Governance structures and accounting at large municipalities

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Abstract

Either Mayor–Council or Council–Manager forms of governance operate most cities in the US, with a slow trend toward Council–Manager cities. Theoretical modeling suggests that the Council–Manager form should be more efficient, since the city manager has greater incentives to increase financial and accounting performance relative to the mayor as chief executive officer. However, two sets of factors may be more important for municipal comparisons. Since the mid-1980s, regulations of state and local governments have intensified. At the same time, economic conditions improved dramatically. Consequently, these two factors might be more relevant to evaluate the financial and accounting conditions in large cities. The purpose of this paper is to test the significance of governance structure on accounting disclosure levels and financial condition, based on samples of large cities from the early 1980s and the mid-1990s. The findings support the perspective that city manager cities substantially outperform Mayor–Council cities on major dimensions examined in both univariate and multivariate tests. Large municipalities improved on key financial and accounting variables from 1983 to 1996. Council–Manager cities maintained superiority over Mayor–Council cities for accounting disclosure in both periods. Council–Manager cities were significantly better in financial condition in 1983, but the evidence for 1996 was mixed.
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1. Introduction

Most American cities are operated by either Council–Manager (48.3%) or Mayor–Council (M-C) (43.7%) forms of municipal governance. The trend over the last two decades has been away from the Mayor–Council to Council–Manager (C-M), with an average 63 cities a year adopting the C-M form. This suggests that the C-M form may be superior based on financial and/or political reasons (ICMA, 2000). But are C-M cities in fact superior, based on financial and accounting results?

The purpose of this paper is to compare the relative performance of corporate governance (M-C vs. C-M) using large municipalities. Univariate and multivariate tests are conducted using two accounting periods, fiscal years ending in 1983 and 1996. The earlier period was before stringent federal regulation and the establishment of the Government Accounting Standards Board (GASB). This also was a period of relatively poor financial conditions for large cities. The later period was over a decade after the Single Audit Act and the formation of the GASB. Economic condition also improved substantially for large cities. Two performance indicators are used for analysis: (1) accounting disclosure levels and (2) financial condition. It is expected that C-M cities will out-perform M-C cities in both periods, based on incentives associated with professional management.

Beginning with Evans and Patton (1983), the accounting literature hypothesized that professional management associated with C-M provides better accounting disclosure and financial characteristics based on signaling and agency theory incentives. Thus, theoretical and empirical evidence indicates the perceived superiority of the C-M governance structure. Can this perception be demonstrated based on either or both 1980s and 1990s data? The 1970s and 1980s were periods of economic disruption and financial strife for municipalities. Evidence of poor accounting and audit quality and fiscal stress was widespread. Consequently, greater accounting and audit regulations were mandated. New regulations have been in place for several years and, simultaneously, economic conditions have improved substantially. Therefore, improvements in financial and accounting results are expected, based on more stringent regulations and financial stability in local government. What has not been demonstrated is to what extent governance structure is related to financial and accounting conditions and the regulatory and economic improvements beginning in the mid-1980s.

Evans and Patton (1983, 1987) provide evidence of municipal differences in accounting based on governance structure. C-M cities were more likely to have a Certificate of Conformance (now Certificate of Achievement), since the City Manager (CM) was a professional administrator with incentives for competent oversight. This basic accounting superiority for C-M cities was corroborated by several studies using municipal data from the 1970s and 1980s. See, for example, Copley (1991) and Giroux and Shields (1993).

Several indicators suggest substantial structural changes in American cities over the last two decades. For example, large cities in 1996 had fewer qualified audit reports, higher bonds rating, and more Certificates of Achievement than comparable cities in 1983 (McLelland and Giroux, 2000, p. 276). This is likely based on the increased accounting and financial regulations and improved economic conditions. However, it is not clear how important the municipal governance structure has been in this transformation. The purpose of this study is to analyze these differences. Theoretical modeling can be based on two likely scenarios: (1) C-M cities will outperform M-C cities on all relevant dimensions, because of the importance of professional management; or (2) there will be no differences in results between the two governance structures by the mid-1990s, since the combination of regulation and strong economic conditions are the overriding factors in financial success. The hypotheses developed for this paper assumes that the regulatory changes and improved economic conditions should dominate for both accounting disclosure levels and financial condition, consistent with the second scenario.

Empirical testing is based first on descriptive and univariate analysis of key accounting, auditing, and financial factors of cities over 100,000 in population, using a matched-pair design for 1983 and 1996. Then multivariate models using OLS and logistic regression statistically compare the two governance structures from both accounting periods. The first model examines disclosure levels of cities. The first empirical analysis uses Certificate of Achievement (CA) as a measure of disclosure levels. Corporate governance structure is used as an independent variable, along with a set of control variables. The second empirical analysis uses a disclosure index (based on CA, the audit opinion and Big 6 audit) to measure disclosure levels. The results provide strong support for the superiority of C-M cities over M-C cities for each period for disclosure levels. The second model tests financial condition, using financial variability (general fund equity divided by general fund revenues). The results indicate superiority for C-M cities in 1983, but the 1996 results are ambiguous. Generally, the results suggest that the C-M governance structure is superior to the M-C structure on key financial and accounting dimensions.

The remainder of the paper is organized as follows. Section 2 provides background information and Section 3 contains the literature review. The model development is presented in Section 4, while Section 5 details our sample. The results are presented in Section 6. Section 7 concludes the study.

2. Background

This section will provide basic historical analysis associated with municipal governance structure, accounting and financial factors associated with cities over the last quarter century, and relevant accounting literature. Section 2.1 reviews

the differences in alternative governance structures including their perceived benefits and drawbacks. Section 2.2 reviews the financial and accounting history of cities since 1975, when New York City was on the verge of financial collapse.

2.1. Governance structure in municipalities

Historically, the M-C form of government has been the most common in US cities. The city council is the elected legislative branch of the city. The primary functions are to adopt the annual operating budget, pass necessary ordinances or resolutions, develop the basic public policy and future plans for the city, and review the performance of the executive branch. The mayor is the chief executive under this system and usually elected as mayor. In some cases the mayor can be a city council member appointed by a vote of the city council. Generally, the mayor runs the city on a day-to-day basis (although the level of responsibility can vary). The mayor is responsible for preparing the budget and implementing the budget passed by the council, hiring and firing department heads and (usually indirectly) the departmental staff (ICMA, 2000). The M-C form is summarized in Fig. 1.

The C-M form is more recent, evolving out of the reform movement at the turn of the (20th) century. Staunton, Virginia may have been the first city to use this form of government, which the city adopted in 1908. The first large city to use it was Dayton, Ohio in 1914. The adoption decision generally requires a charter, local ordinance or state law allowing this form of governance (ICMA, 2000).

