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Through a Glass, Darkly: The Promise and Reality of State Transparency Websites

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Abstract

In recent years, all 50 states have established transparency websites that provide public access to financial information and in some cases performance metrics. This article examines website content and use by the public, and concludes that while the websites provides access to fiscal data; this information is likely difficult to understand. The checklist used for the assessment of the substantive content of the transparency websites, focused on elements important to understanding the financial operations of state governments, the ability of users to search the information, and factors important to the public's ability to understand and use the data, including explanatory narrative, details about the specific financial transactions displayed, and the readability of the information. The analysis showed that the state transparency websites provide a substantial amount of financial information that could be useful to citizens wishing to gain knowledge of how their states are using tax dollars. The usefulness of this information, however, is hampered by the lack of explanatory information made available by most sites and the relatively difficult reading level of their written content. Additionally, many of the websites have low usage. Accordingly, the transparency websites are unlikely to have a material effect on public confidence in government.

Keywords: Government, Accountability, Transparency, Usability, Performance Metrics, Fiscal Data

Introduction

In recent years, all 50 states have established transparency websites that provide public access to a wide range of financial information, including budget, appropriations and expenditure data, and in some cases performance metrics. These websites are touted as a significant advance in government accountability that can enable citizens to better understand how their taxpayer dollars are being spent; some advocates further assert that these websites will improve government efficiency, help weed out waste and corruption, and improve public confidence in government. This article examines the content of state transparency websites and their use by the public, and concludes that while the websites provide public access to a variety of fiscal data; this information is likely difficult for the public to understand and many of the websites are rarely visited. At present, while the sites are useful transparency resources, they are far from a panacea. The research has a role not only for government but also for non-for profit advocacy and small businesses.

Government Accountability & Transparency Background

Governmental transparency has been a key issue in public administration for many years. Concerns about 'the public's right to know' are as old as the U.S. republic, and transparency is frequently cited as a means to address a wide range of governance challenges. Advocates have asserted that enhanced transparency efforts can reverse distrust in government, improve program

efficiency and outcomes, and help fight public corruption (Grimmelikhuijsen & Porubescu, 2013; Heald, 2006; Posey, 2006; Roberts, 2006). Some advocates have gone further and have asserted that the public's right to know should be recognized and promoted as a fundamental human right (Birkinshaw, 2006).

Historically, government transparency efforts primarily focused on administrative mechanisms such as freedom of information acts that enable citizens to access copies of government records and open meeting requirements that enable the public to observe policymakers as they made decisions. However, in recent years, the rise of e-government has led to expanded transparency initiatives, recognizing that many government services, information, transactions and relationships have shifted from paper to electronic formats (Harris, Coles & Davis, 2003). Transparency advocates note that a tremendous amount of information can now be made available to citizens through the internet at a relatively low cost, in theory enabling the public to monitor government activities almost in real time (Meijer, 2009; Halachmi & Greiling, 2013).

Much of this attention has focused on providing access to governmental financial information. These records are voluminous when in paper formats – state budgets and Comprehensive Annual Financial Reports (CAFRs), for example, are typically hundreds of pages long, and governments issue millions of payments for goods and services each year. While these documents were often available to citizens as 'public records,' the sheer volume of these records and their highly technical nature (much of the most critical information in CAFRs is disclosed in footnotes to financial statements) made it difficult if not impossible for the public to access and understand this information. As the accounting systems used by governments have become more sophisticated, it has become possible to provide the public with electronic access to these data. Thornton and Thornton (2013) reported there is high citizen interest in such information, with 75% of Americans asserting that the availability of government financial data is very important. Proponents assert that providing these data through online access is particularly important as it can better inform citizens about how their taxpayer dollars are spent (Kolsaker & Lee-Kelley, 2008; Devaney, 2009).

Accordingly, many governments have increased public access to financial data (Dadashzadeh, 2010). Notably, in recent years, all 50 states have created centralized transparency websites, frequently called 'state online checkbooks', which provide a range of accountability information (U.S. PIRG, 2013). These websites typically provide online access to state expenditure information in searchable formats, and some additionally provide access to related information such as appropriations acts, financial reports, and performance measures.

