

The Structure of State Auditor Functions in the Fight Against Corruption

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SUMMARY: In this study, we examine the structure of the state auditor or equivalent function to determine the relationship with federal corruption convictions. Specifically, we explore whether differences in the responsibilities for (1) financial statement audits of state or local governments (i.e., state audit function versus private-sector auditor) and (2) fraud investigations through whistleblower programs within states are associated with federal corruption prosecutions within the state. We find that states' efforts in the fight against corruption appear to be more effective where state audit functions are responsible for both financial statement audits and fraud investigations. We interpret our results as support for deterrence benefits achievable through state auditor functions' active involvement in financial statement audits and fraud investigations.

Data Availability: All data are publicly available from various internet sources.

Keywords: corruption; government auditing; state financial auditing; local government financial auditing; investigations; occupational fraud; deterrence.

I. INTRODUCTION

Corruption continues to prevail even in the presence of required annual financial statement audits of state and local governments in the United States (U.S.). The U.S. Department of Justice (DOJ) reports that between 1999 and 2018, federal prosecutors convicted 6,643

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state and local government officials of corruption (U.S. DOJ 2018). In this study, we examine whether the responsibilities of the state audit function, focusing on financial statement auditing and fraud investigation responsibilities, matter in the fight against corruption.

State laws dictate the structure of the state audit agencies and therefore, state auditor offices vary in their responsibilities. These duties range from no financial auditing of local governments, partially performing audits at the state level, to having full responsibility for both the state and local government financial audits. Similarly, for fraud investigation, state auditors' responsibilities may range from not investigating any incidents to performing fraud investigations across all levels of government. This paper examines whether variations in state auditor responsibilities are associated with corruption.

The combination of financial audit and fraud investigation responsibilities within the same state auditor office may provide easier access for government employees to report suspicions of occupational fraud. As tips are the most frequent way of discovering occupational fraud cases (ACFE 2020), the combined responsibilities may be an important mechanism to identify potentially fraudulent incidents. Since different skills, knowledge, and resources are required to investigate tips for criminal prosecutions, as opposed to assessing the impact of fraudulent events on financial statements, the ease of referral between employees of the same office and budget allocations for fraud investigation may impact the strength of prosecutions for occupational fraud within a state.

In this paper, we collect data on the responsibility for financial statement audits from *The Book of the States* (hereafter, BOS) (Council of State Governments 2018a, 2018b) and fraud investigation responsibilities, including whistleblower programs, from each state auditor's website. Since we emphasize public corruption, we define corruption as "illegal activities for private gain" (Meier and Holbrook 1992, 136) and focus on corrupt officials whom the DOJ has charged and convicted as one measure of corruption, one category of occupational fraud. Though the state auditor's office cannot criminally charge individuals they may assist prosecutors with corruption investigations (U.S. Attorney DOJ 2018). In line with the deterrence theory of corruption, we find that states where state auditors possess combined responsibility for financial statement audits of state or local governments and fraud investigations experience fewer corruption convictions of state and local government officials.

II. BACKGROUND AND PRIOR RESEARCH

State Auditor Financial Auditing Responsibilities

A government auditor (whom the state employs in a state auditor's office or equivalent function) or a private-sector audit firm may audit the state and local government's financial statements. The type of auditor may influence the audit judgments given the relative proximity to the entity being audited (Neu, Everett, and Rahaman 2013). On the one hand, government auditors may face political considerations that private-sector auditors may not face, including pressures to appease legislative leaders who control budget allocations for the state audit function.

On the other hand, government auditors understand the government departments and programs better than private-sector auditors, which can positively impact audit quality. Prior research finds that government auditors have an advantage in identifying reportable conditions and noncompliance issues relative to private-sector auditors (Carslaw, Pippin, and Mason 2012; Cagle and Pridgen 2015; Jakubowski 2008). Also, private-sector auditors face contract renewal pressures or opportunities for other non-attest engagements that government auditors do not similarly experience (Sutton 1997).

Although each state has an audit function, the responsibilities for the financial statement audit of the state and local government units vary (NSAA 1988). For some states, such as Indiana, the state auditor directly employs auditors as state employees to perform financial audits for the state and local government units such as counties and school districts. Other states, such as Vermont, elect to outsource financial auditing to private-sector auditors while retaining an oversight role or provide financial auditing services upon special request. At the far end of the continuum, a state auditor may have no financial audit responsibilities for any government unit. For example, Nevada uses its state auditor function to conduct performance, but not financial, audits for state entities.¹

State Auditor Fraud Investigation Responsibilities

State auditors differ in the degree of involvement with whistleblower programs for reporting fraud, abuse, and irregularities. Responsibility for managing whistleblower programs matters because tips remain the most frequent source for uncovering fraud across all organizations (ACFE 2020). For some states, whistleblower hotlines may be the attorney general's responsibility; thus, the state auditor is not involved in managing the hotline or the investigations arising from tips. In other states, the state auditor may be responsible for investigating only state-related tips (not local governments involving state funds) or cases related to public benefit frauds only.