Under this system the council remains the legislative branch elected by the voters. The CM is hired by the city council and works at their pleasure. The city would still have a mayor or council president that is selected by the council or elected by voters. The mayor usually is the head of the council and has
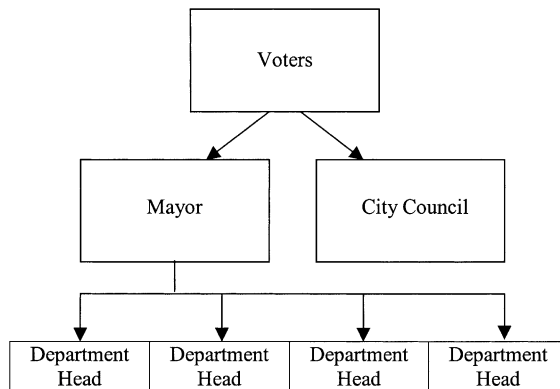

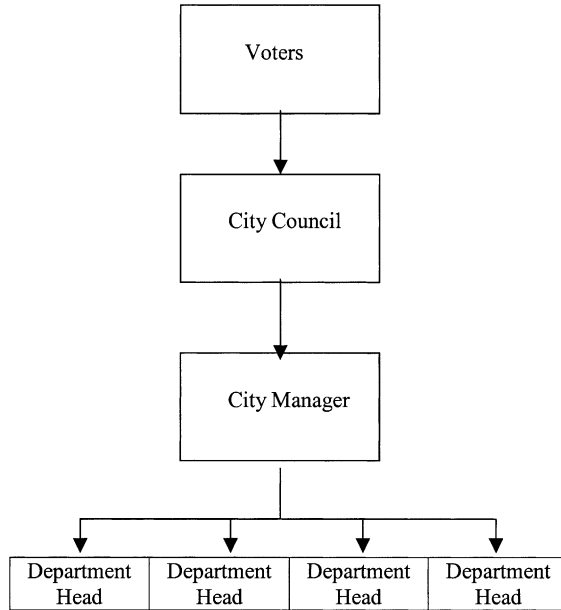Fig. 1. Municipal governance structure: Mayor–Council form.

Fig. 2. Municipal governance structure: Council–Manager form.

ceremonial duties as political head of the city. The CM and not the mayor is the chief executive with day-to-day responsibilities. He or she is responsible for budget preparation and carrying out the budget approved by the city council, as well as hiring and firing decisions of the executive branch. The manager also serves as an advisor to the council for their legislative duties (ICMA, 2000). The C-M form is summarized in Fig. 2.

In both governance structures, the city council serves the same role—as the legislative body of the municipality. The major difference is that the mayor is the chief executive officer (CEO) of the M-C form, while the CM is the CEO in the C-M form. In the first case the CEO is a politician, while in the second a professional manager. Thus, the CEO incentive structure is expected to be quite different for the governance structures.

2.2. Municipal financial and accounting analysis—1975–1996

Municipal accounting was a relatively neglected field until the financial crisis of New York City in 1975 (Giroux, 1995). The near bankruptcy of the nation's largest city and the disreputable budget and accounting practices led to close scrutiny and research of municipal finance and public hearings in Congress. At this time, generally accepted accounting principles (GAAP) were represented by *Governmental Accounting, Auditing and Financial Reporting* (National

Council on Governmental Accounting, 1968) and municipal audits were relatively common among local governments. [1,2]

New York city based accounting practices on state requirements and was not audited. Accounting practices used aggressive revenue recognition, understated expenditures, and did not recognize important liabilities such as pension obligations (Giroux and Flory, 1980, pp. 25–26). A number of subsequent studies and Congressional hearings revealed that these problems extended well beyond New York city. The major accounting problems included inadequate financial reporting, low compliance with GAAP, and many governments that were not audited. Economic problems were widespread at this time and a number of cities suffered fiscal stress (Ernst and Whinney, 1979). For example, Cleveland defaulted on major debt and had difficulty establishing a reliable accounting system (Giroux and Flory, 1980, p. 25).

The two major outcomes of the New York City debacle were: (1) Congressional hearings that led to increasingly stringent audit requirements for state and local governments and (2) the accounting profession developing better accounting standards and an improved structure for standard setting (Freeman and Shoulders, 1999, p. 60).

Beginning in 1979, the National Council on Governmental Accounting (NCGA) issued a series of statements to improve financial reporting standards and make the annual report (the complete annual report to be called the Comprehensive Annual Financial Report or CAFR) more comprehensive and somewhat ''user friendly'' (Giroux, 1995). In 1984 the GASB was established under the Financial Accounting Foundation (FAF) with a structure similar to the Financial Accounting Standards Board (FASB). The GASB built on the framework of the NCGA statements and issued 38 GASB statements by the end of 2001, as well as interpretations, technical bulletins and concept statements. The GASB has given the concept of governmental GAAP more prestige and authority (Freeman and Shoulders, 1999, pp. 11–16).

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[1] After the collapse of New York City in 1975, four of the Big 8 firms conducted research on the state of governmental accounting, auditing, and financial conditions: Coopers and Lybrand (1976), Ernst and Whinney (1979), Price Waterhouse (1979), and Touche Ross & Co. (1979). Congress also held hearings to determine if state and local governmental accounting standards should be mandated by the federal government, the role of the Securities and Exchange Commission or other federal agencies to regulate the municipal bond market, and what additional safeguards were needed to protect federal grants to state and local governments. Consequently, considerable information was made available on municipal accounting, auditing and financial condition from this time period.

[2] As pointed out by an anonymous reviewer, voluntary governmental audits were common by the middle of the 20th century. Wallace (1986), using a sample of cities over 10,000, found that over half of 1034 respondents were initially audited prior to 1956 (p. 15). A C-M governance structure was a positive attribute of these audited cities.

The federal government has numerous programs to fund projects through state and local governments. This has resulted in local governments receiving tens of billions of dollars in inter-governmental grants annually. The federal government has struggled in attempting to maintain financial and legal control on how these monies are used. Beginning with the State and Local Fiscal Assistance Amendments of 1976 (which reauthorized revenue sharing), local governments have been subject to mandated financial audit (Giroux and Dunn, 1982, pp. 49–50). (Under the Act this applied only to governments receiving a total of $25,000 or more in federal funds and required an audit only every three years).

The General Accounting Office (GAO) and the Office of Management and Budget (OMB) established various federal auditing requirements. These were formalized with the passage of the Single Audit Act of 1984. With these new federal requirements, the governmental audit became more stringent than the typical commercial audit. Additional internal control requirements were added and additional audit reports were mandated (e.g., on internal control and concerning compliance with federal laws and regulations). Also, various state and federal agents had authority to review auditor working papers and could refer sub-standard audits to the state accountancy boards (Freeman and Shoulders, 1999, pp. 807–810).

In this "early period" from about 1975 to the middle of the 1980s, municipalities had substantial fiscal problems associated with "stagflation", a period of high inflation accompanied by high interest rates and punctuated with recession. Simultaneously, cities were attempting to meet the new accounting and audit requirements. The GAO issued a number of studies based on GAO reviews of governmental audit working papers (Controller General of the US, 1986) and found a large percentage of government audits sub-standard. Deis and Giroux (1992, p. 473) also discovered that a large number of working paper reviews of Texas school districts were substandard and over 15% were referred to the Texas State Board of Public Accountancy for possible corrective or punitive action.

