IBM Center for
The Business of Government

Assessing the
Recovery Act Series

Recovery Act Transparency

Learning from States' Experience

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Assessing the Recovery Act Series 2012

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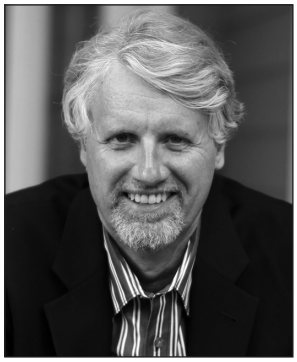
Foreword

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, *Recovery Act Transparency: Learning from States' Experience,* by Francisca M. Rojas, research director for the Transparency Policy Project at Harvard University.


Daniel J. Chenok

The American Recovery and Reinvestment Act of 2009 (Recovery Act) included new and unprecedented provisions requiring disclosure of how its grants, contracts, and loans, totaling more than $275 billion (of the $840 billion in overall Recovery Act funds) were spent. These transparency requirements fell not only on federal agencies, but also on the recipients and sub-recipients of these monies.

In many cases, state governments were the focal point for collecting and reporting this information. How did states respond? Did this increased transparency change how states managed their own monies as well as federal dollars? Are there lessons for future transparency efforts at the state or federal levels?


David Edwards

Dr. Rojas examines the experiences of six states with a range of experiences in implementing the Recovery Act's transparency requirement—Colorado, Maryland, Massachusetts, Mississippi, Texas, and Washington. She interviewed federal and state officials, as well as journalists and advocacy group representatives covering the Recovery Act.

Proponents of the Recovery Act's transparency provisions envisioned millions of "citizen IGs," serving as "eyes and ears" for the accountability of thousands of projects supported by the monies. However, Dr. Rojas found that the transparency websites *did not* serve that role as broadly as originally envisioned. She *did* find that the federal law's transparency provisions improved the capacity of state officials to better manage the disbursement of federal funds under the Recovery Act, and were used as a key management tool to oversee those funds. Advocacy groups and journalists also made notable efforts to work with Recovery Act data to understand the impacts of spending.

Based on these and other findings, Dr. Rojas offers a series of recommendations for the design and implementation of future initiatives that have similar characteristics. One recommendation is that future initiatives should be clear about intended uses and users of the information created and reported. Another recommendation is to work with stakeholders on mechanisms and procedures that generate consensus on performance metrics for transparency reporting systems.

This report is one of a series examining the implementation of the Recovery Act, which was the largest effort undertaken by the federal government in over 60 years, nearly doubling federal discretionary spending in the 17-month period after its enactment. Other IBM Center reports in this series include:

- *Managing Recovery: An Insider's View,* by G. Edward DeSeve
- *Virginia's Implementation of the American Recovery and Reinvestment Act: Forging a New Intergovernmental Partnership,* by Anne Khademian and Sang Choi
- *Key Actions That Contribute to Successful Program Implementation: Lessons from the Recovery Act,* by Richard Callahan, Sandra Archibald, Kay Sterner, and H. Brinton Milward

We hope that both federal and state policymakers find the lessons and recommendations in this report useful as they consider the design and implementation of current and future transparency initiatives.

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Executive Summary

Introduction

Since 2009, the public has been able to track the outlay of more than $275 billion in federal contracts, grants, and loans as a result of the unprecedented transparency and accountability provisions included in the American Recovery and Reinvestment Act (Recovery Act), part of the federal economic stimulus program.[1] As a response to the national economic crisis that began in 2008, the Recovery Act's principal aim was to drive investments that could quickly spur economic activity and create jobs.

Section 1512 of the Recovery Act required that recipients of any funds made available by appropriations under the Act submit quarterly reports on project progress to a newly established, independent Recovery Accountability and Transparency Board (Recovery Board). The Recovery Board disclosed all information collected from recipient reports via a public-facing website at Recovery.gov. Three years into the program, over 276,000 prime and sub-recipients of funds had submitted quarterly reports to the Recovery Board to capture project spending, completion status, and employment outcomes. All of these reports are public information, accessible online by anyone at any time.

This report examines Recovery Act transparency to understand what the disclosure of spending data accomplished, who used the available information, and how it was used. The focus is on implementation of the Recovery Act's transparency requirements at the state level, drawing lessons from the experiences of six states: Colorado, Maryland, Massachusetts, Mississippi, Texas, and Washington.

