

Web-Based Accountability for Nonprofits: Environmental Quality Protection and Beautification Category

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This study examines the web-based accountability (WBA) of a random selection of nonprofit organizations (NPOs) in the environmental quality protection and beautification sector in the United States. Web accountability is a measure of the amount of information that is publicly available to stakeholders and potential donors from an organization's website. The methodology and variables used here have been used in previous studies on differing types of NPOs. Findings indicate that the ethics and generosity of citizens, the number of NPOs, and various laws concerning the legal protection of assets from misuse and/or fraud are important indicators of WBA.

INTRODUCTION

Nonprofit organizations (NPOs) have existed throughout American history. Since the creation of Harvard College in the 17th century, the first nonprofit in America, everyday citizens have been providing for the needs of others (Salamon, 2002). Then, as our nation entered the 20th century, Andrew Carnegie (1835–1919), with an endowment of \$125 million established the Carnegie Corporation of New York (Carnegie Corporation of New York records, 1872-2000). Carnegie's model of philanthropy created the path for other individuals to develop ways to improve the quality of life for their fellow man.

From this foundation, the nonprofit sector has grown significantly, flourished, survived tough economic times and bad publicity, and adopted web-based strategies to accomplish their mission. In this paper, we expand upon the previous work of Saxton and Guo (2011) and Slatten, Guidry Hollier, Stevens, Austin, and Carson (2016) by seeking to further understand web-based accountability efforts in the nonprofit sector. Technological advances in the 1990s have had an impact on the nonprofit sector, especially in the operations areas of organizational communications and resource development (Waters, 2007). The use of web-based strategies for communication of performance indicators, fundraising, information exchange, advocacy and stakeholder interaction appear to be one method of addressing

accountability. These relationship-building activities are at the heart of what NPOs are particularly good at and websites present the perfect medium for building relationships.

GuideStar, a widely known NPO that collects and organizes data on millions of NPOs, was the source of information for structuring the study (GuideStar, 2014). NPOs are categorized by cause area in the GuideStar database that correspond to the National Taxonomy of Exempt Entities Classification System (NTEE) codes. Specifically, this study focuses on the Environmental Quality Protection, Beautification sector which includes an array of organizations in the botanical gardens, horticulture, environmental beautification, and recycling areas. The NPOs in this category are activist groups, land management entities, water preservation coalitions, hiking clubs, botanical gardens, and watershed partnerships. These groups, often volunteer-based, typically engage in promoting collaborative solutions to challenging problems by engaging local residents and/or grassroots activists in efforts and tasks that protect someone/something or influence policymakers. This sample of environmental oriented NPOs are operating in the same challenging times as other NPOs: greater levels of competition for smaller pockets of resources, on one hand, while battling higher levels of scrutiny from funders, policymakers and the public on the other hand (Greenberg & MacAulay, 2009). In this study, the website communication between these NPOs and their stakeholders is examined. Websites offer both small and large organizations an unobstructed path to communicate with the public (Taylor, Kent, & White, 2001). The results of this study will enhance knowledge regarding this particular group of organizations and help to broaden our understanding of accountability practices in NPOs.

This article has the following structure: first, the literature on web-based accountability practices in the nonprofit sector is reviewed. Then, research hypotheses are presented and tested. Next, the methodology and website review results are provided. Finally, in the last section of the paper, results, conclusions, and areas for future research are discussed.

LITERATURE REVIEW

The concept of accountability is multi-faceted and somewhat difficult to define (Kearns, 1994). Ebrahim (2003) offers a comprehensive description of accountability in the nonprofit sector that stems from various disciplinary bases (for example, economics, political science). For the purposes of this research, Ebrahim's (2003, p. 191) four points presented below help to establish a basis upon which to study online web accountability.

- 1) Accountability is relational in nature and is constructed through inter- and intra-organizational relationships.
- 2) Accountability is complicated by the dual role of NPOs as both principals and agents in their relationships with other actors.
- 3) Characteristics of accountability necessarily vary with the type of nonprofit organization being examined.
- 4) Accountability operates through external as well as internal processes, such that an emphasis on external oversight and control misses other dimensions of accountability essential to NPOs

The third point above is especially important as it confirms the need to investigate web accountability in various nonprofit sectors. This is discussed in more detail below.