State Auditor Structure and Impact on Federal Corruption Cases

State audit agencies may have financial auditors and fraud investigators as two distinct areas ultimately reporting to the same senior manager, or the functions may be decentralized across state agencies or outsourced to private firms. Behavioral literature establishes that individuals are more likely to report wrongdoing internally, within an organization, before they report wrongdoing to external parties (Donkin, Smith, and Brown 2008; Gao and Brink 2017; Jeon 2017; Near and Miceli 2016). Therefore, government auditors may be more likely to learn of possible fraud through tips.

Regardless of how potential fraud is identified, government and private audit teams must consider audit scope limitations and involve appropriate parties to determine next steps. Private sector auditors must consult with the appropriate governmental oversight body and/or audit client management to discuss potential audit scope changes and engagement of a forensics investigator.² The identification of potential fraud is likely to increase amounts billed for an engagement considering audit scope changes, materiality thresholds and changes to audit risk. However, though government auditors also face cost and resource constraints (for example, time available for investigations), they may not have the same degree of billing considerations present within a private accounting firm. In fact, state auditors may have more substantial budget and resource allocations for fraud investigations relative to private auditors.³ Considering their different

¹ Dittenhofer (2001) describes performance (or operational) auditing as auditing for the effectiveness and efficiency of actions that public officials take who have received taxpayer resources to ensure they ultimately meet the mandates of legislative actions at the behest of voters. There is a cost/benefit, or economic, aspect to this category of audits.

² In Tennessee, the state auditor provides example contract language specifically dealing with private-sector auditors' responsibility for reporting fraud and abuse items to the state auditor (Tennessee Comptroller of the Treasury n.d.). This language highlights the need for financial auditors (private or government auditors) to discuss their findings with those charged with governance to ensure fraud investigations are appropriately handled.

³ We appreciate an anonymous reviewer indicating their personal experience where the cost of a state audit agency's investigation far exceeded the theft.

incentives, whether a state or local government auditor or private-sector auditor possesses information on possible frauds may have implications for how fraud cases are handled.

Focusing on state audit agencies, by working together in the same state audit agency, government auditors and fraud investigators can build more successful cases with an increased likelihood of criminal prosecution (detection impact). Mui (2018) discusses the importance of teamwork and communication for fraud detection. Investigators' deeper justice system knowledge and frequent interactions with law enforcement and prosecuting attorneys assist with moving forward criminal prosecutions yielding greater conviction rates. In general, governmental fraud investigators may pursue occupational fraud cases with minimal dollar losses, push for the highest level of prosecution, and more severe penalties. This type of aggressive enforcement may result in greater criminal prosecution of fraud, captured as more corruption convictions within the state.

Alternatively, there may be a deterrence impact when financial auditors and state investigators work in the same state agency. Alt and Lassen (2014, 307) discuss deterrence theory specifically applied to corruption as "more enforcement could produce fewer corruption convictions, at least in the long-run . . . as long as a higher probability of enforcement discourages enough public officials from choosing corrupt activities." Combined financial audit and fraud investigation responsibilities within state audit agencies may create an environment that signals aggressive enforcement and dire consequences to potential perpetrators. Given the stability of state auditor responsibilities, over time, these states may experience a decline in the number of potential cases to prosecute based on deterrence theory. Since most state and local government corruption is prosecuted at the federal level (Cordis and Milyo 2016; Albanese and Artello 2019), federal prosecutors, with autonomous responsibility for charging decisions, may have fewer cases to prosecute yielding fewer corruption convictions at the federal level.

Given the competing predictions, we hypothesize, in the null, that state auditors' responsibilities for financial audits and fraud investigations are not associated with corruption convictions.