States were key conduits for Recovery Act expenditures. Their varied disclosure strategies highlight the dynamics of interaction between spending information, user responses, and resulting outcomes. In particular, the report focuses on the relationship between the disclosure of federal spending and the responses to that information from a range of users: individual citizens, media organizations, advocacy groups, and the government itself. The objective of this report is to identify the effects of such disclosure and what can be learned for future efforts to strengthen public spending transparency systems. This report does not attempt to assess the impact of Recovery Act investments on stimulating national or state economies.

Findings

The rollout of Recovery Act disclosure requirements marks the leading edge of a transformation in government spending transparency. Federal transparency requirements created a ripple

1. While the entire Recovery Act allocates $840 billion in expenditures, Recovery Act funds dedicated to tax benefits ($299.8 billion) and entitlements ($219.9 billion) are not subject to the Recovery Act's transparency provisions. Reporting requirements therefore only apply to federal contracts, grants, and loans made to states and other entities.

effect of voluntary transparency efforts. For example, although not required, all states and many state agencies created their own websites for spending disclosure. Journalists and advocacy groups built multiple online outlets to make it easier for the public to access spending information. Further, rates of fraud, waste, and abuse of Recovery Act funds were reported to be lower than expected for federal programs.

We found that the Recovery Act transparency provisions resulted in the following:

- **Finding One:** State compliance with federal spending disclosure requirements was very high. States exceeded Recovery Act transparency requirements in building comprehensive online portals for the data.
- **Finding Two:** Transparency requirements served as a deterrent which contributed to low rates of fraud, waste, and abuse of funds.
- **Finding Three:** The quality and timeliness of transparency data improved over the course of implementation. There was, however, a lack of consensus on performance metrics, particularly with respect to job creation.
- **Finding Four:** Spending transparency became institutionalized in some states and at the federal level.

We found that three key stakeholder groups used Recovery Act data differently:

- **Finding Five:** State officials were the principal users of Recovery Act data as it allowed them to manage and track federal spending in near-real time.
- **Finding Six:** There was high, but uneven, use of data by journalists and advocates due to uneven data quality and lack of context for understanding the impacts of spending.
- **Finding Seven:** Individual citizens found a mismatch between the kinds of data provided by Recovery Act websites and their main interest: finding a job supported by the Recovery Act or applying for a grant or contract funded by the Recovery Act.

Overall, the most significant effect of Recovery Act spending transparency was an improved capacity by state officials to manage the disbursement of federal funds. Advocacy groups and journalists contributed to government efforts to improve the quality of disclosed information. But their attempts to extract meaning from the data show mixed results, depending partly on their capacity to decipher patterns from complex data sets. Inherent problems with newly created metrics for transparency limited such efforts. While the Recovery Board and many state websites aimed to engage individual citizens with data on federal spending, this task proved to be difficult.

Recommendations

How can effective disclosure strategies for government spending be designed and implemented in the future? Both in its strengths and in its limitations, the Recovery Act produced experiences that suggest seven recommendations for future efforts to improve transparency of federal grant, loan, and contract spending that flows through the states.

We offer seven recommendations that could be adopted by either federal or state policymakers who are designing and implementing transparency systems.

Design Recommendations

- **Recommendation One:** Be as clear as possible about the purposes of transparency.
- **Recommendation Two:** Be as clear as possible about intended information users and consider motivations and needs.
- **Recommendation Three:** Ensure any new transparency system be designed to disclose accurate, current, disaggregated, and comparable information that is accessible to a variety of users.

Implementation Recommendations

- **Recommendation Four:** Create strong incentives for reporting compliance by using carrots to reinforce effective reporting and setting meaningful sanctions for non-reporting.
- **Recommendation Five**: Reduce reporting burdens when possible and ensure data accuracy by pre-populating spending reports with existing, public data sources.
- **Recommendation Six**: Work with stakeholders to develop mechanisms and procedures that generate consensus on performance metrics for transparency reporting systems.
- **Recommendation Seven:** Incorporate monitoring and feedback mechanisms into transparency reporting systems and aim for continuous improvement.

In expanding the scope of fiscal transparency, policy-makers should pay special attention to the challenges faced by interest groups, individual citizens, and journalists in using data. Through consultation with user groups and others, government at all levels should develop transparency systems for public spending that are more accessible, actionable, and ultimately more valuable in the years to come.

