### Compilation Report Timeliness in Local Governments: An Investigation of Entities Exceeding State Deadlines

Corey S. Cagle University of North Alabama

Dale L. Flesher University of Mississippi

Annette B. Pridgen Jackson State University

Randall B. Bunker University of Central Arkansas

This study identifies variables that influence compilation report timeliness in governments. Logistic regression is used to estimate effects of several variables of interest on the incidence of filing reports after state filing deadlines. Ordinary-least-squares regression is used to estimate the effect of those variables on the time it takes to file compilation reports with the state auditor's office. The number of auditors' findings was found to be associated with longer compilation report delay and late compilations. Travel distance between the auditor's office and the client's office was found to be associated with longer compilation reports.

### **INTRODUCTION**

For auditors' reports to be relevant, they must be prepared and made available to the public in a timely manner. The purpose of this study is to examine variables that influence timeliness of compilation/agreed-upon procedures engagements for local governments. Since the state of Mississippi requires compilations to be filed with the Office of the State Auditor (OSA) within a one-year window, this study examines the determinants of late compilation filings in that state. The study also examines the variables that influence compilation report delay, as measured by the number of days between the government's fiscal year end and the date in which the compilation report is submitted.

The primary purpose of a financial-statement audit is to provide a level of assurance concerning whether an entity's financial statements are presented fairly in conformity with specified criteria. Many smaller governmental entities, however, are not required to undergo a full-scope audit of their financial statements. In Mississippi, the accounting requirements, and thus the auditing requirements, depend on the amount of municipal revenues or expenditures. Municipalities with revenues or expenditures totaling less than \$1 million may, in lieu of contracting for a full-scope audit of financial statements prepared in accordance with GAAP, contract for the preparation of a compilation report. These entities are allowed to

prepare a compiled financial report that presents the government's cash receipts and disbursements during the period. In lieu of a full-scope audit, these entities are subject to an independent auditor's performance of certain agreed-upon procedures, such as confirmation of cash balances, verification of tax collections, and examination of compliance with purchasing requirements. Like full-scope audit reports, these compilation reports are the primary means for communicating information about the management of the government. To be relevant to interested users, these reports must be prepared and made available to the public in a timely manner.

GASB Concepts Statement No. 1: Objectives of Financial Reporting lists timeliness, along with relevance, reliability, understandability, comparability, and consistency, as one of the six qualitative characteristics necessary for effective financial reporting. The GASB further states within that Concepts Statement that "if financial statements are to be useful, they must be issued soon enough after the reported events to affect decisions" (GASB 1987, p.24). In a 1998 position paper, the National Federation of Municipal Analysts (NFMA), stated that outdated financial information is, at best, worthless, and, at worst, materially misleading with respect to the current condition of the issuer (NFMA 1998). In a 2011 Research Brief, the GASB published the results of a survey of users of governmental financial statements concerning the usefulness of reported financial information as time progresses. Findings from that study indicated that financial information retains some of its usefulness for up to six months after fiscal year end, but the relative usefulness of that information diminishes quickly as time progresses within those six months.

However, the timeliness objective has not often been achieved in governmental financial reporting. In the mid-1990s, the GASB conducted a series of focus-group sessions, which resulted in interviewees complaining that municipal audit delay had become a significant problem for financial statement users (Crain & Bean 1998). In 2005, the GASB, as part of an extensive study of the needs of users of governmental financial information, interviewed more than 250 financial-statement users and found an overwhelming concern that audited financial statements needed to be issued in a more timely manner (Mead 2011). Findings from Merritt (2010) and Mead (2011) provided evidence that even with the concern expressed by various financial statement users, the timeliness of the preparation and subsequent audit of governmental financial statements is not improving.

Many prior studies have examined the causes of audit report delay, however, very little research exists concerning timeliness of compilation reports. While compilation engagements are less complex than full-scope audit engagements, many of these engagements are, nevertheless, submitted late. This study examines compilation timeliness in Mississippi, as a great concern currently exists in that state. Given that timely completion of audits and compilations has become an important issue in the state, new consequences have been introduced to help ensure that future timeliness will be enhanced. The *Mississippi Municipal Audit Guide*, dated July 2010, dictates that municipalities failing to file timely reports may ultimately incur 150 percent of the cost of the engagement, as contracted for by the state auditor's office.