The literature pertaining to nonprofit accountability is abundant (see, for example: Brown & Moore, 2001; Frumkin & Kim, 2001; Romzek & Dubnick, 1987). Studies related specifically to web-based accountability practices in the nonprofit sector, however, only began to emerge in the recent past (Saxton & Guo, 2011; Slatten et al., 2016).

In studying the online accountability practices of over 100 community foundations in the United States, Saxton and Guo (2011) found that the online presence was being used more as a means to disclose financial and performance related information and not necessarily being used for interactive engagement with stakeholders. This finding regarding engagement corroborates those of previous studies (Waters, 2007; Waters, Burnett, Lamm, & Lucas, 2009).

In studying online disclosures by U.S. NPOs, Tremblay-Boire and Prakash (2015) found that organizations in some sectors (for example, health sector, religion-related) tend to disclose less information than others (for example, education). As the authors suggest, although there may be various reasons, the differences in the extent of disclosure may be due to the specific good or service provided by the nonprofit; inherent levels of trust that may already exist between the philanthropic organization and its stakeholders (for example, religion-related), or particular governmental mandates. Interestingly, through multiple statistical analyses and a content analysis of eighty NPOs in the arts, culture and humanities sector, Slatten et al. (2016) found that regulatory measures are the most significant variables for determining web-based accountability for this group of NPOs.

Dumont (2013) developed a Nonprofit Virtual Accountability Index (NPCAI) to serve as a tool for planning and assessment of online accountability practices. The following dimensions of online accountability emerged as a result of this analysis: accessibility, engagement, performance, governance, and mission. This is generally consistent with the dimensions used in the studies of Saxton and Guo (2011) and Slatten et al. (2016), as all were either directly or indirectly addressed in each of these studies.

Further, Lee, Pendharkar, and Blouin (2012) studied the online accountability practices of 125 organizations in the northeast United States. Results indicated that smaller and younger organizations had higher levels of virtual accountability than larger and older organizations. This particular finding as it related to the size of the organization is consistent with those presented by Tremblay-Boire and Prakash (2015), but largely inconsistent with other literature specific to this characteristic (Patten, 2002; Rodríguez, Pérez, & Godoy, 2012; Saxton & Guo, 2011).

Although research that is focused on web-based accountability is still emerging, the existing studies are moving the discussion forward. This is especially important because of the ever-increasing pressure faced by NPOs to be transparent and accountable to their stakeholders. Throughout the remainder of this paper, web-based accountability will be referred to as WBA.

HYPOTHESES

The following hypotheses will be tested in this study. The reader is encouraged to review Slatten et al. (2016) and Saxton and Guo (2011) for a detailed discussion of the derivation of the hypotheses. The current research aims to extend the previous research by applying the same methodology to a new collection of NPOs. These hypotheses are evaluated using linear (correlations) and non-linear (effect size index) measures described in the methodology section.

Hypothesis 1: There is a measurable effect of organizational age on WBA.

Hypothesis 2: There is a measurable effect of organizational size (as measured by personnel size and asset size) on WBA.

Hypothesis 3: There is a measurable effect of organizational density on WBA.

Hypothesis 4: There is a measurable effect of prosecution and detection index on WBA.

Hypothesis 5: There is a measurable effect of state ethics score on WBA.

Hypothesis 6: There is a measurable effect of state generosity index on WBA.

Hypothesis 7: There is a measurable effect of organization net assets on WBA.

Hypothesis 8: There is a measurable effect of community poverty on WBA.

METHODOLOGY

The methodology employed by Slatten et al. (2016) in the study of the arts, culture and humanities sector was adopted for use in this study. Based on the GuideStar map for states having 25,000–50,000 IRS-registered NPOs, a sample of 16 geographically disbursed states representing every region in the U.S. (referred to as purposive sampling) was used to select sixteen states for inclusion in this study (Washington, Oregon, Arizona, Colorado, Kansas, Oklahoma, Minnesota, Iowa, Louisiana, Wisconsin, Tennessee, Kentucky, Alabama, Connecticut, Maryland, and South Carolina).