Methodology

Purpose of the Study

These websites have been assessed on two levels to date. First, Carstens, Kies and Stockman (2015) assessed the technical characteristics of each state's transparency Website using a usability checklist and found that most websites lacked technical features needed to support use by a diverse population. Second, the U.S. PIRG Education Fund has issued a series of annual assessments that have examined whether the sites met the standards of "Transparency 2.0", focusing on whether the sites contain detailed information about all state expenditures (USPIRG, 2013). These reports have concluded that the sites have become more comprehensive over time

"but still have a long way to go to provide taxpayers with the information they need to ensure that government is spending their money effectively (US PIRG, 2013, 5).

This article extends those efforts and focuses on the websites' potential impact as transparency resources, addressing two questions:

1. Do the sites contain content that reasonably could have the desired outcomes of improving trust in government, performance, and cutting waste, fraud, and abuse by significantly improving citizens' ability to track state spending and outcomes?

2. Are the sites being used by the public?

Procedure

To address these questions, we evaluated the content and use of the transparency websites of the 50 states. Our assessment was done between the months of January and May in 2012. We identified the websites sites by examining the official web portals operated the 50 states to identify subsidiary sites that featured state financial and performance information and by examining the transparency websites were listed by Citizens for Tax Reform at http://www.fiscalaccountability.org/transparency (this site is no longer active). A team of reviewers evaluated the these websites using a heuristic checklist; in a few cases where states operated two transparency websites (Florida, for example, had one administered by the Florida Legislature and one by its Chief Financial Officer), both sites were assessed. Each site was examined by two reviewers and any differences in their ratings were reconciled by one of the authors. This project was funded by a grant from the U.S. Small Business Administration (SBA). SBA's funding should not be construed as an endorsement of any products, opinions, or services. All SBA-funded projects are extended to the public on a nondiscriminatory basis.

Data Analysis

The checklist assessed the substantive content of the transparency websites (see Table 1), focusing on elements important to understanding the financial operations of state governments, the ability of users to search the information, and factors important to the public's ability to understand and use the data, including explanatory narrative, details about the specific financial transactions displayed, and the readability of the information. We evaluated the readability of the websites using the Flesch Reading Ease Formula, which assesses the grade-level reading skills required for users to understand written material, and is a standard readability formula (Birnbaum, Cummings, Guyton, Schlotter, & Kushniruk, 2010; Flesch, 1948 & 1949). Rudolph Flesch (1948 & 1949) established the early methods for measuring readability. The Flesch Reading Ease Score is a tool used for measuring a text's readability within Microsoft® Word®. Text from each state site was copied and pasted into Microsoft® Word® and then the reading ease score information was displayed by using the spelling & grammar tool, File -> Options -> Proofing -> When Correcting Spelling and Grammar Mistakes in Word -> Show Readability Statistics. The score displayed is determined through rating text on a 100-point scale based on the average number of syllables per word and words per sentence. The higher the Flesch Reading Ease Score, the easier it is to understand the text. The score indicates the minimum level of education required to understand the subject material (Daily, Dorsey & Kumar, 2010). Table 2 displays the meaning of different reading scores (Flesch 1949). A score that is lower than 60 is

considered as difficult to read (Flesch, 1948, 1949). A sample of the readability statistics that displays within Microsoft® Word® is in Figure 1.

Table 1: State Transparency Website Checklist

Data content	Description – Website Provides User Ability to Display:
Agency appropriations	Appropriations by agency
Program appropriations	Appropriations by individual programs
Agency expenditures	Expenditures by agency
Program expenditures	Expenditures by program
Funding source	Breakdown of expenditures by funding source
Payee information	Identifying information (name, vendor number) for each expenditure
Expenditure document #	Document number for each expenditure
Performance measures – output	Output measures maintained by state
Performance measures – outcome	Outcome measures maintained by state
Audits and evaluations	Links to relevant audit and evaluation reports
Search Capability	**Description – Website Enables Users to Search Expenditures by:**
Expenditure type	Type (salaries, etc.)
Vendor	Vendor
Employee	Employee
Contract	State term contracts
Keyword	Keyword (travel, etc.)
Agency	Agency
Program	Program
Dollar threshold	Dollar threshold
Grant or earmark	Grant or earmark number/vendor
Download Capability	**Description – Users can download information**
Excel	To Excel file.
Other applications	To other formats such as PDF or Word
Report Functionality	**Description – Can Report and Compare**
Year to year comparisons	Multiple years of data
Agency comparisons	Expenditures between agencies
Top vendors	Top vendors by dollar volume