III. METHODOLOGY

Our ordinary linear regression model is:

$$\begin{aligned} \text{AVGCONVICPER100K} = & \beta_0 + \beta_1 \text{STATEAUDIT} + \beta_2 \text{LOCALAUDIT} + \beta_3 \text{INVESTIGATION} \\ & + \beta_4 \text{STATE} * \text{INVESTIGATION} + \beta_5 \text{LOCAL} * \text{INVESTIGATION} \\ & + \beta_6 \text{POLICEPER10K} + \varepsilon \end{aligned}$$

We model state auditors' responsibility for financial audits at the state and local levels.⁴ To capture the extent of financial audit responsibility, *STATEAUDIT* equals 1 for states where state auditors conduct audit fieldwork for the majority, i.e., greater than 50 percent, of the state. *LOCALAUDIT* equals 1 for states where state auditors conduct audit fieldwork for the majority, i.e., greater than 50 percent, of the counties within the state. To capture the fraud investigation responsibilities, *INVESTIGATION* equals 1 for state auditors who have the responsibility for whistleblower hotlines and full investigative responsibility for tips as part of the agencies' broader mandate.

⁴ The 2018 BOS reports the proportion of the basic financial statements conducted by each state audit agency. We use the 50 percent (majority) threshold to delineate state audit agencies with extensive responsibility for financial statement audit from state audit agencies with less responsibility for financial statement audits. We follow a similar approach for audits of counties, our proxy for local government auditing, as more state auditor offices are involved with counties than cities, financial auditing.

The dependent variable, *AVGCONVICPER100K*, is the natural log of the average of annual federal corruption convictions from 2009 to 2018 by the U.S. DOJ Public Integrity Section (PIN) reports per 100,000 population (U.S. DOJ 2018), similar to Meier and Holbrook (1992) and Alt and Lassen (2014).⁵ Since federal prosecutors are removed from the local politics, the U.S. DOJ PIN section supervises the corruption convictions for all levels of government with a non-trivial percentage of state and local government convictions and reports the cases in total (Albanese and Artello 2019). Corruption cases, such as kickbacks, bribery, and embezzlement, may have implications for financial statements (Kassem and Higson 2016; Jeppesen 2019). Cordis and Milyo (2016) allude to convictions often being for bribery or embezzlement, discussing the inclusion of only a few nonfinancial cases, like drugs, in the PIN data.⁶ While the PIN data are not limited to cases of a financial nature, charges may include providing a false statement with an underlying scenario that has financial implications.

Our key variables of interest are the β_4 and β_5 coefficients, reflective of state audit agencies with extensive financial auditing involvement and full fraud investigation responsibilities. A positive coefficient indicates that having both financial auditors and fraud investigators within the same state auditor's office is associated with more corruption cases (a detection impact). A negative coefficient would be consistent with a deterrence impact in line with deterrence theory.

We include *POLICEPER10K*, the natural log of the number of police with arrest powers per 10,000 citizens within a state, to control for the overall state attitude toward crime, which may contribute to the conviction rate (Goel and Nelson 2011). We do not control for the political regime as Pavlik (2017) shows that the political party in power does not appear to influence state and local government corruption. Table 1 specifies each variable in the model and the respective data sources.

IV. DATA AND RESULTS

Data

We use the 2018 *BOS* (Council of State Governments 2018a, 2018b) to determine the state-level and county-level financial auditing responsibilities by state. We hand collect fraud investigation information from the 50 state websites in 2020.⁷

Results

Table 2 provides the descriptive statistics for our data and supports variation in state auditor responsibilities. The state auditor performs extensive state-level financial audits in 28 states (*STATEAUDIT*), but only 11 extensive county-level financial audits (*LOCALAUDIT*). State auditors receive tips directly and have full fraud investigation responsibilities in 22 states (*INVESTIGATION*).⁸

⁵ A single task force operation can result in numerous cases that induce yearly variation; thus, we average the case counts. In addition, most cases take multiple years to prosecute (Pavlik 2017).

⁶ Jha, Kulchania, and Smith (2021) use PIN case counts to proxy for corruption within states.

⁷ Earlier editions of *BOS* reported information about the fraud investigation functions associated with each state auditor's office (last reported for 2017). Comparing this information in the 2017 edition with the data on the state websites in 2020 showed a high degree of agreement.

⁸ Our untabulated correlation analysis suggests that the dependent variable is only significantly correlated with the independent variable, *STATEAUDIT*.