The US economy generally has been rising since the early 1980s and "booming" since the early 1990s. Municipalities have been beneficiaries, primarily because of increasing revenues. It is expected that cities should have improved dramatically on dimensions of fiscal viability because of economic prosperity, as well as on accounting and auditing practices and reporting because of substantive regulatory requirements.

3. Literature review

Empirical governmental research became a major focus for accounting in the early 1980s. Wallace (1981), Wilson and Howard (1982), Ingram and

Copeland (1982), and others considered the municipal bonds market. Accounting factors were used to explain default risk in the pricing (or interest rates) of municipal issues. Generally, accounting-related variables had some impact on net interest cost or other measure of default risk. The basic explanation was that improved accounting and auditing techniques was associated with reduced risk and, therefore, lower interest rates.

Evans and Patton (1983) used an agency and signaling framework to predict participation in the Certificate of Conformance (now Certificate of Achievement or CA) of the Municipal Finance Officers Association (MFOA, now Government Finance Officers Association or GFOA). A major explanatory factor was the existence of a CM. The hypothesis was that the CM has both direct and indirect benefits from participating in the CA program (Evans and Patton, 1983, p. 151).

To obtain a CA, a GFOA team (at the time of the Evans and Patton article it was an MFOA team) reviewed the financial reports of the government for compliance with GAAP and other requirements. Participation was voluntary and those choosing to participate could be losers (not receiving a certificate) or winners (receiving a CA). In the Evans and Patton theoretical model, the existence of a CA was a signal of executive competence. Consequences for receiving a CA could include better financial disclosure, higher bond ratings, lower interest on debt, and favorable recognition for the CM. The CM is an agent of the city. Competent management is beneficial to the city and indirectly beneficial to the CM (and other administrators). The CA can be viewed as the personal accomplishment of the CM, which favorably signals the labor market (Evans and Patton, 1983, p. 158). A CM with aspirations to a higher paying job at a larger city has incentives to receive a CA for the local municipality.

Evans and Patton (1983) empirically tested their theory using a probit model with CA participation as the dependent variable. The sample included 1,032 cites over 25,000 in population and measured over the period 1976–1980. The three categories included 193 CA winners, 76 CA losers, and 763 non-participants. Probit results suggested that CA participants were more likely to have a CM, were relatively larger, and had more active municipal officials (p. 168). Thus, the role of the CM was critical to the CA participation decision.

Evans and Patton (1987) extended their earlier analysis by time period, theoretical modeling, and expanding the empirical models. Additional data were provided by a survey to chief financial officers of municipalities. Information from 1981–1984 was included. The role of the CM was unchanged in this analysis and results were similar. However, form of government (M-C vs. C-M) was significant over the entire sample, but not significant for cities with populations from 25,000 to 60,000.

Several governmental studies from the 1980s and early 1990s included C-M as an independent variable for a variety of models. Quite often, it proved to be a significant variable in a variety of contexts. Morgan and Pelissero (1980) tested

the relationship between politics and government structure for determining taxation and spending. They provided limited evidence that "reformed" cities (that include the C-M governance structure) had lower tax and spending rates.

Giroux et al. (1986) surveyed the supervisory staffs of six Texas cities to measure relative influence (or power) in budget decisions associated with the C-M governance structure. The CM had the most vertical power relative to the city council and department heads for determining final budget numbers for all city size categories and setting goals for all but the small cities (the city council had the most power in the small cities). However, the department heads had the most power for carrying out the budget. No analysis was made of M-C cities.

Ingram and DeJong (1987) developed accounting disclosure indexes to examine what factors are associated with disclosure levels. Based on an agency framework, C-M governance structures were expected to have a positive impact on disclosure levels associated with professional management. The governance dummy variable was negative (indicating lower disclosure levels for the M-C form of government) and significant, as expected.

Copley (1991) compared municipal disclosure practices with audit quality. A sample of 262 cities with population over 25,000 from 1984 was used and a disclosure index used as a surrogate for disclosure quality. Higher disclosure levels were associated with Big 8 auditors (used as a measure of audit quality) and cities with the C-M governance structure.

Mayper et al. (1991) looked at the difference between budget and actual expenditures and surplus/deficit (called budget errors). They assumed that C-M budgets would be more accurate (a budget that can be relied upon would be considered a measure of performance), while the M-C form was more likely to have liberal budget estimates (providing an extra cushion for more government services). Using a sample of large cities from the mid-1980s, form of government was significant. C-M cities had larger budget errors, associated with more conservative budgeting; that is, appropriations were relatively larger than actual expenditures for C-M cities and relative surpluses also were larger.

Giroux and Shields (1993) used a public choice monopoly model developed by Gonzalez and Mehay (1985) to measure government output levels (based on expenditures). In this study of cities over 100,000 in population using 1983 data, C-M was combined with CA to form composite dummy variables. Compared with M-C cities without CAs, the three other combinations (M-C with CA, C-M without CA, and C-M with CA) all were negative and significant. This indicated that spending levels were reduced in all cases, indicating a control effect. As stated: "These results suggest that the CM behaves as an effective liaison between the bureaucracy and elected officials and the CA is a useful monitoring device" (Giroux and Shields, 1993, p. 255).

Several studies have analyzed municipal audit fees and other audit measures based on audit economics models. Some of these studies included C-M as an independent variable. For example, Ward et al. (1994) examined audit fees

from 171 Michigan cities for 1988. Cities with a C-M structure had significantly lower audit fees, presumably because C-M cities have better control systems.

4. Model development

Under the M-C governance structure, the mayor serves as CEO. The mayor is elected by the voters and is a direct agent of the citizens. The primary incentive of the mayor as an elected official is assumed to be reelection. Consequently, the mayor is expected to focus on political motivations. The CM is the direct agent of the city council and only an indirect agent of the voters (Mayper et al., 1991). Following Evans and Patton (1983, 1987), the CM is viewed as a professional administrator hired by and serving at the pleasure of the city council. The CM will seek to signal competence both to the city council and regional and national peers.

When modeling the expected differences between the two governance structures, both agency and signaling factors dominate. The C-M structure has obvious principal–agent relationships, with the CM the agent of the city council (Selden et al., 1999). This should be associated with a strong financial structure free of fiscal stress, relatively low taxes and low debt levels, a problem-free audit, and financial reports that signal complete reporting in a competent manner. The M-C governance structure should be associated with a focus on political rather than financial characteristics, such as meeting the needs of important special interests. Therefore, there are few obvious incentives to achieve a strong financial structure. Assuming that governance structure incentives predominate (that is, regulatory environment and economic conditions are relatively less important), there should be significant differences in key indicators of financial and accounting excellence.