Part I: Overview

Introduction

Since 2009, the public has been able to track the outlay of more than $275 billion in federal contracts, grants, and loans authorized by the American Recovery and Reinvestment Act (Recovery Act), a key part of the federal economic stimulus program.[2] As a response to the national economic crisis that began in 2008, the Recovery Act's principal aim was to drive investments that could quickly spur economic activity and create jobs. As mandated by Section 1512 of the Recovery Act, recipients of any funds made available by appropriations under the Act were required to submit quarterly reports on project progress to a newly established, independent Recovery Accountability and Transparency Board (Recovery Board). Section 1512 reporting applied to any entity receiving recovery funds, including state governments.

To fulfill the transparency requirements of the Recovery Act, the Recovery Board disclosed all information collected from recipient reports via a public-facing website at Recovery.gov. By 2012, over 276,000 prime and sub-recipients of funds had submitted quarterly reports to the Recovery Board to capture project spending, completion status, and employment outcomes. All of these reports were public information, accessible online by anyone at any time. As a transparency initiative, the provision of so much detailed information in such a timely manner represents an extraordinary achievement for the federal government.

This report focuses upon implementation of Recovery Act transparency requirements in six states:

- Colorado
- Maryland
- Massachusetts
- Mississippi
- Texas
- Washington

States were key conduits for Recovery Act expenditures and their varied disclosure strategies highlight the dynamics of interaction between spending information, user responses, and resulting outcomes.[3] This report addresses the following questions:

2. While the entire Recovery Act allocates $840 billion in expenditures, Recovery Act funds dedicated to tax benefits ($299.8 billion) and entitlements ($219.9 billion) are not subject to the Act's transparency provisions. Reporting requirements therefore only apply to federal contracts, grants and loans made to states and other entities.

3. The framework of analysis for this study employs the targeted transparency "action cycle" developed by Fung, Graham, and Weil (2007: p. 54). The action cycle traces the pathways through which information from disclosers gets embedded in the decision-making routines and activities of intended information users to achieve accountability objectives.

- What were the goals of the Recovery Act transparency requirements? (pages 12–14)
- What information did the Recovery Act disclose? (pages 14–19)
- How did states implement Recovery Act transparency requirements? (pages 20–28)
- What did Recovery Act transparency requirements accomplish at the state level? (pages 30–37)
- Who were the major users of Recovery Act spending information and what did they do with it? (pages 37–47)

This study is based on a limited number of cases, and some states gave researchers greater access to in-state actors, resulting in a clearer picture of the state's transparency dynamics. In examining the advocacy community, we chose to focus on a subset of information users, studying the activities of a network of national and state advocacy groups who formed dedicated coalitions to track Recovery Act spending. The time period for conducting this research also limits a full perspective on transparency outcomes since not all Recovery Act funds have been spent by the states and recipients will continue to submit reports to the Recovery Board through September 2013. Nevertheless, as the Obama administration and Congress now begin to draw lessons from Recovery Act spending disclosure to design and implement future government-wide spending transparency systems, these case studies can provide lessons for future efforts.

Overview of Findings

The speed and scale with which the federal government and states mobilized to implement Recovery Act transparency was remarkable. Beginning with a broad mandate from Congress in January 2009 to "establish and maintain, no later than 30 days after enactment of this Act, a user-friendly, public-facing website to foster greater accountability and transparency in the use of covered funds,"[4] the Recovery Board quickly built a large-scale, complex data input and output system in time for the first recipient reporting deadline of September 30, 2009.

As Recovery Act transparency matured through three years of implementation, it sustained an exceptional level of spending disclosure compliance and low rates of fraud, waste, and abuse of funds. Nearly every recipient of federal funds reported expenditures quarterly starting in September 2009. During the October–December 2011 reporting quarter, 171,304 recipients filed reports with the Recovery Board and 413 recipients failed to do so: most of these were first-time reporting failures.[5] Through January 2012, only nine recipients failed to report to the Recovery Board over three or more reporting cycles.[6] Further, rates of fraud, waste, and abuse of Recovery Act funds appeared to be low for a federal program, with just 298 criminal convictions and $7.2 million in lost funds out of over $200 billion in federal contracts, grants, and loans received by the states, a 0.004% rate of lost funds over two years.[7] By comparison, the National Health Care Anti-Fraud Association estimates that federal health care programs lose 3% of expenditures to fraud on an annual basis.[8]