This research utilizes logistic regression to estimate the effects of several variables of interest on the incidence of filing the compilation report after the state-mandated one-year filing deadline versus filing on time. According to the Mississippi Code, engagements shall be completed before the close of the next succeeding fiscal year. The research also utilizes ordinary-least-squares (OLS) regression to estimate the effects of several variables of interest on the time it takes to file the compilation report with the OSA. The majority of the prior studies of governmental audit delay measured audit delay as the number of days between the governmental entity's fiscal year end and the date on the audit report. In this study, delay is measured as the number of days between the entity's fiscal year end and the date the compilation was received by the state auditor's office. This measure is perceived to be superior, as it more closely represents the date in which the reports are made available to the public.

The results of the study indicate that a higher number of auditors' findings was significantly associated with longer reporting delays as well as with late compilation reports. Results of the study also provided evidence that the travel distance between the auditor's office and the client's office plays a role

in compilation report timeliness. A greater travel distance was found to be associated with longer delay and was associated with late compilation report filings.

The results of this study have important implications for entities wishing to file compilations on or before the mandated deadlines. Figure 1 presents a histogram illustrating the frequencies in which Mississippi governments completing compilations for fiscal-year 2007 filed those reports during specific ranges of time with the Mississippi Office of the State Auditor. Most of the late filers missed the deadline by six months or less. With a better understanding of the factors that affect compilation report timeliness, these entities may better be able to decrease reporting time and avoid the ramifications of the newly established consequences set forth in the *Mississippi Municipal Audit Guide*.

### FIGURE 1 FREQUENCIES IN WHICH COMPILATION REPORTS WERE SUBMITTED TO THE MISSISSIPPI OFFICE OF THE STATE AUDITOR FOR FISCAL-YEAR 2007



The findings from this study are important not only to governmental entities but also to governmental auditors, state auditors, and other third parties, such as creditors and federal granting agencies, that use governmental financial statement information. Governmental entities desiring a more timely compilation for any reason, such as the desire to obtain grant monies, can use the information to help determine if selection of an auditor with different characteristics than their current auditor might aid in timeliness. The study may also highlight areas of potential improvement within the governmental entity that might aid in audit timeliness.

This study adds to the existing literature in that it is the first study of governmental financial reporting delay to focus on compilation/agreed-upon procedures engagements rather than full-scope audit engagements. Another contribution of the study is the focus on both the time it takes to file compilation reports and whether those reports were late or timely.

The remainder of this paper is organized as follows. Section 2 discusses the previous literature. Section 3 discusses the development of the hypotheses. Section 4 discusses the data collection and method. Section 5 discusses the results, and Section 6 summarizes the findings and comments on the study's implications.

### LITERATURE REVIEW

Several studies have addressed the issue of delay of full-scope audits in governments. Even though the characteristics of those full-scope engagements are markedly different from a compilation/agreedupon procedures engagement, the methods and findings of those studies are relevant to this study. Each prior study established audit delay, measured as the number of days from the governmental entity's fiscal year end to the date on the audit report, as the dependent variable and utilized ordinary-least-squares (OLS) regression to gather evidence about the effects of a number of independent variables (Merritt (2010) and Mead (2011) are exceptions, as they were descriptive studies).

Beginning with Dwyer & Wilson (1989), each study incorporated different combinations of independent variables, often removing some of the variables from the prior studies, retaining others, and adding new variables not considered in prior studies. Key characteristics and mean audit report delays from these prior studies are summarized in Table 1, while a summary of key findings concerning governmental audit report delay is presented in Table 2.

Also pertinent to this research are the findings of Carslaw et al. (2007) in a study of audit delay in school districts. In that study, the authors examined results from 36,367 audits during the five-year period from 1998 to 2002. The authors noted an average audit delay of anywhere from 245 days to 432 days in the five years analyzed and also noted that the percent of late filers ranged from 9.7 percent to 15.6 percent.

In that study, the authors noted that audit delay was positively associated with the level of expenditures for the year, the use of a sole-practitioner auditor rather than a larger firm, the presence of reportable conditions in the audit report, and the presence of material noncompliance in the audit report. The authors noted that audit delay was negatively associated with the use of a private-sector auditor rather than the use of a state auditor, audit reports having an unqualified audit opinion, the issuance of an unqualified opinion on the report of major programs, the government's receipt of the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting, the auditor's experience in similar audit engagements, and the classification of the audit client as a low-risk client.