4.1. Governance structure hypothesis

The formal hypothesis comparing governance structures is divided into two parts:

H1a: C-M cities have superior accounting disclosure levels when compared to M-C cities.
H1b: C-M cities have superior financial conditions when compared to M-C cities.

The role of governance (GOV) will be measured with two models. The first is accounting disclosure level. The second is financial condition. Accounting disclosure level represents the degree to which the financial information is complete and in accordance with GAAP. This should insure complete disclosure and relative financial transparency. Two empirical surrogates measure

disclosure levels. The first disclosure surrogate is CA. Following Evans and Patton (1983, 1987), this is a common disclosure measure in the accounting literature. The CA represents recognition for financial reports that meet the requirements of the GFOA. [3] It is assumed that the CM has greater incentives than a mayor to seek the CA to signal professional competence (Evans and Patton, 1983, 1987). The CA can signal the City Council and other community leaders, as well as professional peers at other cities. This recognition can lead to increased pay and other perquisites as well as future job opportunities at other cities for higher compensation.

Second is a disclosure index (DI), based on three factors: (1) a CA, (2) a Big 6 audit (BIG 6), and (3) an unqualified audit opinion (OPIN). [4] Thus, a municipality can achieve a score of zero to three. A Big 6 (Big 8 in the early 1980s) audit should be associated with a higher quality audit than a non-Big 6 audit. According to Giroux and Shields (1993), a mayor as CEO has political incentives to hide financial conditions and should prefer a non-Big 6 (lower quality) audit, since it would be more likely to hide financial and accounting problems. [5,6] An OPIN is expected. On the other hand, a qualified audit opinion is ''bad news'', signaling that the financial statements do not comply with GAAP (McLelland and Giroux, 2000). [7]

The CM should be particularly concerned about the financial viability of the city, which may not be of interest to a mayor willing to spend money for

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[3] An interesting question is to what extent the standards of the CA have changed over time. Using a sample of over 600 respondents, Evans and Patton (1983) found that only 16.6% participated in the CA program (then called the Certificate of Conformance). Of the 101 participants, 64 received a certificate—a ''pass rate'' of 63.4%. Evans and Patton (1987) estimated that the pass rate in the 1980–1984 period was approximately 70% (footnote 18). In 1996 (based on 1995 annual reports), the GFOA reports that 1351 CAs were awarded out of 1395 submissions (a pass rate of 96.8%) (GFOA, 2001, p. 29). Consequently, the pass rate has increased substantially.

[4] A bond rating dummy variable where an AAA Moody's rating = 1 was initially part of the disclosure model. However, as pointed out by an anonymous reviewer, governments with bond insurance are automatically given an AAA rating. When we reviewed our sample we discovered that 27 cities had bond insurance and, consequently, received an AAA rating. Since the bond rating cannot be used to represent an objective review of the municipalities' financial condition, this variable was dropped from the analysis.

[5] We did not examine the effect of mergers, acquisitions, or professional affiliations between Big 6 and non-Big 6 accounting firms on the two sample periods. In both 1983 and 1996, we can only observe which audit firm performed the audit for that individual year. In addition, mandatory auditor rotation may influence the choice of audit firm and our observations. This is a limitation of this study. For a sub-sample of 140 firms in 1996 that responded to our survey requests, the average audit firm tenure was 5.55 years.

[6] Non-big 6 auditors included four audits conducted by state auditors in three states (Indiana, Minnesota and Washington). Because of the small number, a separate analysis was not conducted.

[7] In 1988 the ''subject to'' opinion was eliminated under SAS nos. 58 and 59 (AICPA, 1988a,b). We coded OPIN without regard to this auditing change. However, in both 1983 and 1996, the single most common item that caused the qualification was a lack of fixed assets records.

political support. Financial viability (FV), defined as the ratio of general fund equity divided by general fund revenues, is used as an empirical surrogate for financial condition (McLelland and Giroux, 2002). The relative equity position in the general fund is an indicator of financial health, roughly analogous to retained earnings for a commercial firm. The C-M structure should maintain a fiscal cushion (here measured as a higher equity ratio), which is associated with improved financial management.

The models to test governance structure performance are presented in Table 1. The dependent variables were described above. GOV is the independent variable of interest in each model. The remaining independent variables are control variables, representing those factors most likely to affect on accounting disclosure levels and financial condition. The theoretical surrogates are the same for both disclosure and financial condition; however, the empirical surrogates are somewhat different.

Two economic/demographic factors are included in the analysis. Population (POP) measures municipal size. As municipalities grow in population, increased municipal services are expected as well as increased revenue sources to pay for these. The relative wealth of the municipality is measured by per capita income (PCI). Cities are expected to provide more services as demand for these services rises with wealth (Giroux and Shields, 1993).

In the level of disclosure models, financial condition is measured using FV and total general long-term debt (TOTLDEBT). Financial condition should be positively related to disclosure levels, since the chief executive has incentives to signal financial health to voters, creditors and other users of financial information. The financial conditions model uses FV as the dependent variable, while TOTLDEBT is an independent variable to control for relative debt levels as a measure of credit risk.

The C-M should attempt to maintain relatively low levels of outstanding debt to maintain a strong financial structure. M-C cities likely prefer higher debt levels to increase spending to benefit favored special interests. The surrogate to capture this is total debt in the general fixed asset account group to total revenues (TOTLDEBT). Public choice models often view long-term debt as a potential form of fiscal illusion, since it appears to be a form of "tax-free spending" if voters do not consider the additional taxes needed to pay future interest and principal payments (Wagner, 1976). Since higher debt levels indicate increased credit risk, a negative coefficient is expected. [8]

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[8] Revenue problems from the 2001 recession resulted in states and local governments scrambling to meet balanced budget requirement (an aggregate deficit at the state level of $68 billion in 2003 according to Kadlec, 2002, p. 1). Alternatives included raising taxes, lowering spending, and issuing new debt. Thus, fiscal illusion incentives seem to be on the rise associated with the economy turning down.

Table 1
Theoretical modeling for multivariate analysis

Theoretical construct	Empirical model	Definition	
Panel A: dependent variables			
Level of disclosure	Certificate of achievement	CA dummy	
Level of disclosure	Disclosure index	Certificate of achievement + Audit opinion + Big 6	
Financial condition of municipality	Financial viability	GF equity / GF revenues	
	Empirical surrogate	Expected sign: disclosure models	Expected signs: financial viability models
Panel B: independent variables			
Corporate governance	City manager dummy	+	+
Municipal size	Population	?	?
Municipal wealth	Per capita income	+	+
Financial condition	Financial viability	+	
Financial condition	Total debt ratio	−	−
Regulation	State accounting regulation		+
Regulation	State reporting regulation	+	
Regulation	Inter-governmental grant ratio	−	−

Accounting and reporting regulations are important control variables, especially because of the expected differences over the period under study. Prior to the increasing levels of federal regulations (especially the US Congress, 1984), state regulations should be substantial factors for disclosure differences and, to a lesser extent, financial condition. The disclosure index models use state reporting regulations (SRR), a dummy variable where one equals the existence of state regulations. The financial condition model uses state accounting regulations (SAR), since it is the underlying impact on GAAP that is most important. [9] It is expected that the state regulations be positive, especially for the 1983 period, which was before the Single Audit Act and other national regulatory constraints.