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| Graphics Capabilities	Description – Can Portray Data Graphically
YTD bar or pie charts	By chart type
Year to year comparisons	Data across years
Contextual Information	**Description – Descriptive Information Provided**
Expenditure Purpose	Purpose of individual expenditures (e.g., items purchased)
Budget overview	Summary overview of state budget
Revenue overview	Summary overview of state revenues
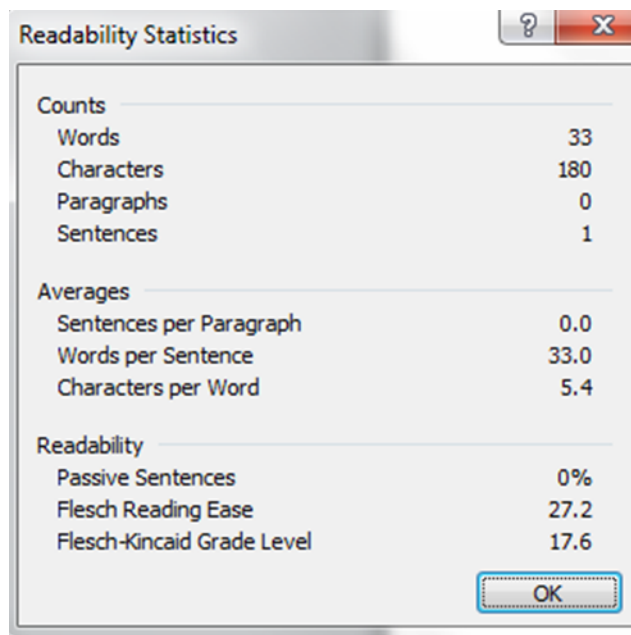
Figure 1: Readability Statistics

Table 2: Interpreting Flesch Scores to a Readability Level

Flesch Score	0–30	30–50	50–60	60–70	70–80	80–90	90–100
Readability Level	Very Difficult	Difficult	Fairly Difficult	Standard	Fairly Easy	Easy	Very Easy

Source: Flesch (1949, p. 149).

We assessed the public's use of the state transparency websites by using the Compete.com Website (2013), which enables users identify the number of unique visitors for any public website. Compete.com provides the number of unique visitors for a one-month period; we

computed annual web traffic for each state transparency websites by multiplying the number of visitors in October 2013 by twelve.

Results

Our analysis showed that the state transparency websites provide a substantial amount of financial information that could be useful to citizens wishing to gain knowledge of how their states are using tax dollars. The usefulness of this information, however, is hampered by the lack of explanatory information made available by most sites and the relatively difficult reading level of their written content. Additionally, many of the websites have low usage. Accordingly, the transparency websites are unlikely to have a material effect on public confidence in government.

As shown in Table 3, over half of the state transparency websites provided detailed information about both government appropriations and expenditures. A high percentage (over 70%) of the sites enabled users to identify total appropriations and expenditures by agency, while somewhat lower percentages allowed users to track appropriations and expenditures by program. High percentages (over 70%) of the sites also allowed users to identify expenditures by funding source and payee. These sites, for example, enabled users to identify the annual salary levels of individual state employees, the total payments made to specific vendors during a year, and the amount of federal funds received and expended by an agency. Although the sites would break down the information to a gross level such as vendor payments and who was the vendor, it would not have the details as to what was received from the vendor for the amount spent. The top states were Indiana, New Jersey, Utah, Florida, Oregon and Tennessee as the research didn't suggest significance with regards to the state size, budget, size of population, and the rated range of transparency.

Table 3: Summary of Results

Assessed element	Number of states meeting criteria
Data content	
Agency appropriations	36
Program appropriations	28
Agency expenditures	43
Program expenditures	34
Expenditure funding source	41
Payee information	35
Expenditure document #	24
Performance measures – output	20

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Performance measures – outcome	19
Relevant audits and evaluations	24
Search Capability	
Expenditure type	34
Vendor	33
Employee	20
Contract	30
Keyword	36
Agency	42
Program	22
Dollar threshold	11
Grant or earmark	10
Download Capability	
To Excel	27
To other applications	40
Report Functionality	
Year to year comparisons	30
Agency comparisons	29
Top vendors	9
Graphics Capabilities	
YTD bar or pie charts	33
Year to year comparisons	15
Contextual Information	
Purpose of Expenditures	34
Budget overview	33
Revenue overview	34
Flesch Reading Ease Score	1

