efficiency of the city. That is, the fiscal revenue-expenditure ratio, debt service ratio, and self-reliance ratio are measures to assess city managers' managerial capability in improving the financial performance of their governments. This study found out the significant effects of the power of financial management in the council-manager form of city governments on the size of expenditure, revenue, and tax. However, the net effect of city managers on the ratio of revenue-expenditure is not statistically significant. We expected that city managers were better able to provide public services efficiently to their residents than city mayors. However, the results do not confirm this expectation.

Additionally, this study shows other managerial powers of city managers on financial administration. The effect of reformed municipal government on the debt service ratio is not statistically significant. We expected that the council-manager system decreases the debt service ratio, which means that the deficit and debt are lower in the council-manager system than in the mayor-council system. However, this finding does not represent the fact that city managers have more ability to manage their governments' debt than city mayors. Finally, council-manager forms increase the fiscal self-reliance ratio more so than the mayor-council form. Statistically, this indicates that the city with a council-manager system relies on their own financial resources, such as taxes and fees, rather than relying on grants from state and federal governments. From these findings, we can argue that city managers are more capable of improving not only financial soundness, but also intensifying financial independence from high levels of government such as state and federal.

# V. Conclusion and Discussion

This study attempts to fill the void in our understanding of how municipal political institutions influence the fiscal health and efficiency of city governments. Most previous works tried to test the assumption of Progressive reformers that professional management systems in municipal governments are better able to increase financial performance than political leadership systems. However, the empirical test results have coalesced.

At the core of our argument here is the proposition that as municipal governments institutionalized council-manager systems as the form of government, city managers were better able to improve fiscal health and efficiency in their governments than city mayors. As a result, this study explores the effects of an institution—a municipal form of government—on managerial, especially financial outcomes rather than policy outcomes. We suggest that the fiscal effect of government form should be measured by alternative fiscal indicators instead of ignoring fiscal measures and focusing only on policy outcome measures. This paper challenges the previous research using the size of government variables such as a size of expenditure, revenue, and taxation in order to assess the fiscal effects of each government form. We used additional financial condition indicators as alternative variables to evaluate an effect of government form on financial performance in cities. Overall, the council-manager system improves fiscal efficiency in city governments through increasing the size of expenditure, revenue, and taxation, and it improves fiscal health as well, especially in terms of the fiscal self-reliance ratio.

The significant findings from this study provide relevant implications for the efforts of Moon's administration to delegate more authority to the local governments. This research confirms the notion that the more granted authority the local governments have, the more likely they will be able to improve their fiscal performance in their jurisdictions. This notion implies that Korean local governments should be given an authority to be able to design political institution systems to increase administrative capacity. The higher authority could allow Moon's administration to quickly enhance the financial independence of local governments from the central government which is one of the five core strategies suggested by the roadmap to open a new local governance era in Korea. In 2017, the local governments generated only 52.5% of the total revenue with their resources. The significant financial reliance on the central government could reduce the power and capability of local self-governing. Therefore, it is time to consider how to guarantee local autonomy to reconstruct or to design their political institutions. It does not indicate that we should grant authority for them to change their forms of government like in the U.S. federal system. However, we can suggest that the local governments can have the authority to consider whether they need to make additional administrative positions, like city managers, who are free from political pressure and have professional administration skills.

Finally, further studies could consider how to empirically investigate how changing the form of municipal governments affects their financial behavior over time. The dataset used in this study was established by ICMA from 1991 to 2011 using pooled cross-sectional data. Under a pooled cross-sectional study, it is difficult to observe the time effects of changing a form of municipal governments on their financial behavior over time. The pooled cross-section analysis applied in this study is a relevant statistical skill to analyze a big N size data. The big N size data is meant to reflect the population group of forms of municipal governments closely. However, if further studies succeed in building panel data by ICMA, the studies could analytically investigate how a change of the political institution could significantly influence the fiscal performance over time. Also, this study considered political institution systems of city governments in two types, council-manager, and city-mayor forms. However, in order to explicitly capture the political power of mayors and administrative power of managers, future studies could focus more on how to categorize further municipal political structures beyond these dichotomous types in order to investigate the characteristics of executive and legislative authority in council-manager and mayor-council systems.