Federal regulations changed over the period under study and should affect municipalities based, in part, on the relative importance of inter-governmental

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[9] The Municipal Finance Officers Association (MFOA) published a survey of existing state accounting and reporting regulations in 1983, which was used to develop the two dummy variables (MFOA, 1983). This was updated to 1996 using emails to all state governments in our sample.

grants. That is, high levels of grants should be associated with greater compliance with federal requirements (Giroux and Shields, 1993). This is captured by the ratio of inter-governmental grants to total revenues (IG). A positive sign is expected.

4.2. Time period hypothesis

To capture the relative changes in financial and regulatory factors over the comparative periods under study, the formal hypotheses are:

H2a: Governance structure is less significant relative to accounting disclosure levels in 1996 compared to 1983.

H2b: Governance structure is less significant relative to financial condition in 1996 compared to 1983.

Accounting and financial factors should have improved over the period under study, basically from two causes. First, regulatory requirements became more stringent. The Single Audit Act of 1984 mandated financial audits of state and local governments and increased audit requirements beyond generally accepted auditing standards. The GASB was established in 1984 and has been issuing financial and reporting standards ever since. Second, economic conditions improved substantially and municipalities generally moved from fiscal stress to financial solvency. [10] It is assumed that regulatory changes and improved economic conditions should be more important than governance structure for both accounting disclosure levels and financial condition.

Because of the important economic and structural changes to the local government environment from the early 1980s to the mid-1990s, a comparative statics structure will be incorporated. The early 1980s was a period of financial turmoil. Municipal fiscal stress was common and both financial and accounting reforms were not yet implemented. The expectation is that C-M cities were superior on key financial factors in the earlier period based on agency incentives and maintained this superior position over the next decade and beyond.

5. Sample

To test the relative impact of governance structure in a comparative statics environment, national samples of cities over 100,000 in population for the fiscal

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[10] As stated by one anonymous reviewer: "regulation would mitigate the ability of strong mayors to obfuscate financial reporting and an improving national economy over the period should have benefited MC cities as much as CM cities." We thank the reviewer for the insight.

years ending in 1983 and 1996 were used. The 1983 period is important because it predates both key regulatory changes and the substantial economic boom of the mid-1980s to the late 1990s. The 1996 period was over a decade after both regulatory changes and was well into the economic boom.

Many of the studies cited used large cities. It is expected that governance structure is especially important for this group. The position of mayor of a large city can be considered a major political position, requiring a full-time politician. The CM position in a major city can be considered a significant accomplishment and a highly visible position for a governmental professional. Cities of this size are large enough to have a large core of professional governmental employees and well-developed political structures.

Annual reports were requested from the 175 cities in 1983 and 209 cities in 1996 over 100,000 in population. Reports were received from 133 and 166 cities, respectively, from the two time periods. Because of the direct comparisons across the two time periods, a matched-pair design was used for analysis. There were 104 cities common to both samples. However, four cities changed form of governance from 1983 to 1996 and were dropped from the sample. [11] After eliminating cities with missing data, the final sample was 92 municipalities, 43 with a M-C form of governance and 49 with a C-M form.

Before the focus strictly on M-C and C-M comparisons using the multivariate models, it is useful to consider some possible structural changes over the last decade or so. Accounting and auditing regulations have increased substantially and the economy has boomed over this period, which may have substantial overall changes, irrespective of the governance structure. To determine the scope of structural changes in large cities six dummy variables are examined in the governance structure model. These are the number of C-M to M-C cities, number of unqualified audit opinions, number of CA, number of cities with Big 6 audits, and state accounting and reporting regulations. Six continuous variables also are analyzed. The purpose of the descriptive comparison is to get a general idea of key differences for similar cities over this 13-year time horizon. Differences should be associated with the changing regulatory environment (because of increasingly stringent accounting and auditing requirements) and the robust economy of the late 1980s and 1990s.

Univariate testing of differences (by governance structure and over time) included chi-square for dummies and *t*-tests for continuous variables. The variables used for analysis are summarized in Table 2, with expected signs for the univariate testing.

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[11] Three cities changed from C-M to M-C (St. Petersburg, FL, Columbus, GA, and Rochester, NY), while Philadelphia, PA changed from M-C to C-M.

Table 2
Variables used for analysis

Variables	Definition	Prediction
Panel A: dummy variables		
Mayor–Council vs. Council–Manager governance structure (GOV)	Dummy variable, where 1 = C-M structure	+
Certificate of achievement (CA)	Dummy variable, where 1 = city receiving a CA in the previous year	+
Unqualified audit opinion (OPIN)	Dummy variable, where 1 = unqualified opinion, 1983 and 1996	+
Big 6/8 auditor (BIG 6)	Dummy variable, where 1 = Big 8 used in 1983, Big 6 auditor in 1996	+
State accounting regulations (SAR)	Dummy variable, where 1 = state governmental accounting regulations, 1983 and 1996	+
State reporting regulations (SRR)	Dummy variable, where 1 = state governmental reporting regulations, 1983 and 1996	+
Panel B: continuous variables		
Financial viability (FV)	General fund equity divided by general fund revenues, FYE 1983 and 1996	+
Population (POP)	Total population 1983 and 1996, natural logs used in multivariate analysis	?
Per capita income (PCI)	Per capita income, 1983 and 1996	+
Total debt ratio (TOTLDEBT)	Total debt in the general long-term debt account group to total revenues, FYE 1983 and 1996	−
Inter-governmental revenues (IG)	Ratio of inter-governmental revenues to total revenues, FYE 1983 and 1996	−
Disclosure index (DI)	Combining certificate of achievement, Big 6, and audit opinion	+

FYE = fiscal year ended.

6. Results

Analysis of results is divided into four parts. In the first section, a descriptive comparison is made between 1983 and 1996 cities. Mean comparisons are made for continuous variables and frequencies for categorical (dummy) variables. Univariate tests are used to determine significant differences between 1983 and 1996 data: *t*-tests for continuous variables and chi-square for dummy variables. In the second section, descriptive comparisons are made for both 1983 and 1996, testing M-C and C-M cities separately. The same univariate testing is used, but to determine if significant differences exist between 1983 and 1996 by GOV. The descriptive analysis is cross tabulated by both GOV and time period, using the same techniques. In the third section, the disclosure

level models are tested. The disclosure level models are based on logistic regression. The financial condition model is tested in section four, using OLS regression.

6.1. Structural change comparison, 1983 vs. 1996

Descriptive comparisons are made for the 12 variables associated with the governance structure models. The comparisons are summarized in Table 3. Panel A compares the means (standard deviations)/frequencies (percentages) for these variables, comparing 1983 with 1996. Panel B compares frequencies and chi-square results for the dummy variables and Panel C include *t*-values and significance levels for the continuous variables.