The transparency websites typically provided a range of capabilities to search the expenditure databases, most often by keyword, agency, and expenditure type. The websites less frequently provided the capability search expenditures by program (such as identifying total state spending

for foster care), or by dollar threshold or by specific grants or earmarks; less than half of the websites provided such search capabilities. The websites generally provided capabilities for users to download financial information to other applications, graphically depict summary through pie and bar charts, and to show year-to-year and agency comparisons; over half of the websites provided these functionalities. However, less than half of the sites provided the capability to sort summary information by top vendors or to graphically portray year to year comparisons. The websites also typically provided useful summaries of state finances, which is useful in informing citizens about how their tax dollars are collected and used. These included overviews of the budget process, breakdowns showing the major categories of state revenues and spending, such as the percentage of revenues derived from sales, income, and other types of taxes, and the percentages of expenditures allocated to education, transportation, health care, and other major categories of programs.

However, the websites were much weaker as transparency resources in providing information relevant to identifying the results of government expenditures. Although at least 40 states have statutory requirements that require the use of performance measures (Lu & Willoughby, 2012), only 19 the state transparency websites provided either output or outcome measures. Similarly, less than half provided access to relevant audits and program evaluations.

A weakness of the state transparency websites was their lack of provision of contextual information necessary for understanding specific expenditures. Generally, the websites identify the amount of specific expenditures but do not provide information on the nature or purpose of the transaction. Thus, a user may see that an agency paid $4.6 million to a vendor, but would not be able to determine what goods and services it received in exchange for this payment. Such information is typically contained in individual expenditure vouchers that identify the specific items or services that were purchased. None of the websites provided access to these vouchers documents, although 23 of the sites did provide expenditure document numbers where this information may be provided. While users could in theory contact the state and request copies of these documents, it is not clear whether these records would be considered public records. Access to payment vouchers is likely highly restricted as these documents often contain confidential information such as the names, addresses and social security numbers of the payee.

Another critical weakness of the transparency websites is that the narrative information they provided was typically written at a highly difficult reading level. We evaluated the readability of this information using the Flesch Reading Ease Formula, which scores the reading difficult of text on a scale of 0 to 100, with lower scored material rated as more difficult to read. Over half of the websites – 28 of the 50 – received a score below 30, which corresponds to a 'very confusing' reading level generally requiring a college graduate reading skills. Of the remainder, 18 websites received scores between 30 and 49 points, which corresponded to a 'very difficult' reading level, and 4 were written at a 'difficult' level. None of the sites were written at a "standard" reading level, equating to an 8th or 9th grade reading level, or a lower reading difficulty level. This indicates that the majority of the public would likely have substantial difficulty understanding the material provided on the transparency websites. Finally, many of the state transparency Websites had relatively few visitors. As shown in Table 4, while all of the sites were receiving some traffic, the number of visitors they received annually varied greatly. While thirteen sites received more than 1 million visits annually, eleven had under 25,000 visits

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per year (and one less than 6,000). These data likely overstate citizen use of the websites, as the count may include multiple visits by a single person.

Table 4: Annual Unique Visitors

State	# of Annual Unique Visitors
AK	729,900
AL	10,248
AR	917,076
AZ	No Data
CA	9,804
CO	No Data
CT	169,260
DE	No Data
FL	1,626,060
GA	65,436
HI	3,194,640
ID	No Data
IL	75,168
IN	23,756,484
IA	No Data
KS	1,312,188
KY	No Data
LA	292,560
MA	14,463,948
MD	No Data
ME	5,691,288
MI	68,484
MN	395,328
MO	83,316
MS	No Data
MT	888,876
NC	No Data
ND	1,349,064
NE	No Data
NH	2,663,844

NJ	**6,703,956**
NM	**5,976**
NV	**No Data**
NY	**No Data**
OH	**699,804**
OK	**6,448,788**
OR	**13,700,292**
PA	**No Data**
RI	**1,159,200**
SC	**21,888**
SD	**12,840**
TN	**12,632,628**
TX	**148,668**
UT	**1,714,872**
VA	**1,459,584**
VT	**16,968**
WA	**95,868**
WI	**No Data**
WV	**597,912**
WY	**203,664**

Discussion

The primary strength of the transparency websites maintained by the 50 states is they provide a single portal where the public can access a range of financial information on how these governments are spending taxpayer funds. This is a notable accomplishment, as citizens formerly would generally have needed to go to multiple sources, including both legislative and executive branch offices, to acquire these data. In addition to providing the capability of searching and downloading expenditure data, most of the sites also provide useful summary documents that explain the budget process and how public funds are raised and spent.