Using GuideStar, five NPOs from the Environmental Quality Protection, Beautification NTEE category were randomly selected from each state. This category includes organizations working in the following areas: (1) botanical gardens, arboreta and botanical organizations; (2) garden clubs, horticulture programs; (3) environmental beautification, and (4) recycling. The advanced search feature on the GuideStar website was used to search by state and by the NTEE codes that corresponded with these subcategories. These subcategories were carefully chosen, as it was important to select those that would have similar organizational structures, operations, and governance mechanisms. Further, the search results only included independent organizations. As with the previous study (Slatten et al., 2016), the only specifications that impacted a completely random selection were that each nonprofit organization must be donor-dependent, be classified as a 501(c)(3) Public Charity, have a minimum income of \$5,000, and have a web presence. The search criteria were set such that revoked and defunct or merged organizations were also excluded from the search. Furthermore, those organizations that filed an IRS Form 990-EZ were not included, as some of the financial and organizational data needed for the purposes of this research were not included on the shortened 990-EZ forms.

In order to investigate online accountability practices, the website content of the 80 NPOs was analyzed. In the social sciences, content analysis is used to study communication artifacts (Bryman, 2011) in a systematic way. Such communication artifacts can include content present on websites. The items included in this analysis are those originally used by Saxton and Guo (2011) and those further explored by Slatten et al. (2016). Consistent with these studies, this analysis focused on website content related to financial disclosure, performance disclosure, and stakeholder interactions.

Each of the websites was analyzed independently by two authors using the rubric presented in Appendix A. An initial inter-rater reliability score of .84 was calculated using a Pearson correlation. A final inter-rater reliability score of 1.00 was attained after extensive collaborative thought on any discrepancies that existed. Determination of point values was based on disclosure of each of the listed items (see Appendix A). The content analysis score, labeled “WBA” (since it is the numeric measure of web-based accountability), was calculated by summing the indicator variables for each of the following four indices: 1) Financial Disclosure Index (FDI); 2) Performance Disclosure Index (PDI); 3) Interactive Engagement Scale (Interactivity); and 4) Contact Information.

The independent variables used in the present study are those used by Slatten et al. (2016) in an effort to fully consider those factors that could have an impact on web-based accountability. Detailed information on each of the independent variables is provided in Appendix B. Brief descriptions of each follow:

- Asset size: This information was obtained from IRS Form 990 and is calculated in the Balance Sheet section called Total Assets.
- Organizational Age: Calculated using information from IRS Form 990 in the section where year of formation is noted.
- Organizational Density: Adapted from Saxton and Guo (2011), this is the ratio of active NPOs in a given state per the total population of citizens in that state. The number of organizations per state was obtained from information provided by GuideStar.
- Personnel size: This information was obtained from IRS Form 990, indicating the total number of individuals employed in calendar year 2012.

- Net assets: Net assets or fund balances information from IRS Form 990 was used. This number is calculated by subtracting Total Liabilities from Total assets.
- Community Poverty: Adapted from Saxton and Guo (2011), this is the percentage of residents in the community living on income below the federal poverty line as determined by the 2011 US census.
- Prosecution Index: Per Desai and Yetman (2005), a governance index or score assigned to each organization based on the state of location. A high score indicates the existence of more laws directed at prosecuting asset theft and misuse of funds.
- Detection Index: Per Desai and Yetman (2005), a governance index or score assigned to each organization based on the state of location. A high score indicates the existence of more laws directed at prosecuting theft and misuse of funds in that state.
- State Generosity Index: This information was obtained from the Fraser Institute's 2013 Generosity Index (based on 2011 tax year personal income tax returns in the US and Canada) (MacIntyre & Lamman, 2013). The Generosity Index measures the percent of tax filers who donate to charity and the percentage of aggregate personal income donated to charity.
- State Ethics Score: This information was obtained from The Center for Public Integrity's state grades after assessing transparency, accountability and anti-corruption mechanism in all U.S. states in 2012.