#### HYPOTHESIS DEVELOPMENT

In this study, compilation report timeliness is modeled a function of three groups of factors, as shown in the following model:

Compilation delay = f (Report message content and managerial competency, Accountability, Audit environment) (1)

#### **Report Message Content and Managerial Competency**

Dwyer & Wilson (1989) developed hypotheses based on the premise that timely reporting is a device employed by municipalities to signal highly competent financial management. Administrators and elected officials are expected to signal fiscal competence and stewardship to the citizens, investors, and other users (McLelland & Giroux 2000). One circumstance in which management has incentive to signal competent performance is when there exists a favorable message to be reported. One element of a favorable message is strong financial performance. Givoly & Palmon (1982) noted that delayed financial reporting is often a precursor to the receipt of bad news. Hirshleifer (1993) suggested that managers' incentives are to advance the arrival of good news and delay the arrival of bad news.

One element of a favorable governmental compilation report message is the lack of auditors' findings. Prior studies of governmental audit timeliness have not addressed audit findings. In a study of differences between private-sector auditors and public-sector (state government) auditors in Mississippi, Cagle & Pridgen (2011) noted that the number of audit findings issued in the audit report is positively associated with audit delay. Findings are issued when the client fails to comply with laws or regulations and when the auditor notes problems with internal controls. These issues will lead to increased assessment of risk, increased attestation procedures, and increased time. In contrast, the lack of auditors' findings is a measure of good news that is expected to be reported in a more timely manner. Lack of auditors' findings may also be considered an indication of competent management. In contrast, a large number of auditors'

findings could be perceived as bad news and could be an indication of less competent management, both of which could lead to less timely reporting. In this study, FINDINGS is defined as the total number of findings issued by the auditor on the compilation report. The following are hypothesized:

		Fiscal	Sample	Mean Audit	
Study	n	Year	Characteristics	<b>Report Lag</b>	
Dwyer and	142	1982	U.S. cities with available	3.56 months	
Wilson,			time series bond data;	(approx.	
1989			Population > 25,000	107 days)	
Rubin,	79	1986	Ohio cities;	8.13 months	
1992			Population > 10,000	(approx.	
				244 days)	
Johnson,	192	1993	U.S. cities with CAFRs;	115 days	
1996			Population > 50,000		
Johnson,	289	1993	U.S. cities with CAFRs	121 days	
1998			and U.S. counties		
			Population > 20,000		
McLelland	164	1996	U.S. cities;	125 days	
and Giroux,			Population > 100,000		
2000					
Johnson et al.,	302	1993	U.S. cities with CAFRs	122 days	
2002			and U.S. counties		
			Population > 20,000		
Payne and	410	1992	Cities in eight states;	100 days	
Jenson,			Population > 5,000 or		
2002			Expenditures > \$100,000		
Merritt,	450	2007-	U.S. cities issuing bonds	168 days	
2010	250	2009	U.S. counties issuing bonds	172 days	
Mead,	294	2006-	Largest U.S. cities	182 days	
2011	276	2008	Largest U.S. counties	172 days	
	130		Cities: Revenues between \$10 million	187 days	
			and \$100 million		
	131		Counties: Revenues between \$10 million	244 days	
			and \$100 million		