It should be noted that the state transparency websites have been a work in process. As noted by the U.S. Public Interest Research Group, the content and functionality have improved in recent years (US PIRG, 2011, 2012, 2013). Nonetheless, the websites have significant shortcomings as transparency resources. Most notably, the financial data they provide generally lacks important context and their information is written at a high reading level that is likely difficult for the public to readily understand. Perhaps not surprisingly, the websites often attract limited public use. Accordingly, the transparency websites do not meet the tests outlined by Bean, Carstens and Barlow (2008), who noted that if web portals are to succeed as mechanisms to educate the public, they must not cater only to a population of literate individuals, and should address communication issues such as language barriers or usability impairments. The researchers also examined the Canadian website, Industry Canada (2015), which addresses many of the items on

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the checklist. The usefulness of the study checklist is not only applicable to other governments in other countries but also to non-for profit advocacy and small businesses.

Our review identified several areas for potential future research. This article assessed the number of unique visitors to each of the sites. It would be useful to obtain and examine additional information about these users, such as their educational levels and political beliefs as well as their frequency of use. For example, it would be interesting to determine whether those that use the transparency websites are seeking confirmation that their governments are operating efficiently, or whether such users are instead seeking information to justify their beliefs that government is inherently wasteful. Curtain (2010) posited that the public could utilize websites and social media to enhance transparency, accountability, and trust in government; however, in this age of Tea Party opposition to government, the websites could instead serve to provide ammunition to those who seek confirmation that many if not most public expenditures are ripe with waste, fraud, and abuse.   Similarly, as noted by Chase, Taylor and Phillips (2008) it would be interesting to assess whether the websites aid voters in assigning responsibility and strengthening electoral accountability.

Finally, future research could assess the relationship between the different levels of robustness of the information provided on the state transparency websites and whether those who visit the websites change their perceptions about the performance of their state government. If fiscal transparency is in fact important for promoting trust in government, one would expect that persons who use websites that provide more complete and readily understandable financial data would have higher satisfaction with the sites and their states than persons who visit transparency websites that are weaker in these areas.

Conclusion

There is an ongoing debate in the field between those who assert that transparency initiatives enhance the public's trust in government, improve government performance, and reduce waste, fraud, and abuse (Heald, 2006, Cook, Jacobs & Dukhong, 2010) and those who counter-argue that such initiatives paradoxically have the opposite outcome because they make it easier to for the media to cherry pick data for misleading stories, frustrate citizens with too much information that is difficult to interpret, and slow down government decisions (Grimmelikhuijen, 2012).

This research found that state transparency websites are more likely to achieve the later outcome than the former. While the websites provide useful fiscal information, the information often lacks critical context and requires a very high reading skill level, and many sites have attracted few visitors. The limited information they provide about expenditures – identifying that an agency has spent $25,000 on out-of-state travel, for example – could more likely be used as example of government waste than to show that such travel is justified by non-disclosed circumstances such as the increased tax revenues obtained by auditing out-of-state companies. Accordingly, the websites' impact on trust in government is most likely to be very limited.

While we did not attempt to measure the websites' impact on government performance and reducing waste, fraud, and abuse, the US PIRG, which has tracked the development of these sites over time, reported in 2013 that some states had reported achieving minor cost savings from developing their sites (US PIRG, 2013). The cost savings were mostly by reducing the costs of responding to public information requests by referring individuals to the websites and by

analyzing the expenditure database to identify opportunities to consolidate purchasing. Utah, for example, reported saving $85,000 by identifying the total amount of bottled water being purchased and directing agencies to reduce this amount. Such actions, while laudable, are unlikely to have a material impact on government expenditures or performance.

Currently, the state transparency websites provide only a limited window into the financial operations and performance of state governments, that of 'through a glass, darkly'. Accordingly, just as looking through a semi-transparent window provides little satisfaction to the viewer; it is likely that the state transparency websites are unlikely to satisfy neither those who have pre-existing cynicism about the financial performance of their states nor those who seek a deeper understanding of their government's operations.

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