Of the 92 cities under analysis, 49 (53.6%) were C-M governance, while 43 (46.7%) were M-C. The substantial increase in cities receiving CAs from 51 (55.4%) to 81 (88.0%), significant at 0.01, reinforces the interpretation of improved accounting disclosure. Audit results indicated that the number of unqualified opinions increased dramatically. Most cities (71% or 77.2%) had qualified opinions in 1983 but less than 8% were qualified in 1996, significant at 0.01. This possibly is associated with cities that did not meet the new audit requirements early on, but have been striving to meet the regulations over time. [12] The number of Big 6 audits increased from 39 (42.4%) to 60 (65.2%); however, this is not a significant difference.

Financial viability as measured by General Fund equity as a percent of revenues, increased from 15.7% to 21.5%, significant at 0.01. This indicates reduced financial risk, associated with a stronger equity position. Population size was compared for the two groups. The average size increased from 318,000 to 354,000, a significant difference. Per capita income increased from under 10,000 dollars to almost $14,000, significant at 0.01. TOTLDEBT decreased from 99.8% to 90.4% of revenues, an insignificant difference. The inter-governmental grant percentage decreased from 28.0% to 22.1% of revenues, significant at 0.01. Thus, large cities must depend more in relative terms on own-source revenues rather than grants. The disclosure index increased from 1.21 to 2.46, again significant at 0.01. Level zero disclosures decreased from 20 to 3 from 1983 to 1996, while level three disclosures increased from 7 to 54.

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[12] There are a number of other possible reasons. As discussed in Footnote 6, the "subject to" opinion was eliminated in 1988. Also, the Single Audit Act of 1984 required several additional reports. Exceptions can be reported here and still result in a "clean" opinion.

Table 3
Descriptive comparisons of 1983 vs. 1996 results

Variable	1983	1996	
Panel A: frequency (%) for dummy variables = 1 (percentages); mean (standard deviations) for continuous variables			
Number of C-M cities (GOV)	49 (53.6%)	49 (53.6%)	
Certificate of achievement (CA)	51 (55.4%)	81 (88.0%)	
Unqualified audit opinion (OPIN)	21 (22.8%)	85 (92.4%)	
BIG 6/8 (BIG6)	39 (42.4%)	60 (65.2%)	
State accounting regulations (SAR)	57 (62.0%)	56 (60.9%)	
State reporting regulations (SRR)	58 (63.0%)	54 (58.7%)	
Financial viability (FV)	15.7% (0.15)	21.5% (0.17)	
Population (POP), in thousands	317.96 (381.8)	354.30 (371.9)	
Per capita income (PCI)	$9758.70 (1652.2)	$13,945.48 (2869.0)	
Total debt ratio (TOTLDEBT)	99.8% (0.90)	90.4% (0.49)	
Inter-governmental revenues (IG)	28.0% (0.14)	22.1% (0.13)	
Disclosure index (DI) means	1.21 (0.87)	2.46 (0.76)	
DI level 0	20 (21.7%)	3 (3.3%)	
DI level 1	40 (43.5%)	6 (6.5%)	
DI level 2	25 (27.2%)	29 (31.5%)	
DI level 3	7 (7.6%)	54 (58.7%)	
N	92	92	
			Chi-square
Panel B: frequencies (%) for variable = 1 and chi-square tests for dummy variables			
CA	51 (55.4%)	81 (88.0%)	24.1**
OPIN	21 (22.8%)	85 (92.4%)	91.2**
BIG 6	39 (42.4%)	60 (65.2%)	9.6**
			t-value
Panel C: t-tests for continuous variables (comparison of 1983 vs. 1996 amounts)			
FV	15.7%	21.5%	3.05**
POP (000)	318.0	354.3	4.25**
PCI	$9758.7	$13,945.5	46.6**
TOTLDEBT	99.8%	90.4%	−0.91
IG	28.0%	22.1%	−4.35**
DI means	1.21	2.46	12.85**

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).

6.2. Structural change comparison, 1983 to 1996—Mayor–Council and City Manager

The M-C and C-M comparison parallels the structural change comparison above. The descriptive analysis for the 1983 to 1996 M-C comparison is summarized in Table 4. The samples consist of the 43 M-C cities. Panel A considers the dummy variables using a chi-square test to measure statistical differences. Panel B analyzes the continuous variables and differences between 1983 and 1996 cities are statistically compared based on a *t*-test.

Cities with CAs increased from 18 (41.9%) to 34 (79.1%), significant at 0.01. Unqualified opinions rose from 7 (16.3%) to 37 (86.1%), a significant increase at 0.01. The number of BIG 6 audits increased from 19 (44.2%) to 27 (62.8%), significant at 0.1. Financial viability increased significantly from 11.0% to 16.7%, a significant indicator of increased equity. Average population increased from 420,000 to 427,000, an insignificant amount. PCI had a significant increase, from $9300 to over $13,000. Total debt decreased from 120% to 92%, an insignificant change. The IG ratios decreased from 32.7% of revenues to 25.3%, significant at 0.01. Finally, the disclosure index increased from only one to 2.28, again significant at 0.01. Level zero disclosures decreased from 10 to 3 from 1983 to 1996, while level three disclosures increased from 2 to 22. In summary, M-C cities financial and accounting characteristics improved substantially.

Table 4
Descriptive comparisons of 1983 vs. 1996 results for 43 Mayor-Council cities

Variable	1983	1996	Chi-square
Panel A: frequencies (%) for variables = 1 and chi-square tests for dummy variables			
CA	18 (41.9%)	34 (79.1%)	12.5**
OPIN	7 (16.3%)	37 (86.1%)	41.9**
BIG 6	19 (44.2%)	27 (62.8%)	3.0*
	1983 mean	1996 mean	*t*-value
Panel B: means (standard deviations) and t-tests for continuous variables			
FV	11.0% (0.12)	16.7% (0.10)	3.28**
POP (000)	420.1 (506.3)	426.7 (474.4)	0.53
PCI	$9300.0 (1442.1)	$13,234.7 (2358.8)	36.79**
TOTLDEBT	120% (1.08)	92% (0.56)	−1.53
IG	32.7% (0.17)	25.3% (0.14)	−2.94**
DI means	1.02 (0.77)	2.28 (0.91)	8.87**
DI Level 0	10 (23.3%)	3 (7.0%)	
DI Level 1	24 (55.8%)	4 (9.3%)	
DI Level 2	7 (16.3%)	14 (32.6%)	
DI Level 3	2 (4.6%)	22 (51.1%)	

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).

