

WHISTLEBLOWER LAWS AND EXPOSED CORRUPTION: EVIDENCE FROM AMERICAN STATES

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Introduction

- A whistleblower “is someone who exposes wrongdoing, fraud, corruption and/or waste”.
- Whistleblower (WB) laws are designed to protect and encourage voluntary policing of misconduct in public institutions by safeguarding and rewarding individuals who expose wrongdoings.
- One of the first federal laws was the 1863 United States False Claims Act.
- Recently, federal government enacted the Whistleblower Protection Act in 2007 which provides legal protections for whistle-blowing activities of federal employees.

- While whistleblower provisions have been gaining prominence, and information about their existence is increasing, partly due to the internet, there is no formal study examining their effect on wrongful behavior by public and private individuals.
- This research constitutes a first step by investigating the effects of awareness about whistleblower laws on observed corruption by public officials.
- In recent years there has been heightened focus on corruption control and on research on corrupt activity (surveys in Aidt (2003), Jain (2001), Lambsdorff (2006), Serra (2006), and Svensson (2005)).

- **Are whistleblower laws complementary or substitute for other, more direct, corruption control measures?**
- WB laws and other measures would be complementary when both have similar effects in exposing corruption, and they would be substitute when efficacy of one type of initiative is undermined by the other.

Model

- Formal estimated equation has the following general format (*i* denoting a state in cross-sectional analysis):
$$CORRUPTION_i = f(Whistleblower_i, Income_i, URBAN_i, GSPstate_i, LawEnforce_i) \quad (1)$$
- Dependent variable (*CORRUPTION*) is total federal convictions in a state per million population over 2000-2009.
- We include economic prosperity (*Income*), urbanization (*URBAN*), economy size (*GSPstate*) and direct law enforcement (*LawEnforce*), as determinants of corrupt activity.
- The internet based awareness about whistleblower laws (*Whistleblower*) is the main variable of interest and key contribution. It can be viewed as capturing media freedom and effectiveness of voluntary corruption enforcement.

Whistleblower measure

- We create an internet-based measure of the number of web search hits in Google and Yahoo for awareness about WB laws (*Whistleblower*).
- *Examples of search results included official publications and web postings about WB laws, newspaper articles, advertisements, academic references, media reports of court cases, etc.*
- Resulting measure provides a good comparison of awareness about WB laws that would embolden a would-be whistleblower, while it might even deter some law breakers.
- *Primary search strategy to generate data on Whistleblower involved using keywords that included both the U.S. state's name and the term “whistleblower law”.*

Table 1
Variable definitions, summary statistics and data sources

Variable	Definition (Mean; Std. dev.)	Source
Corruption	Total federal public corruption convictions per million population, 2000-2009 (43.30; 77.18)	U.S. Department of Justice (1) U.S. Census Bureau (3)
Whistleblower	Whistleblower internet hits per 1,000 population, 2012. (0.83; 1.07)	www.google.com www.yahoo.com
Income	Per-capita personal income, 2010 (39,648; 7,015)	U.S. Bureau of Economic Analysis (2)
URBAN	Percentage of state population residing in urban areas, 2010 (74.1; 14.9)	U.S. Census Bureau (5)
GSPstate	Gross state product originating from the state-local public sector in a state per million population, 2010 (4,338; 665)	U.S. Bureau of Economic Analysis (2)
LawEnforce	Law enforcement employees (all levels of government) in a state per million population, 2010 (3,179; 835)	Federal Bureau of Investigation (4)

Results – baseline model

- Model 1.1 examines determinants of observed corruption, without consideration of whistleblower awareness.
- Results show that higher levels of economic prosperity and greater law enforcement increase corruption conviction rates, while a larger state-local economy is associated with lower rates of detected corruption. More urbanized states have lower observed corruption.
- In the context of the literature, the effect of income on corruption in the case of the United States is less consistent than in a cross-national context (Glaeser and Saks (2006), Goel and Nelson (2011), Serra (2006)). Similarly larger economy size may lower corruption due to better checks and balances and more streamlined processes; also due to perhaps more grand corruption (Goel and Nelson (1998)). The effect of urbanization is consistent with the “social shame” argument of corruption deterrence.
- *Overall, there is no big surprise in these results, although the signs and significance of some determinants have varied somewhat in the literature depending upon the period and the corruption measure (Goel and Nelson (2011)).*

- Models 1.2 and 1.3 in Table 2 add whistleblower awareness variable.
- The coefficient on *Whistleblower* is positive and statistically significant in all the models. Greater internet awareness through news reports, blog posts and legal opinions tends to embolden potential whistleblowers into exposing corruption. Thus, whistleblower acts, although with a broader intent than exposing corruption alone, seem to work.
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- Effects of other determinants are remarkably similar to the baseline model.
- Direct enforcement activities and whistleblower laws seem to be complementary in combating corruption – *Whistleblower* and *LawEnforce* have positive effects on observed corruption.