As with the previously mentioned studies on NPOs (Saxton & Guo, 2011, Slatten et al., 2016), Poisson regression is used to model the dependent variable WBA using the independent variables listed above. Correlations between these variables, which measure a linear relationship, are calculated. In addition to these measures used in previous studies, an examination of the size of the effect of each of the independent variables is conducted on the dependent variable using Cohen's (1988) effect size index, *f*. The effect size index is defined as:

$$f = \sqrt{\eta^2 / (1 - \eta^2)} \quad (1)$$

where η^2 ("eta-squared") is the proportion of variation in the dependent variable that is explained by variation in the independent variable (Burns & Burns, 2008). The denominator in the equation above is the proportion of variation in the dependent variable that is not explained by the independent variable. Eta-squared, therefore, ranges in value between 0 and 1, while *f* increases as η^2 increases. IBM SPSS Statistics version 23 is used to calculate the value of eta (using the command Analyze/Descriptive Statistics/Crosstabs), from which η^2 is calculated. Cohen (1988) reports that η^2 is analogous to a linear correlation coefficient, except that it measures the strength of a curvilinear relationship between pairs of variables.

In addition, the effect size index can be interpreted as follows. When *f* = .1, the size of the effect is said to be "small", and corresponds to an effect which is present, but not necessarily visible to the naked eye. When *f* = .25, the effect is said to be "medium" (twice as large as a "small" effect), and apparent to the naked eye. Finally, when *f* = .4, the effect is said to be "large" (twice as large as a "medium" effect), and very obvious to the naked eye. The effect size index is especially significant because it is generalizable from one study to another, and Cohen (1988) gives numerous practical examples of the meaning of small, medium, and large effects. The difference in mean heights between 15 and 16 year-old girls is a "small" effect (present, but not noticeable to the naked eye), while the difference in mean heights between 14 and 18 year-old girls is a "medium" effect (apparent to the naked eye), and the difference in mean heights between 13 and 18 year-old girls is a "large" effect (obvious to the naked eye).

RESULTS

The Poisson regression did not reveal any statistically significant relationships between the independent variables and WBA. This result is very similar to that obtained by Slatten et al. (2016). In addition, the correlations between independent variables and WBA are weak to non-existent (all with magnitudes less than 0.2) and not statistically significant. This result is the same as reported by Slatten et al. (2016). However, the calculation of η^2 and the effect size index, f , revealed some relationships with practical interpretations.

For independent variables that do not behave like “categorical” variables, such as asset size, net assets, community poverty, personnel size, and organizational age, the values of η^2 are inflated and do not provide a meaningful interpretation. This happens because the value of asset size, for example, uniquely identifies an organization and therefore uniquely identifies a value of WBA. In this way, all of the variation in the dependent variable is explained. Because such interpretations would be trivial, these independent variables are excluded from further effect size index analyses. Table 1 summarizes the results and effect sizes for the remaining independent variables on WBA.

TABLE 1
SUMMARY OF EFFECT SIZES OF INDEPENDENT VARIABLES ON WBA

Independent Variable	η	η^2	f	size
State Ethics Score	0.159	0.025	0.161	small
Prosecution Index	0.157	0.025	0.159	small
Detection Index	0.232	0.054	0.239	medium
State Generosity Index	0.426	0.181	0.471	large
Organizational Density	0.426	0.181	0.471	large

To understand why the given effect was produced, a cross-tabulation of independent variable versus dependent variable can be examined. Table 2 shows such a table for Detection Index versus WBA. Note that it is not unexpected that state generosity index and organizational density produce identical scores since they each consist of exactly 16 separate values of the independent variable. The 80 organizations selected were divided equally among the 16 values of each of these two variables, consisting of 5 organizations with each value. Consequently, their partitioning of variation is the same.