Table 5
Descriptive comparisons of 1983 vs. 1996 results for 49 City Manager (C-M) cities

Variable	1983	1996	Chi-square
Panel A: frequencies (%) for variable = 1 and chi-square tests for dummy variable			
CA	33 (67.4%)	47 (95.9%)	13.3**
OPIN	14 (28.6%)	48 (98.0%)	50.8**
BIG 6	20 (40.8%)	33 (67.4%)	6.9**
	1983 Mean	1996 Mean	*t*-value
Panel B: means (standard deviations) and t-tests for continuous variables			
FV	19.8% (0.15)	25.7 (0.21)	1.80*
POP (000)	228.3 (185.8)	290.8 (237.5)	5.93**
PCI	$10,161.2 (1732.5)	$14,569.2 (3144.4)	32.43**
TOTLDEBT	82.0% (0.67)	89.3% (0.43)	0.72
IG	23.9% (0.10)	19.2% (0.11)	−3.52**
DI	1.37 (0.93)	2.61 (0.57)	9.20**
DI Level 0	10 (20.4%)	0 (0.0%)	
DI Level 1	16 (32.7%)	2 (4.1%)	
DI Level 2	18 (36.7%)	15 (30.6%)	
DI Level 3	5 (10.2%)	32 (65.3%)	

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).

The descriptive analysis of 1983–1996 C-M cities is summarized in Table 5. The number of CAs increased from 33 (67.4%) to 47 (95.9%), significant at 0.01. The percentages were larger than M-C cities for both periods, although the rate of increase was actually higher for the M-C cities. Unqualified opinions increased from 14 (28.6%) to 48 (98.0%), significant at 0.01. The number of BIG 6 audits rose from 20 (40.8%) to 33 (67.4%), significant at 0.01. In both cases the number of BIG 6 audits was not much different than M-C cities, an unexpected result. Financial viability increased from 19.8% to 25.7%, significant at 0.1. In both periods, FV was substantially higher than for M-C cities. Average population size for C-M cities increased from 228.3 million to 290.8 million, significant at 0.01. PCI increased from over $10,000 to over $14,000, significant at 0.01. Unlike M-C cities, total debt increased from 82.0% to 89.3% (an insignificant difference). IG decreased significantly, from 23.9% to 19.2%. Finally, the DI increased from 1.37 to 2.61, again significant at 0.01. Level zero disclosures decreased from 10 to 0 from 1983 to 1996, while level three disclosures increased from 5 to 32.

To get a better picture of the joint comparisons, results are cross tabulated in Table 6. This table highlights the significant differences that exist both by governance structure and over time. In most cases, results were better both for C-M cities and in 1996. The primary differences were BIG 6 audits, which were not significantly different by GOV for either 1983 or 1996, and IG, where M-C

Table 6
Descriptive comparison for Mayor–Council vs. City Manager cities, by variable for1983 and 1996

Variable	Mayor	CM	Chi-square
Panel A: frequencies (%) for variable = 1 and chi-square tests for dummy variable			
CA—1983	18 (41.9%)	33 (67.4%)	6.02*
CA—1996	34 (79.1%)	47 (95.9%)	6.18*
OPIN—1983	7 (16.3%)	14 (28.6%)	1.96
OPIN—1996	37 (86.1%)	48 (98.0%)	4.62*
BIG 6—1983	19 (44.2%)	20 (40.8%)	0.11
BIG 6—1996	27 (62.8%)	33 (67.4%)	0.21
			t-value
Panel B: means (standard deviations) and t-tests for continuous variables			
FV—1983	11.0%	19.8%	−3.00*
FV—1996	16.7%	25.7%	−2.60*
POP (000)—1983	228.3	191.8	2.47*
POP (000)—1996	426.7	290.8	1.77*
PCI—1983	$9300	$10,161	−2.57*
PCI—1996	$13,234	$14,569	−2.28*
TOTLDEBT—1983	120%	82%	2.06*
TOTLDEBT—1996	91.7%	89.3%	0.23
IG—1983	32.7%	23.9%	3.03**
IG—1996	25.3%	19.2%	2.29*
DI—1983	1.02	1.37	−1.92*
DI—1996	2.28	2.61	−2.13*
n	43	49	

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).

cities had significantly higher ratios in both 1983 and 1996. A possible explanation is the importance of political factors in funding levels where the mayor was CEO. In addition, the total debt ratio was not different by GOV in 1996. M-C cities also were larger in both 1983 and 1996.

6.2.1. Multivariate analysis—disclosure levels

Logit was used to analyze disclosure level differences as measured by CA in a multivariate perspective for both 1983 and 1996. [13] The dependent variable was CA, where 1 = CA received for excellence in financial reporting. The

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[13] As suggested by an anonymous reviewer, age of city was a significant factor between C-M and M-C cities. The average age of C-M cities was 111 years in 1983 vs. 135 years for M-C cities, significant at 0.1. However, incorporating age of cities reduced sample size by 10 observations. When age of city was included in the multivariate models as a control variable, it was never significant. Consequently, it was not included in the empirical analysis.

Table 7
Logit results for certificate of achievement models, 1983 and 1996

Independent variable	Expected sign	Estimate	Standard error	Odds ratio	Wald statistic
Panel A: 1983[a]					
GOV	+	1.231	0.562	0.292	4.803*
POP	?	0.053	0.348	0.592	2.272*
PCI	+	0.037	0.145	0.964	0.650
FV	+	4.962	2.384	0.007	4.333*
TOTLDEBT	−	0.225	0.275	0.799	0.671
SRR	+	0.345	0.490	0.708	0.495
IG	−	1.959	1.962	0.141	0.997
Intercept		5.225	2.755		3.596
Panel B: 1996[b]					
GOV	+	1.384	4.546	0.251	2.211*
POP	?	1.162	0.625	0.313	3.459*
PCI	+	0.000	0.000	1.000	1.935*
FV	+	8.061	4.238	0.001	3.618*
TOTLDEBT	−	0.425	0.750	1.572	0.339
SRR	+	0.117	0.875	1.124	0.018
IG	−	0.914	3.039	2.495	0.091
Intercept		9.558	4.546		4.420

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).

[a] Classification accuracy is 71.2% on a sample size of 92 cities.

[b] Classification accuracy is 85.0% on a sample size of 92 cities.

results are summarized in Table 7. The 1983 model had three significant variables, GOV, POP and FV. The classification accuracy also was 71.2% (a naïve model would yield 53.3%). The key point is the significance of governance structure for achieving a CA. The 1996 model had four significant variables, GOV, POP, PCI and FV. This was similar to the 1983 model, except that PCI also was significant and the classification accuracy was more accurate at 85.0%. Thus, the multivariate analysis indicates C-M superiority in both periods.

Logit was used to evaluate relative disclosure levels based on the disclosure index. Results are summarized in Table 8. The 1983 disclosure model (DI83) has three significant variables, all with the expected sign, GOV, FV and SRR. Classification accuracy was 68.5%. DI96 has four significant variables, again with expected signs, GOV, POP, PCI and FV. SRR was significant in the 1983 model, as expected. In other words, state regulations were significant before the increased regulations of the Single Audit Act and other regulatory requirements.