4. American Recovery and Reinvestment Act of 2009, Sec 1526, H.R. 1–179.
5. Michael Wood blog post on Recovery.gov, "Shaming the Scofflaws." March 28, 2012. http://blog.recovery.gov/2012/03/28/shaming-the-scofflaws/
6. Figures current through January 2012. Recovery Accountability and Transparency Board, "Wall of Shame"
7. Earl Devaney's post for the *Chairman's Corner* blog on Recovery.gov. December 14, 2011. http://www.recovery.gov/News/chairman/Pages/14Dec2011.aspx
8. Testimony to the Senate Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security by Lewis Morris, Chief Counsel, Office of Inspector General, Department of Health and Human Services. April 22, 2009.

Significantly, these federal transparency requirements created a ripple effect of voluntary transparency efforts. All states and many state agencies created their own websites for spending disclosure. A high level of commitment from public officials, combined with pressure from the Obama administration and advocacy groups to meet public disclosure requirements, motivated great attention to addressing data quality issues and devising ways to convey the meaning of spending information to the public.[9] Journalists and advocacy groups also built multiple online outlets to make it easier for the public to access spending information.

In the states examined here, state officials reported a high level of use of Recovery Act spending data. Indeed, the most significant effect of Recovery Act disclosure was to improve the management of federal funds within state governments. The available spending data gave state officials a detailed and timely view of how federal funds were flowing through their states. State officials were therefore able to manage their deployment of federal funds more efficiently and effectively than in the past. Also, the high frequency of recipient reporting allowed state officials to make adjustments in near-real time. Officials in states with considerable experience in data-driven performance management (Maryland and Washington) or a high level of commitment from the governor to effectively use Recovery Act funds (Massachusetts and Colorado) used federal spending data most effectively in overseeing and managing expenditures.

Early on, public users—individual citizens, the media, and advocacy groups—recognized Recovery Act transparency as a significant leap in federal spending disclosure. At the federal level and in many states, government officials made data available online in browsable and machine-readable formats. They incorporated visual tools such as maps and charts, and updated them on a quarterly basis.

Several national advocacy groups ranked state transparency efforts and pressed for improvements in disclosure. In some states, advocacy groups formed coalitions and hired dedicated data analysts. A few intrepid journalists spent months analyzing data for their communities. Yet early issues with the quality of recipient-reported data and persistent difficulties in contextualizing the information made it challenging for many to understand and assess the impact of Recovery Act investments.

These varying responses from different Recovery Act information users signal a common problem of disclosure systems. The anticipated users of information often are identified generally as the public. In reality, the public comprises various groups of stakeholders characterized by different motivations, interests, needs, and capacities to use information. The information users discussed in this report are summarized below.

- **Individual citizens** were targeted by the states studied here as their primary audience. Many of the individual users who visited these websites sought information on how to get recovery-funded jobs and contracts rather than information to track spending accountability.
- **Journalists** sought stories within the data, particularly about local impacts of federal investments on jobs and related outcomes. But interpreting the detailed spending data and connecting it to job creation was challenging, even for experienced journalists.
- The **advocacy groups** studied primarily sought to assess whether Recovery Act funding addressed the needs of disadvantaged groups. But reported data did not include demographic indicators, making it difficult to determine who was benefiting from Recovery Act investments. Also, state-level advocates saw little opportunity to influence investments since allocation decisions were made early in the policy process and funds were directed

9. See President Barack Obama's "Memorandum on Combating Noncompliance with Recovery Act Reporting Requirements." April 6, 2010. http://www.gpo.gov/fdsys/pkg/DCPD-201000234/pdf/DCPD-201000234.pdf

through existing federal programs. As a result, advocates focused on improving state-level transparency systems, laying the groundwork for future efforts.

The rollout of Recovery Act disclosure requirements marks the leading edge of a transformation in government spending transparency.[10] Like the federal government, states built data intake and output systems quickly and showed a commitment to improve them over time to achieve unprecedented levels of spending transparency. Yet designing disclosure systems comprised of complex and detailed information that broadly targeted public users generated challenges in anticipating and reaching intended audiences.

As a result, the most significant effect of Recovery Act spending transparency was an improved capacity at the state level to manage the disbursement of federal funds. Advocacy groups and journalists contributed to government efforts to improve the quality of disclosed information and attempted to extract meaning with mixed results, depending partly on their ability to decipher patterns from complex data sets. Inherent problems with newly created metrics for transparency limited such efforts. While the Recovery Board and many state websites aimed to engage individual citizens with data on federal spending, this task proved to be difficult.