# TABLE 1 PRIOR STUDIES OF LOCAL GOVERNMENT AUDIT DELAY

 TABLE 2

 VARIABLES PRIOR STUDIES HAVE SHOWN TO BE SIGNIFICANTLY ASSOCIATED WITH AUDIT DELAY

Decreases	Increases
Audit Delay	Audit Delay
Receipt of GFOA Certificate of Achievement	Audit responsibility divided among two
for Excellence in Financial Reporting <sup>a, b, d, e, f, g</sup>	or more auditors <sup>c, d, e, f</sup>
Preparation of CAFR rather than	Municipal year end coincides with
general purpose financial statements <sup>e, g</sup>	auditor's busy season <sup>c, d, f, g</sup>
Government finance officer is a certified	Variable rather than fixed fee
public accountant <sup>f</sup>	arrangement with auditor <sup>f</sup>
Auditor is experienced in governmental	Large amount of municipal expenditures
audits <sup>g</sup>	for the fiscal year <sup>g</sup>
City-form of government rather than	Presence of state-mandated accounting
other form of government <sup>d</sup>	or auditing requirements <sup>a, d</sup>
Larger number of employees at audit firm	State ban on solicitation or competitive
that performs the audit <sup>g</sup>	bidding for audit engagements <sup>g</sup>
Presence of bonded indebtedness <sup>g</sup>	Use of public-sector (state) auditor rather
	than private-sector auditor <sup>a, b, e</sup>
Governmental entity has a web page <sup>e</sup>	Total revenue is made up of a larger portion
	of intergovernmental revenue <sup>e</sup>
Governmental entity voluntarily includes	Auditor issued a qualified audit opinion <sup>g</sup>
additional reports <sup>e</sup>	
<sup>a</sup> Dwyer & Wilson (1989)	
<sup>b</sup> Rubin (1992)	
<sup>c</sup> Johnson (1996)	
<sup>d</sup> Johnson (1998)	
<sup>e</sup> McLelland & Giroux (2000)	
<sup>f</sup> Johnson et al. (2002)	
<sup>g</sup> Payne & Jenson (2002)	

H1a: The total number of reported findings will be positively associated with compilation report delay.

### H1b: A higher number of reported findings will be associated with compilation reports failing to meet state-mandated filing deadlines.

#### Accountability:

Differing levels of accountability may also influence the timing of the audit report. For example, the presence of debt is expected to increase monitoring of municipal performance (Evans & Patton 1987).

Bondholders' primary concerns are the solvency of the municipality and its ability to repay the required debt service (Payne & Jenson 2002). Payne & Jenson (2002) noted that bondholders would view an unusual delay in financial reporting as a negative sign. As such, management of entities in which bonded and other long-term indebtedness exist will have an incentive to signal favorable performance through timely reporting. Payne & Jenson (2002) found that the presence of bonded indebtedness significantly reduced audit delay. In this study, the variable, DEBT, is measured as the total dollar amount of the governmental entity's long-term debt at fiscal year end. The following are hypothesized:

### H2a: The amount of bonded and other long-term indebtedness will be negatively associated with compilation report delay.

### H2b: A higher amount of bonded and other long-term indebtedness will be associated with compilation reports meeting state-mandated filing deadlines.

#### Environment:

The various complexities of an engagement can lead to potential delays in the timing of the compilation report. Payne & Jenson (2002) used as a measure of audit complexity the number of separate funds reported on the government's financial statements. The variable was coded 1 for any entity that reported three or more separate funds and 0 if otherwise.

In this study, a variable, FUNDS, is included to capture the number of reported funds. As a greater number of major funds will require a greater amount of engagement effort, the following are hypothesized:

### H3a: The total number of reported funds will be positively associated with compilation report delay.

### H3b: A higher number of reported funds will be associated with compilation reports failing to meet state-mandated filing deadlines.

The physical distance between the auditor's office and the client's office is a variable not considered in prior studies of audit timeliness. While the distance between the auditor and client is not a direct measure of complexity, the mileage the auditors must travel to complete field work can be reasonably expected to have a bearing on the amount of time required to complete the engagement. An auditor situated farther from the client will require additional travel time that an auditor situated nearer to the client would not be required to incur. Additionally, auditors may be inclined to procrastinate concerning engagements in which the burden of increased travel is present, especially when there exist other engagements that are closer in proximity. In this study, the DISTANCE variable is defined as the total number of miles between the auditor's office and the client's office. The following are hypothesized:

### H4a: The total number of miles between the auditor and the compilation client will be positively associated with compilation report delay.

### H4b: A higher number of miles between the auditor and the compilation client will be associated with compilation reports failing to meet state-mandated filing deadlines.

Attestation engagements involving governmental entities differ from engagements of for-profit companies. A degree of specialization is required to perform governmental engagements. In this study, the variable, EXPERTISE, is measured as the total number of governmental audit and compilation clients for each audit firm in the sample. Audit firms that specialize in audits and compilations of governmental entities are expected to be better equipped to perform a timely audit or compilation of a local governmental entity. However, since all governmental engagements in Mississippi are due on the same

date, auditors with multiple governmental clients may experience time constraints as a result of increased workload. As such, no direction is predicted regarding the following hypotheses:

### H5a: The total number of governmental attestation engagements performed by the audit firm will be associated with compilation report delay.

### H5b: The total number of governmental attestation engagements performed by the audit firm will be associated with whether compilation reports meet state-mandated filing deadlines.