TABLE 1

Variable Definitions

Variable	Name	Specification	Source
AVGCONVICPER100K	Average Convictions over 10 years * 100,000	Natural log ([average corruption cases per year over 10 years/ state population] * 100,000)	U.S. DOJ PIN reports, Table III, for 2009 to 2018: https://www.justice.gov/criminal-pin US Census: https://www.census.gov/data/tables/time-series/demo/popest/2010s-state-total.html
STATEAUDIT	State Financial Audit Responsibilities	1 if government auditors provide fieldwork for the majority of the state; 0 otherwise	2018 <i>The Book of the States</i> : http://knowledgecenter.csg.org/kc/category/content-type/book-states (Table 4.28)
LOCALAUDIT	County Financial Audit Responsibilities	1 if government auditors provide fieldwork for the majority of the counties in a state; 0 otherwise	2018 <i>The Book of the States</i> : http://knowledgecenter.csg.org/kc/category/content-type/book-states (Table 4.29)
INVESTIGATION	State Auditor Office Investigation Responsibilities	1 if the state auditor's office has investigative responsibilities that are not limited and a reporting mechanism where tips come into their office; 0 otherwise	Examined individual state audit websites to determine the current level of responsibility
STATE * INVESTIGATION	Interaction between State Audit and Investigation Responsibility	Mathematically calculated using the two respective variables above	See above for individual data sources for each component
LOCAL * INVESTIGATION	Interaction between Local Audit and Investigation Responsibility	Mathematically calculated using the two respective variables above	See above for individual data sources for each component
POLICEPER10K	Police with Arrest Powers * 10,000	Natural log ([Full-time equivalent of police with arrest powers/ state population] * 10,000)	U.S. Census: https://www.census.gov/programs-surveys/apcs/data/datasetstables.2018.html

TABLE 2
Descriptive Statistics

<u>Variable</u>	<u>Obs.</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Min.</u>	<u>Max.</u>
<i>AVGCONVICPER100K</i>	50	-1.45	0.71	-3.52	0.12
<i>STATEAUDIT</i>	50	0.56	0.50	0	1
<i>LOCALAUDIT</i>	50	0.22	0.42	0	1
<i>INVESTIGATION</i>	50	0.44	0.50	0	1
<i>STATE * INVESTIGATION</i>	50	0.30	0.46	0	1
<i>LOCAL * INVESTIGATION</i>	50	0.18	0.39	0	1
<i>POLICEPER10K</i>	50	21.05	4.40	13.84	39.84

Variables are defined in Table 1.

Table 3 presents the regression model results. The coefficients on the variables of interest, the interaction terms, are negative and significant, associating the combined structures with fewer corruption convictions. Our result appears to be consistent with a deterrence impact for federal level corruption prosecutions when state audit agencies are responsible for extensive financial audit fieldwork and fraud investigation. Meanwhile, states where the responsibilities for state and

TABLE 3
Regression Results

	<u><i>AVGCONVICPER100K</i></u>
<i>STATEAUDIT</i>	0.74*** (0.23)
<i>LOCALAUDIT</i>	1.36*** (0.45)
<i>INVESTIGATION</i>	0.77** (0.30)
<i>STATE * INVESTIGATION</i>	-0.86** (0.37)
<i>LOCAL * INVESTIGATION</i>	-1.32** (0.53)
<i>POLICEPER10K</i>	0.06*** (0.02)
Constant	-3.23*** (0.49)
Obs.	50
R ²	0.36
Adjusted R ²	0.28

***, ** Indicate $p < 0.01$ and $p < 0.05$, respectively.

Standard errors are in parentheses.

Variables are defined in Table 1.

local financial audits and fraud investigation are separated (captured by *STATEAUDIT*, *LOCALAUDIT*, and *INVESTIGATION*) are associated with greater corruption convictions. This separation of responsibilities appears to be associated with increased detection (and willingness to prosecute cases) though the separate structure does not appear to yield a strong deterrence impact.⁹

Similar to other studies of public corruption, our study is not without limitations. First, it is impossible to know the true degree of corruption as many instances go unidentified, uninvestigated, and/or unprosecuted. Second, our corruption measure is not disaggregated to the level of government or entity type (municipality, educational entity, etc.). Third, data availability prohibits examination of alternative corruption outcomes such as deferred prosecution agreements.

V. CONCLUSION

Our results reflect a previously unexplored benefit of the intersection of government auditors conducting audit fieldwork and an active fraud investigation unit. Specifically, empowering state audit agencies with responsibility for conducting extensive financial audits of states or local governments and performing fraud investigations is negatively associated with federal corruption convictions. Our results highlight a deterrence benefit from having both functions with direct communication and budget and resource allocations within state audit agencies. These results may be informative to state auditor offices as they evaluate their scope of responsibilities for financial auditing and fraud investigations.

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⁹ Our untabulated results remain consistent with the reported results with an unlogged dependent variable and using population as a control variable instead of scaling the dependent variable. Two states do not provide a summary percentage of audit coverage within the BOS. Our results remain consistent irrespective of their classification.

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