In summary, GOV was significant in all models. Thus, the CM can be considered important to the disclosure level of the city under both sets of

Table 8
Logit results for disclosure index models, 1983 and 1996

Independent variable	Expected sign	Estimate	Standard error	Odds ratio	Wald statistic
Panel A: 1983[a]					
GOV	+	0.836	0.475	0.432	3.123*
POP	?	0.316	0.296	0.729	1.141
PCI	+	0.085	0.126	0.918	0.458
FV	+	2.699	1.500	0.067	3.235*
TOTLDEBT	−	0.225	0.235	0.798	0.921
SRR	+	0.805	0.448	0.447	3.228*
IG	−	−0.219	1.640	1.244	0.018
Intercept 0		2.645	2.277		1.349
Intercept 1		4.788	2.318		4.265
Intercept 2		6.825	2.374		8.266
Panel B: 1996[b]					
GOV	+	0.842	0.500	0.431	2.834*
POP	?	1.415	0.406	0.243	12.136**
PCI	+	0.000	0.000	1.000	3.129*
FV	+	2.414	1.562	0.089	2.389*
TOTLDEBT	−	0.158	0.488	1.172	0.105
SRR	+	0.465	0.491	0.628	0.896
IG	−	0.160	1.812	1.174	0.008
Intercept 0		7.183	2.614		7.553
Intercept 1		8.474	2.592		10.686
Intercept 2		10.753	2.692		15.960

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).
[a] Classification accuracy is 68.5% on a sample size of 92 cities.
[b] Classification accuracy is 74.1% on a sample size of 92 cities.

regulatory and economic conditions. This supports H1a, but does not support H2a. That is, the C-M governance structure maintain its significant over both periods, despite the increased regulations and improved economy from 1983 to 1996.

6.2.2. Multivariate analysis—financial condition

OLS regression was used to evaluate relative financial conditions based on the FV ratio. Results are summarized in Table 9. When testing the 1983 model (FV83), two extreme values were detected and deleted. Thus, the results presented are based on the reduced sample size of 90. Three variables were significant, including GOV. POP was significant with a negative sign, indicating that smaller municipalities tend to have higher FVs. The model was significant at 0.01 with a R^2 of 23.7%.

Table 9
Regression results for financial viability models, 1983 and 1996

Independent variable	Expected sign	FV83—coefficient (*t*-value)	FV96—full model: coefficient (*t*-value)	FV96—reduced model: coefficient (*t*-value)
GOV	+	0.056 (2.35)*	0.079 (2.13)*	0.014 (0.71)
POP	?	−0.031 (−2.06)*	−0.050 (1.92)*	
PCI	+	0.0136 (2.14)*	0.006 (1.01)	0.006 (1.91)*
TOTLDEBT	−	0.007 (0.57)	−0.022 (−0.59)	−0.025 (−1.31)*
SAR	+	−0.013 (0.55)	0.010 (0.25)	−0.001 (−0.05)
IG	−	0.023 (0.26)	0.120 (0.84)	
Intercept		0.142	0.352	0.114
F value		4.30**	2.49*	1.72
R^2		23.7%	14.9%	7.9%
n		90	92	86

Note: Significant at 0.01 (**) and 0.10 (*). One tailed test for directional predictions, two tailed test for POP (no prediction made).

The "full model" for FV96 had only two significant variables, GOV and POP, a significant model at 0.1 and R^2 of 14.9%. However, regression diagnostics indicated extreme values, non-normality of residuals and heteroscedasticity. [14] To solve the extreme value problem (which also eliminated the non-normality of residuals) six observations were deleted. However, this did not eliminate the heteroscedasticity. To resolve this issue, two variables were eliminated from the model, POP and IG. However, with this "reduced" model, the model was not significant and GOV also was insignificant. Both the full and reduced samples are presented in Table 9. [15]

This analysis supports H1b, but does not support H2b since the results were mixed for 1996. It should be pointed out that a total debt analysis does support H2b.

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[14] Regression diagnostics included variance inflation factors (multicollinearity), studentized residuals (extreme values), box plots and normality plots (normality of residuals), and the Glejser test (heteroscedasticity). Variance inflation factors (VIFs) greater than 5 may indicate multicollinearity. None of the VIFs was greater than 2. Extreme values were considered those over three standard deviations from the norm. The Glejser test compares the independent variables regressed on the absolute value of the residuals. Significant variables indicate possible heteroscedasticity.

[15] Since governance structure should influence debt levels, a separate set of OLS regressions were run with TOTLDEBT as the dependent variable. In the 1983 model, GOV was negative and significant at 0.01. This indicates that debt levels tended to be lower for C-M cities as expected. In the 1996 model, GOV was insignificant. This finding supports hypothesis H2b.

7. Conclusions

The purpose of this paper was to compare the two primary governance structures used by US cities across two time periods. The incentives of mayors vs. CMs as chief executive officers are quite different, which was discernable in both theoretical and empirical models. Fundamentally, mayors are expected to seek reelection and be motivated to please key constituencies. CMs are professional CEOs who signal competence through high level financial and accounting performance. Therefore, the theoretical model predicted that C-M cities would outperform M-C cities on financial and accounting dimensions.

Major factors in the M-C vs. C-M comparison are the important structural changes that have taken place over the last two decades or so, based on extensive accounting and auditing regulations and the booming economy. Therefore, all cities were expected to have improved on key financial and accounting dimensions. An alternative perspective was that financial and economic conditions are based solely on these structural factors rather than governance structure.

The descriptive comparison of 1983 to 1996 dimensions indicated considerable improvement in key financial and accounting factors. Of the eight variables analyzed in univariate tests, six showed significant improvement from 1983 to 1996 (CA, OPIN, BIG 6, FV, PCI and DI). Therefore, structural change has made a major contribution to financial and accounting dimensions of large cities. When considering only M-C cities or C-M cities, these variables remained significant.

A more thorough multivariate analysis of M-C vs. C-M cities for both 1983 and 1996 demonstrated continued differences between the financial and accounting performance of the two alternative governance structures. The disclosure index models consistently indicated the significance of GOV for both 1983 and 1996. GOV was significant with the 1983 FV; however, GOV was significant only for the "full" 1996 model. When corrections were imposed to eliminate regression violations, GOV was insignificant. Therefore, the FV results must be considered mixed.

Except for the 1996 FV results, both theoretical and empirical testing demonstrates the superior performance associated with the C-M governance structure. While all cities in the samples tested improved from 1983 to 1996, C-M cities maintained a performance edge in important financial and accounting dimensions analyzed.

7.1. Limitations

There are a number of limitations to this study, which should be recognized. Only large US cities are analyzed and then only about half of those are in the

final sample. Only two years of analysis are included. A full time series analysis from the mid-1970s to more recent periods would provide a more complete analysis, especially of the impact of changing structural conditions.

7.2. Suggestions for further research

It is suggested that the analysis be extended to a larger range of municipalities, other types of local governments, and over additional periods. Of current interest is the adoption of GASB 34, which required a quite different and more detailed level of financial reporting. The impact of corporate governance on reporting under GASB 34 may be of particular interest to financial statement users and policy makers.

Acknowledgements

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