### DATA COLLECTION AND METHOD

Ordinary-least-squares (OLS) regression and logistic regression are used to test hypotheses in this study. The dependent variable, DELAY, is used to test the set of hypotheses dealing with report delay (the A-set of hypotheses). That variable is defined as the number of days from the entity's fiscal year end (September 30, 2007) to the date the compilation report was received by the Mississippi Office of the State Auditor, and is log transformed for analysis, as visual inspection of the residual distribution using untransformed data revealed a violation of the normality assumption. The following OLS regression model is used:

#### DELAY = f (FINDINGS, DEBT, FUNDS, DISTANCE, EXPERTISE)(2)

The majority of the data used in the study was obtained from the compiled financial reports of each municipality. The variable names, expected impact on compilation delay, and variable descriptions have been previously discussed. Table 3 presents a summary of the variables along with sources of data.

The dependent variable, LATE, was used to test those hypotheses dealing with whether the governmental entity met or failed to meet the reporting deadlines (the B-set of hypotheses). That variable is coded 1 if the compilation is filed beyond the state-mandated filing deadline and 0 if the compilation is filed on or before the state-mandated filing deadline. The following logistic regression is used:

### LATE = f (FINDINGS, DEBT, FUNDS, DISTANCE, EXPERTISE)(3)

The data used to examine governmental compilation report delay were obtained from the compiled financial statements of Mississippi governments for the fiscal year ending September 30, 2007, which were due on or before September 30, 2008. Fiscal-year 2007 was chosen to ensure that the governments taking the longest to file compiled financial statements would be included in the sample. The final sample included entities that took almost 1,200 days to submit completed reports.

A listing of Mississippi municipalities was obtained that contained an initial sample of 298 observations. From that initial sample, 22 were removed because no financial statements had been submitted to the OSA, and 142 were removed because they were subject to full-scope audit requirements. This resulted in a final sample that included 134 municipalities submitting compiled financial statements to the OSA.

Variable		
(Expected Sign)	Description	Source
Dependent Varia	bles:	
DELAY	Number of days from fiscal year	Compiled Financial Statements
	end to the date the compilation report is	
	received by the state auditor's office	
LATE	=1 if the entity failed to meet	Compiled Financial Statements
	the state-mandated reporting	-
	deadline, 0 otherwise	
Report Message	Content and Managerial Competency:	
FINDINGS (+)	Total number of auditors' findings	<b>Compiled Financial Statements</b>
	issued by the auditor	
Accountability:		
DEBT (-)	Government's total long-term debt	Compiled Financial Statements
Audit Environme	nt:	
FUNDS (+)	Number of funds reported on	<b>Compiled Financial Statements</b>
	the entity's financial statements	
DISTANCE (+)	Number of miles between auditor's	mapquest.com
	office and the compilation client's office	- •
EXPERTISE (±)	Total number of governmental attestation	Determined from Audited and
	engagements performed by the	Compiled Financial Statements
	audit firm during the year	-

## TABLE 3DESCRIPTION OF VARIBLES

### RESULTS

Table 4 presents descriptive statistics for compilations filed on or before the state-mandated deadline and compilations filed after the state-mandated deadline. Along with statistics for all 134 governmental entities in the sample, the table presents statistics for 41 governmental entities that filed late compilations and 93 governmental entities that filed timely compilations. Preliminary univariate analysis of each independent variable was performed. Differences for these continuous variables were analyzed using t-tests. Results of those tests are also presented in Table 4.