TABLE 2
CROSS-TABULATION OF DETECTION INDEX VERSUS WBA

		Total Web Content																	Total
		2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	
Detection Index	1	0	0	1	0	0	0	1	0	0	2	0	0	1	0	0	0	0	5
	2	0	0	1	0	0	0	0	1	0	0	1	0	0	0	2	0	0	5
	3	0	0	0	1	0	0	1	0	0	2	1	4	1	0	0	0	0	10
	4	0	0	1	0	0	0	1	1	0	1	1	0	0	0	0	0	0	5
	5	0	0	0	1	1	3	1	1	2	1	2	1	0	0	1	1	0	15
	6	0	0	0	1	1	0	0	1	0	0	1	0	1	0	0	0	0	5
	7	0	1	1	0	2	2	0	0	1	0	1	0	0	1	1	0	0	10
	8	1	1	0	0	0	3	3	0	1	2	4	3	0	1	0	0	1	20
	11	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	5
Total		1	2	4	3	4	9	8	5	5	8	11	9	3	2	4	1	1	80

An examination of Table 2 shows that a detection index of 3 has the highest percentage of “large” WBA scores. Here, “large” WBA is defined as having a score of 12 or more, with 80% of organizations obtaining this score having a WBA value of 12 or more. On the other hand, only 20% of organizations (1 out of 5) with a detection index of 11 have a WBA of 12 or more. Continuing the review of cross-tabulations for the other independent variables (not shown here due to space considerations), the following interpretations can be made:

- Organizations with a state ethics score of 10 or 11 have highest WBA (organizations with state ethics score of 10 also yields maximum WBA value of 20)
- Organizations with prosecution index = 6 have highest WBA
 - Minimum value of WBA is 8 for these organizations, compared to minimum values of 5, 4, and 2 for organizations with other prosecution index values
 - Only one organization in this group has a WBA score below the median of 11
- Organizations with detection index = 3 have highest WBA
- Organizations with state generosity index = 4.4 (the 43rd percentile) have highest WBA
 - All organizations with state generosity index = 4.4 have WBA value that is 12 or larger
 - Organizations with two smallest state generosity scores perform worst
- Organizations with organizational density = 211.96 (the maximum value) have highest WBA
 - All organizations with maximum organizational density each have WBA of at least 12
 - 70% of organizations with smallest organizational density had WBA of at least 12

In addition to these statistics, frequency distributions of the four variables that comprise WBA indicate that many organizations are basically making no attempt at specific components of web accountability. Fifty-one of the 83 organizations, or 63.7%, have a Financial Disclosure Index of zero. These organizations provided no financial statement, no tax return, and no budget information on their website. For the Performance Disclosure Index, most organizations have posted a mission statement, and so receive a score of at least 1, but 17.5% of the organizations have a performance index of zero. This index includes recent grants, grant award amounts, and grant-client success stories. Most organizations also indicate how they should be contacted, how contributors can donate (including a “donate now”

button), and links to social media. Consequently, organizations perform much better on the Interactive Engagement Scale, with 77 of the 80 organizations, or 96.2%, having at least 3 of the 6 items that constitute this category. For the final component of WBA, Contact Information, most organizations have some contact information for management, staff, or board members. Interestingly, a large majority of organizations list information regarding board members (64 of 80 organizations, or 80%). Conversely, 25% of the organizations list no information for staff or managers.

Based on these findings, the following decisions can be made regarding the research hypotheses. In these decisions, recall that the use of the terms “small,” “medium,” and “large” for describing the size of an effect have specific, comparable meanings across studies.

1. There is insufficient evidence to suggest that organizational age has a measurable effect on WBA.
2. There is insufficient evidence to suggest that organizational size has a measurable effect on WBA.
3. There is sufficient evidence to suggest that organizational density has a large effect on WBA.
4. There is sufficient evidence to suggest that prosecution index has a small effect on WBA, while detection index has a medium effect on WBA.
5. There is sufficient evidence that state ethics score has a small effect on WBA.
6. There is sufficient evidence to suggest that state generosity index has a large effect on WBA.
7. There is insufficient evidence to suggest that net assets has a measurable effect on WBA.
8. There is insufficient evidence to suggest that community poverty has a measurable effect on WBA.