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**장 성 규**: 플로리다 주립대학교에서 행정학 박사 학위를 취득하였으며 (학위 논문: "*A historical review*, A Formal Model, and An Empirical Test of the Government's Contractual Choice of Tax Collection between Tax Farming and Tax Bureaucracy), 현재 인디애나 주립대학 사우스 밴드 캠퍼스 (Indiana University-South Bend) 행정학과 조교수로 재직 중이다. 학문적 관심 분야로는 조세행정, 성과주의 예산, 정책 분석 등이 있으며 주요 논문으로는 "The Effects of State Delinquent Tax Collection Outsourcing on Administrative Effectiveness, Efficiency, and Procedural Fairness," (with Robert Eger), *American Review of Public Administration*, first published online: April 6, 2018, https://doi.org/10.1177/0275074018759435" 이다. E-mail: sujang@iusb.edu

**염 지 선**: 플로리다 주립대학교에서 행정학 박사 학위 (논문제목: Green Multilevel Governance: The Dynamic Multi-Governmental Efforts for Climate Protection and Green Energy)를 취득하였고, 현재 가천대학교와 선문대 행정학과에서 강의를 하고 있다. 학문적 관심분야는 지방자치분권 및 선거 제도, 기후 변화와 재생 가능한 에너지 정책, 지방정부간 협력 관계 분석 등이 있다. E-mail: youmji@gmail.com.

# Appendix 1. Variable Description and Data Sources

| | Variables | Descriptions | Sources |
|---|---|---|---|
| Dependent | Rev. per capita | Total revenue / Population (in thousands) | Florida State's Annual Financial Report, 1991, 1996, 2001, 2006, and 2011 |
| | Fiscal self-reliance ratio | Own source revenue / Total revenue | |
| | Exp. per capita | Total expenditure /Population (in thousands) | |
| | Rev.-Exp. ratio | Total revenue / Total expenditure | |
| | Debt service ratio | Debt service / Total expenditure | |
| | Tax rev.per capita | Total tax / Population (in thousands) | |
| Independent | Municipal form of government | 1: Council-Manager<br>0: Mayor-Council | ICMA's Municipal Form of Government survey. 1991, 1996, 2001, 2006, and 2011 |
| Control | Population | Population (in thousands) | Florida State's Annual Financial Report, 1991, 1996, 2001, 2006, and 2011 |
| | Property value | Total property tax / Population (in thousands) | |
| | Budget maker | 1: Chief appointed official or Chief financial officer<br>0: Chief elected official | ICMA's Municipal Form of Government survey, 1991, 1996, 2001, 2006, and 2011 |

# Appendix 2. A ICMA Questionnaire for Form of Municipal Governments

Q: Indicate your municipality's current form of government as defined by your charter, ordinance, or state law (Check only one).

1. Mayor-Council. Elected council or board serves as the legislative body. The chief elected official is the head of government, with significant authority, generally elected separately from the council.
2. Council-Manager. Elected council or board and chief elected official (e.g., mayor) are responsible for making policy with advice of the chief appointed official. A professional administrator appointed by the board or council has full responsibility for day-to-day operations of the government
3. Commission. Members of a board of elected commissioners serve as heads of specific departments and collectively sit as the legislative body of the government.
4. Town Meeting. Qualified voters convene to make basic policy and to choose a board of selectmen. The selectmen and elected officers carry out the policies established by the government.

# Appendix 3. Multicollinearity Assumption Test (VIF) Result Table

| | Council-Manager Form | Population | Property Value | Budget Maker | 1991 | 1996 | 2001 | 2006 |
|---|---|---|---|---|---|---|---|---|
| Tax Rev. per capita | 1.40 (0.713) | 1.03 (0.972) | 1.01 (0.99) | 1.40 (0.713) | 1.75 (0.57) | 1.64 (0.61) | 1.70 (0.587) | 1.71 (0.583) |
| Exp. per capita | 1.42 (0.71) | 1.03 (0.97) | 1.01 (0.99) | 1.41 (0.71) | 1.76 (0.57) | 1.65 (0.61) | 1.71 (0.59) | 1.72 (0.58) |
| Rev-Exp. Ratio | 1.42 (0.71) | 1.03 (0.97) | 1.01 (0.99) | 1.41 (0.71) | 1.76 (0.57) | 1.65 (0.61) | 1.71 (0.59) | 1.71 (0.58) |
| Debt service Ratio | 1.40 (0.71) | 1.03 (0.97) | 1.01 (0.99) | 1.40 (0.72) | 1.76 (0.57) | 1.64 (0.61) | 1.70 (0.59) | 1.71 (0.58) |
| Fiscal self-reliance | 1.40 (0.713) | 1.03 (0.97) | 1.01 (0.99) | 1.40 (0.72) | 1.75 (0.57) | 1.64 (0.61) | 1.70 (0.59) | 1.71 (0.58) |

Note: ( ) 1/VIF