TABLE 4
DESCRIPTIVE STATISTICS FOR GOVERNMENTS COMPLETING COMPILATIONS AND A
COMPARISON OF LATE AND TIMELY COMPILATIONS

Variables <sup>a</sup>	Total (n=134)	Late Compilations (n=41)	Timely Compilations (N=93)	
Dependent Variable: DELAY	(11 104)			
Mean (Standard Deviation)	289.44 (191.62)	512.46 (166.57)	191.12 (95.28)	
Range	22 to 1,179	375 to 1,179	22 to 365	
Report Message Content and M	anagerial Compete	ency:		
FINDINGS				
Mean (Standard Deviation)	0.89 (1.51)	1.56*** (1.84)	0.59*** (1.23)	
Range	0 to 8	0 to 7	0 to 8	
Accountability:				
<b>DEBT</b> (millions)				
Mean (Standard Deviation)	0.34 (0.58)	0.38 (0.62)	0.32 (0.57)	
Range	0 to 4.61	0 to 3.11	0 to 4.61	
Audit Environment:				
FUNDS				
Mean (Standard Deviation)	2.98 (1.13)	3.07 (1.23)	2.94 (1.09)	
Range	1 to 6	1 to 6	1 to 6	
DISTANCE				
Mean (Standard Deviation)	27.91 (29.85)	35.05* (41.91)	24.76* (22.18)	
Range	1 to 150	1 to 143	1 to 150	
EXPERTISE				
Mean (Standard Deviation)	6.24 (6.05)	5.27 (4.53)	6.67 (6.59)	
Range	1 to 24	1 to 24	1 to 24	

<sup>a</sup> See Table 3 for a description of the variables

\*\*\*p<0.001 one-tailed test

\*p<0.05 one-tailed test

Note: t-tests were used to determine significant differences between governments filing late compilations and

governments filing timely compilations

The mean compilation report delay (DELAY) for all entities in the sample was 289.44 days. Of those entities, 30.60 percent failed to submit compiled financial statements to the Office of the State Auditor within the state-mandated one-year deadline. For compilations filed in a timely manner, the mean delay was 191.12 days. For compilations filed past the filing deadline, the mean audit delay was 512.46 days. Results of the t-tests reveal that FINDINGS and DISTANCE differ significantly between timely filers and late filers.

The bivariate correlation coefficients among the independent variables included in the model appear in Table 5. DEBT is positively correlated with FUNDS (0.292), and DISTANCE is positively correlated with FINDINGS (0.198). To assess the presence of multicollinearity, variance inflation factors (VIF) and the condition indexes were examined. No values of VIF were greater than 1.20. The largest condition index (the condition number) was 8.0. Each of these diagnostic measures provides evidence that no strong multicollinearity issues are present in the model.

 TABLE 5

 BIVARIATE CORRELATION COEFFICIENTS AMONG VARIABLES; COMPILATION ENGAGEMENTS; n=134

Variables <sup>a</sup>	DELAY	LATE	FINDINGS	DEBT	FUNDS	DISTANCE	EXPERTISE
DELAY	1.000						
LATE	0.776**	1.000					
FINDINGS	0.305**	0.298**	1.000				
DEBT	0.117	0.048	0.098	1.000			
FUNDS	0.057	0.056	-0.015	0.292**	1.000		
DISTANCE	0.177*	0.159	0.198*	-0.047	0.059	1.000	
EXPERTISE	-0.114	-0.107	0.048	0.057	0.071	0.075	1.000
<sup>a</sup> See Table 3 for a description of the variables							
Pearson Correlations							
For the Y/N variables, the Pearson's r is technically a point-biserial correlation coefficient since the variable is a dichotomy.							
** Correlation is significant at 0.01 level (two-tailed)							
	* Correlation is significant at 0.05 level (two-tailed)						

In the first phase of testing, an OLS model was estimated using as the dependent variable the natural log of the number of days from fiscal year end until the date the compilation report was received by the Office of the State Auditor (DELAY). Leverage values were examined and no influential data points were observed in the model. An examination of plots of the residuals indicated no problems with heteroskedasticity. Table 6 presents the results of the regression. The model has an  $R^2$  of 0.141, an adjusted  $R^2$  of 0.107, and model F-statistic of 4.203 (p=0.001).

The sample includes clustered data resulting from some governmental entities in the sample being audited by the same audit firm. Ignoring this results in the regression coefficients remaining unbiased (given that the assumptions of OLS are met), however, standard errors are generally underestimated, which inflates the likelihood of Type I error. To counter this, models were estimated using generalized estimating equations (GEE) methods that allow for within-cluster correlation of errors; thus producing clustered robust standard errors are different (Ghisletta & Spini, 2004). The OLS and GEE models resulted in the same findings regarding significance.

In the second phase of testing, a logistic regression analysis was used to determine how the variables examined in the first phase of the study affect the outcome of whether the compiled financial statements are filed within or beyond the state-mandated filing deadline. The dependent variable in the regression (LATE) was coded 0 if the compilation was filed in a timely manner and 1 if the compilation was filed beyond the state-mandated one-year filing deadline.