CONCLUSIONS

Measures of the linear effects of the independent variables on WBA have weak and often statistically insignificant effects. Measuring the curvilinear effects of the independent variables on WBA yield small, medium, and large effect size index values. These values are analogous to the small, medium, and large effect sizes obtained in other studies that utilize this same metric. The higher the State Ethics Score, the higher the value of WBA. This effect size index for State Ethics Score on WBA is a small one, indicating that it is present, but is an effect that would not necessarily be noticeable. The more a state assesses the transparency, accountability, and potential corruption of an organization, the higher the web accountability for organizations in that state.

The Prosecution Index measures state laws and regulations that specify how a nonprofit may be sued for theft and/or fraud concerning its use of assets. The higher this score, the higher the organization’s web accountability, in general. Prosecution Index also has a small effect size index for WBA. Organizations receiving the high score of 6 on this variable also had the highest values of WBA. This indicates, as was the case in research on NPOs in the arts and humanities sector (Slatten et al., 2016) that oversight and the threat of prosecution for misconduct are predictors of web accountability.

The Detection Index is a similar measure to Prosecution Index, except that it measures the *procedures regarding enforcement of laws* within a state aimed at preventing the misuse and/or fraud of funds in NPOs. Detection Index has a medium effect size index on NPOs, and so would be analogous to an effect that is noticeable. Detection Index also has an effect that is approximately twice as large as the effect due to Prosecution Index. Detection Index scores range from 1 to 11, and the organizations with highest WBA have a Detection Index score of 3. This indicates that not only the presence of such laws, but the manner in which they are enforced, definitely increases WBA. There is a diminishing return in terms of WBA for states that have many more procedural requirements regarding enforcement of such laws. That is, states with the highest Detection Index scores do not have the highest WBA values.

State Generosity Index and Organizational Density have the same large effect size index on WBA. This large effect is approximately twice the size of the effect of Detection Index, and four times the size

of the effects of State Ethics Score and Prosecution Index. The State Generosity Index of 4.4 is approximately the median of the values that were studied. States with this score had the highest values of WBA. While this score is based on data obtained from tax filings, it is certainly logical that the overall generosity of citizens would play an important role in attracting NPOs and have a subsequent effect on WBA. Similarly, the states with the maximum Organizational Density have the maximum web accountability. Future research could investigate whether successful NPOs have greater accountability and are therefore more likely to locate where other successful NPOs are already located.

Ingenhoff and Koelling (2009) concluded nearly ten years ago that NPOs were not making use of the full potential of their websites. The results of this study only show minimal improvements in the past decade. NPOs in this study are not using their website to fully engage the public. Most are missing out on the opportunity to build a relationship with the public and potential donors as evidenced by low performance scores in areas related to grant-client success stories, contact information for staff or managers, and changing content that generates return visits to the site. Social media may offer other opportunities, however, as reported by Bortree and Seltzer (2009) who specifically examined Facebook profiles of environmental advocacy groups. In some instances, social media is being used by NPOs to link to their organizational website. Such items as links to a homepage, opportunities for donations, membership solicitations (“join now”) and content sharing capabilities are offering a new frontier for NPOs who regularly use social media. Perhaps social networking sites are functioning as a proxy for website interaction and accountability. While outside the scope of this study, it is important to note the need for specific staff (or a volunteer) to be responsible for posting timely and information on a regular basis that is relevant to the organization and all stakeholders.

One limitation of the study also offers an opportunity for future research: the results are based on a small sample. Future studies could extend the present study on a national level across multiple regions or all states. And, as mentioned in a previous section of this paper, Ebrahim (2003) suggests that characteristics of accountability differ by the type of NPO. It is possible that differences in WBA may become apparent in different nonprofit sectors. Thus, the examination of WBA of various types of NPOs provides areas for future research. Also, a qualitative study on the reasons why NPOs locate in specific states or regions could be interesting. Text mining is becoming more popular and tools more readily available, so a qualitative analysis of WBA might reveal other factors impacting WBA.

Web-based technologies offer opportunities to build organizational capacity and engage with many types of stakeholders. NPOs with compelling missions and significant accomplishments have a powerful story to tell. Effective use of websites to promote transparency and accountability has an important role in the current and complex nonprofit sector.