Table 2
Whistleblower laws and exposed corruption across U.S. states
 (Dependent variable: CORRUPTION)

	Model 1.1	Model 1.2	Model 1.3
Whistleblower		27.05** (3.1)	23.38** (2.8)
Income	0.006** (2.8)	0.003** (2.5)	0.004** (3.0)
URBAN	-1.47** (3.0)		-0.76** (2.1)
GSPstate	-0.024* (1.9)	-0.022** (2.2)	-0.023** (2.3)
LawEnforce	0.053** (3.1)	0.045** (3.5)	0.048** (3.7)
N	51	51	51
F-statistic	2.90**	4.33**	3.87**
R-squared	0.68	0.75	0.76

Note: An intercept is included in all OLS models, but the corresponding results are not reported. The figures in parentheses are robust t-statistics expressed in absolute value;

**** and ***, respectively, denote statistical significance at the 5% (or better) and 10% levels.

Allowing for possible endogeneity of whistleblower awareness

- To account for possible reverse feedbacks from corruption to whistleblower awareness – i.e., the degree of corrupt activity might affect awareness about whistleblower laws, we take *Whistleblower* to be endogenous.
- A state's whistleblower laws (*State Whistleblower Law*) and a state's physical size (*State Land Area*) were employed as additional instruments.
- First-stage *F*-values and the over identification tests support the choice of instruments.
- **Again, greater whistleblower internet awareness results in greater corruption exposure.**
- Results for other determinants are similar to Table 2.

Using a broader measure of whistleblower awareness

- To address concerns that internet based searches come with some “noise”, we used a broader measure of whistleblower awareness by dropping the word “Law” in Google searches.
- *Resulting variable, WhistleblowerBroad, had correlation with Whistleblower of 0.61.*
- Coefficient on *WhistleblowerBroad* was positive and statistically significant, with results for other variables quite similar.

Using a narrower measure of whistleblower awareness

- We redid searches by restricting them to just news stories in Google news (rather than the whole web search) - *WhistleblowerNews*.
- Coefficient of *WhistleblowerNews* was positive and statistically significant.
- *WhistleblowerNews* had correlation of 0.67 with *Whistleblower* and 0.77 with *WhistleblowerBroad*.

Concluding remarks

- Whistleblower provisions have been gaining in popularity with lawmakers in the United States in their efforts to improve governance and reduce abuse of public funds.
- Using recent data on observed corruption across the American states, this research uniquely examines the impact of awareness about whistleblower laws on the level of observed corrupt activity.
- A new internet-based measure of state-level search hits is constructed using the Google and Yahoo internet search engines. The resulting measure captures awareness about whistleblower provisions for both potential whistleblowers and participants in corrupt transactions.
- This research adds to the media-corruption nexus, but with a unique focus on awareness about whistleblower laws (Andersen (2009), Brunetti and Weder (2003), Di Tella and Franceschelli (2011), Freille et al. (2007) and Vaidya (2005)).

- Couching empirical analysis within the literature (Goel and Nelson (2011), Treisman (2000)), results show that greater internet awareness about whistleblower laws results in greater corruption coming to light and being successfully prosecuted.
- Direct government resources to control crime and indirect efforts via whistleblower laws are found to be complementary.
- *Findings robust to alternate specifications, including potential endogeneity of whistleblower awareness, and to broader and narrower measures of internet whistleblower awareness.*
- Results with respect to economic prosperity, urbanization and economy size largely support literature (Fisman and Gatti (2002), Glaeser and Saks (2006), Goel and Nelson (2011)).

- Results for the United States on effectiveness of whistleblower laws in exposing corruption should be of interest to policy makers everywhere, especially in nations that do not have adequate protections for whistleblowers.
- As internet diffusion grows and digital divide narrows, it would be interesting to see the impact of whistleblower awareness on corruption worldwide.
- As internet search engines become more sophisticated leading to more pinpointed searches, the quality of internet-based data should improve.