Table 7 presents the results of the logistic regression. The coefficients indicate that the overall model was significant ( $\chi^2 = 16.04$ , p = 0.007), and the Hosmer and Lemeshow test indicates goodness of fit ( $\chi^2 = 6.99$ , p = 0.537). The model was able to correctly classify 97 percent of government entities that filed audits in a timely manner and 27 percent of those that filed late, for an overall success rate of 75 percent. The model had a Cox & Snell R<sup>2</sup> of 0.113, a Nagelkerke R<sup>2</sup> of 0.159, and a McFadden's R<sup>2</sup> of 0.097. The

following sections discuss the results of the OLS regression and the logistic regression based on hypothesis grouping:

# TABLE 6 RESULTS OF ORDINARY LEAST SQUARES REGRESSION OF DELAY: COMPILATION ENGAGEMENTS

Variables <sup>a</sup>	Predicted Sign	Coefficient Estimate	Standard Error	t- statistic	p- value
Intercept	~~~~~	5.276	0.180	29.305	< 0.001
Report Message Content and Man	agerial Competen	cy:			
FINDINGS	+	0.115	0.040	2.854	0.003
Accountability:		0.105	0.100	1 7 7 7	0.542
DEBT (millions)	-	0.185	0.106	1.737	0.543
Audit Environment:					
FUNDS	+	0.000	0.055	-0.001	0.999
DISTANCE (hundreds)	+	0.397	0.202	1.963	0.026
EXPERTISE	±	-0.018	0.010	-1.820	0.071

<sup>*a*</sup> See Table 3 for a description of the variables

Ν	134
Model F-statistic	4.203
Prob (F-statistic)	0.001
R <sup>2</sup>	0.141
Adjusted $R^2$	0.107

*Note: One-tailed test for directional predictions, two-tailed test where no prediction was made.* 

Variables <sup>a</sup>	Predicted	β	Standard	Wald's	p-value	Exp(β)
	Sign		Error	$\chi^2$		
Intercept		-1.482	0.624	5.637	0.018	0.227
Report Message Content and Mana	igerial Compe	tency:				
FINDINGS	+	0.427	0.148	8.373	0.002	1.533
<i>Accountability:</i> DEBT (millions)	-	0.094	0.358	0.069	0.604	1.099
Audit Environment:						
FUNDS	+	0.111	0.182	0.369	0.544	1.117
DISTANCE (hundreds)	+	0.897	0.672	1.782	0.091	2.452
EXPERTISE	±	-0.062	0.041	2.335	0.127	0.940

### TABLE 7 LOGISTIC REGRESSION RESULTS SHOWING FACTORS CONTRIBUTING TO LATE FILINGS OF COMPILATION ENGAGEMENTS

<sup>*a*</sup> See Table 3 for a description of the variables

n	134
$\chi^2$	16.040, p=0.007
Cox & Snell R <sup>2</sup>	0.113
Nagelkerke R <sup>2</sup>	0.159
McFadden's R <sup>2</sup>	0.097

Note: One-tailed test for directional predictions, two-tailed test

where no prediction was made.

### Report Message Content and Managerial Competency—Findings

Hypothesis 1a predicts that the total number of findings issued on the compilation report will be positively associated with compilation report delay. FINDINGS was positive and significant (p = 0.002, one-tailed) with respect to compilation report delay (Table 6). Hypothesis 1a is supported.

Hypothesis 1b predicts that a higher number of reported findings will be associated with compilation reports failing to meet state-mandated filing deadlines. The results of the logistic regression analysis provides evidence that findings are significantly associated with compilation reports that are not filed in a timely manner (p = 0.003, one-tailed) (Table 7). For each one-unit increase in the number of audit findings, the odds of a late compilation increase by 1.533. Hypothesis 1b is supported.

### Accountability—Long-Term Debt

Hypothesis 2a predicts that the amount of bonded or other long-term indebtedness will lead to decreased compilation report delay. The coefficient for the variable DEBT is in the opposite direction than was predicted (Table 6). Hypothesis 2a is not supported.

Hypothesis 2b predicts that a higher amount of long-term debt will be associated with governments that file timely financial reports with the state. The coefficient for DEBT is in the opposite direction than was predicted (Table 7). Hypothesis 2b is not supported.