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APPENDIX A: CONTENT ANALYSIS

Financial Information	No	Yes	Comments
Annual report			
Current audited financial statement			
Donor privacy policy			
IRS Form 990			
Annual operating budget			

Performance indicators	No	Yes	Comments	
Mission statement				
List of recent grants awards				
Dollar amounts of grants awarded				
Grantee/client stories				
Performance Indicator	Nothing	Something	Everything	Comments
Program, grant, or community impact				

Stakeholder Interaction	No	Yes	Comments
Strategic plan			
Contact us link			
Online survey			
Evidence of engagement of needs assessment			
Donate now button			
Provides information on how to donate			
Links to social media			How many?
Sign-up--email, newsletter, etc.			

Other	Nothing	Something	Everything	Comments
Names and contact information for management team members				
Names and contact information of all staff				
Names of board members				

APPENDIX B: INDEPENDENT VARIABLES

Variable	Source	Definition
Asset Size	IRS Form 990, Part I, Line 20 (IRS, 2017)	It generally includes the following: cash (non-interest-bearing); savings; net pledges and grants receivable; net accounts receivable; loans and other receivables; land, buildings and equipment (less accumulated depreciation); and investments.
Organizational Age	IRS Form 990: Page 1, Item L (IRS, 2017)	Calculated based on year of formation.
Organizational Density	Saxton and Guo (2011); GuideStar (2014) Infographic: Nonprofit Organizations in the U.S.	Calculated ratio of nonprofit organizations in a given state per the total population of citizens in that state. The number of organizations per state was obtained from GuideStar (2014).
Personnel size	IRS Form 990, Part I, Line 5 (Internal Revenue Service, 2017)	Total number of individuals employed in calendar year 2012. It includes the number of employees reported on Form W-3, Transmittal of Wage and Tax Statements.
Net Assets	IRS Form 990, Part I, Line 22 (IRS, 2017)	Calculated by subtracting Total Liabilities from Total assets.
Community Poverty	Saxton and Guo (2011); US Census Data (US Census Bureau, 2011)	Percentage of residents in the community living on income below the federal poverty line as determined by the 2011 American Community Survey conducted by the US census.
Prosecution Index	Desai and Yetman (2005)	Governance index/score assigned to each organization based on the state of location. A high score indicates the existence of more laws directed at prosecuting asset theft and misuse of funds. Six various state laws are included in the index calculations such as: the Attorney General (AG) is the primary oversight authority; parties other than the AG have standing to bring legal actions against the charity; separate state statutes for for-profit and not-for-profit organizations; liquidating distributions restricted to other not-for-profit organizations; <i>Cy Pres</i> authority (allows the AG to enforce the stated terms of any trust documents such as by-laws and articles of incorporation); and stated limitations on conversion or re-incorporating as a for-profit corporation thus changing the tax status of the charity. These laws are directed at prosecuting asset theft and misuse.

Variable	Source	Definition
Detection Index	Desai and Yetman (2005)	Governance index/score assigned to each organization based on the state of location. A high score indicates the existence of more laws directed at prosecuting theft and misuse of funds in that state. Eleven various state laws are included in the index calculations such as: AG must be notified of any suits involving charities; AG must be notified of asset sales; state registration required; the use of fundraising firms; financial statement audit required; financial statements included in filings in addition to the IRS Form 990; and By-Laws, Articles of Incorporation and Tax Exempt Determination letter also required as a part of state reporting. These laws are expected to enhance detection by either requiring the reporting of specific actions or by demanding that more information be disclosed on a regular basis.
State Generosity Index	Fraser Institute's 2013 Generosity Index (MacIntyre & Lamman, 2013)	Data is from 2011 tax year personal income tax returns in the US and Canada. The Generosity Index measures, by state, private monetary generosity at two levels: the percent of tax filers who donate to charity and the percentage of aggregate personal income donated to charity.
State Ethics Score	The Center for Public Integrity (Ginley, 2014)	Data was obtained from The Center for Public Integrity's state grades after assessing transparency, accountability and anti-corruption mechanism in all US states in 2012.