#### **Environment—Funds**

Hypothesis 3a predicts that the total number of reported funds will increase compilation report delay. FUNDS is defined as the total number of funds reported on the government's financial statements. The results of the OLS regression indicate that the total number of reported funds is not significantly associated with longer compilation report delay (Table 6). Hypothesis 3a is not supported.

Hypothesis 3b predicts that a higher number of reported funds will be associated with compilations filed beyond the state-mandated filing deadline. Results of the logistic regression indicate that FUNDS is not significantly associated with untimely financial reporting (Table 7). Hypothesis 3b is not supported.

#### **Environment—Travel Distance**

Hypothesis 4a predicts that a greater total travel distance (DISTANCE) between the auditor's office and the compilation client's office will be associated with longer compilation report delays. The results of the OLS regression provide evidence that as the mileage traveled increases, so does the amount of delay in filing the compiled financial statements (p=0.026, one-tailed) (Table 6). Hypothesis 4a is supported.

Hypothesis 4b predicts that a greater travel distance between the auditor and the compilation client will be associated with audit reports failing to meet state-mandated filing deadlines. The results of the logistic regression provide some evidence that greater travel distance is associated with untimely financial statement reports (p=0.091, one-tailed) (Table 7). This provides some support for Hypothesis 4b.

#### **Environment**—Auditor Expertise

Hypothesis 5a predicts that the total number of governmental attestation engagements performed by an audit firm (EXPERTISE) will be associated with compilation report delay. Regression results provide some support that auditor expertise, as measured by the total number of clients, is negatively associated with compilation report delay (p=0.071, two-tailed) (Table 6).

Hypothesis 5b predicts that the total number of governmental audit and attestation engagements performed by the audit firm will be associated with whether compilation reports meet state-mandated audit-filing deadlines. The results of the logistic regression indicate no significant relationship between the number of audit clients and timely financial reporting (Table 7). Hypothesis 5b is not supported.

### SUMMARY AND CONCLUSIONS

Compilation / agreed-upon procedures engagements for governmental entities are less complex than are full-scope audits, yet many compilation reports are not submitted to the appropriate agency in a timely manner. The overall results from this study indicate that report message content and managerial competency, as well as the attestation environment play a role in explaining compilation timeliness. Specifically, a greater number of auditors' findings and a greater travel distance between the auditor's office and the client's office lead to longer delays. A greater number of auditors' findings was also found to be associated with late filings of compilation reports.

Reasons for these results could be that a larger number of auditors' findings is perceived as bad news, thus providing incentive for the governmental entity to delay reporting. The result could also be an indication of less competent management, which could delay the reporting process for many reasons, such as the auditor not being able to obtain needed records because they are either incomplete or poorly executed and maintained. Findings could also be issued as a result of the discovery of inadequate internal controls, for which the auditor will, as a result, be required to perform additional procedures.

Greater travel distance was also found to be significant with regard to longer reporting delay. This result could be due to the facilitation of information flows due to closer proximity or it may provide some indication that audit firms might have an element of procrastination regarding clients that have more travel time. This finding could also be indicative of auditors wishing to ensure that the audits of the municipalities in or near where they reside be completed in a more timely manner, whether it be due to pressure from local government officials or the auditor's desire to maintain a personal image in his or her own hometown.

There are a number of actions governments can take to improve the timeliness of their compilation reports. Governments wishing to obtain a more timely engagement should take steps to ensure that past auditors' findings are corrected as soon as possible. Corrections of findings would result less risk assessment and a more efficient engagement in the future. Fewer reported findings coupled would be perceived as good news by the governmental entity, and that entity would have incentive to accelerate the reporting of that news. Governments wishing to obtain a more timely compilation might also consider choosing an audit firm that is in closer proximity to the government's offices.

The results of this study are subject to some important limitations. The sample for this study was not randomly obtained but instead uses the entire population data from counties and municipalities from one state. As such, caution should be used in generalizing these results to other geographic regions. Also, at the time of data collection, there still existed some governmental entities in Mississippi that had yet to file a compiled financial report to the Office of the State Auditor, and these extreme cases might have had an influential effect on the results.

Since this study captures data in Mississippi prior to the state's enactment of rules that establish ramifications for late audits filed after 2010, the findings from this study will provide a reference point for a future study concerning the success of these steps after they have been instituted in Mississippi. This study is an important first step in determining whether "the goal of increasing the availability of timely information has been hampered by the absence of a filing deadline" (NFMA 1998).

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