Goals of Recovery Act Transparency

The Office of Management and Budget's (OMB) *Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009* noted the following five accountability objectives for the legislation:

- **Goal One:** The recipients and uses of all funds are transparent to the public, and the public benefits of these funds are reported clearly, accurately, and in a timely manner;
- **Goal Two:** Funds are used for authorized purposes and instances of fraud, waste, error, and abuse are mitigated;
- **Goal Three:** Funds are awarded and distributed in a prompt, fair, and reasonable manner;
- **Goal Four**: Projects funded under this Act avoid unnecessary delays and cost overruns; and
- **Goal Five:** Program goals are achieved, including specific program outcomes and improved results on broader economic indicators. [11]

This report examines the effects of Recovery Act transparency based on six state-level case studies and focuses on the first three of the five goals listed above.

In service of the first three goals, the Recovery Board envisioned transparency and accountability as symbiotic processes: the public would go to Recovery Act websites to see their tax dollars in action and, in turn, "… millions of 'Citizen IGs' who live in the neighborhoods where Recovery dollars are being spent [would] join in the oversight effort,"[12] by both directing spending to high-priority areas given a community's needs and by reporting instances of fraud, waste, and abuse. Through this process, public officials would respond to input from citizens by allocating Recovery Act funds more efficiently and effectively to meet the main objectives of stimulating the economy and creating jobs as quickly as possible.

10. For a description of the elements of federal spending, see Sunlight Foundation's Clearspending infographic at http://sunlightfoundation.com/clearspending/animation/

11. Adapted from OMB Memorandum "Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009" (M-09-10) by Peter Orszag, February 18, 2009.

12. Recovery Accountability and Transparency Board, "Breaking Ground: 2009 Annual Report," p. 1. http://www.recovery.gov/About/board/Documents/2009 Annual Report.pdf.

To address the first goal, the Recovery Act was not specific about which public users would participate in tracking spending. The presentation of information on Recovery.gov and on many state websites generally targeted individual citizens who were not experts in data analysis. The format and content of data prioritized geospatial mapping and data visualizations that invited people to plug in their zip code and locate projects in their immediate area. Earl Devaney, chairman of the Recovery Board, explained:

> And in the end, the data was not merely published as a jumble of numbers in a hardbound catalog that sits on a shelf somewhere but was arrayed geospatially on Recovery.gov, making the data available and understandable for all users.[13]
>
> For example, users can drill down into their own zip codes to find nearby Recovery awards. Or, by comparing a variety of maps offered on the website, users can see where federal funds are disbursed and decide for themselves whether the funds are going where the need is greatest.[14]

Capacity was also built into many of the Recovery Act's various transparency websites for more sophisticated users to download either machine-readable spreadsheets of data or summaries of expenditures in static (PDF) document formats.

As for the second objective of mitigating fraud, waste, and abuse, the Recovery Act relied on a combined institutional effort involving agency Inspectors General (IGs), the Government Accountability Office (GAO), and a new Recovery Operations Center. The Recovery Board established the Recovery Operations Center to cross-reference data from recipient reports with other government databases for predictive modeling and risk analysis. But there was also an expectation that citizens would play the role of "Citizen IGs" with transparency as the key enabler. President Obama introduced the Recovery Act website on February 9, 2009, saying:

> This is going to be a special Web site that we set up that gives you a report on where the money's going in your community, how it's being spent, how many jobs are being created, so that all of you can be the eyes and ears.[15]

By visiting a Recovery Act website, it was envisioned that the general public would have enough information to assess whether the on-the-ground reality matched information reported by recipients of recovery funds. If this was not the case, they could then alert local and federal authorities to fraudulent spending directly on recovery websites. Recovery.gov and the Massachusetts recovery website, for instance, featured a red button at the top of the screen that read, "Report Fraud, Waste and Abuse." In Colorado and Texas, citizens could call a hotline number with their concerns. Based on these tips from the eyes and ears of citizens, the government would then investigate further.

A third goal of Recovery Act transparency was to ensure that funds were "awarded and distributed in a prompt, fair, and reasonable manner."[16] The reporting system put in place to track spending was not only intended to mitigate fraud, waste, and abuse but also served federal and state agencies in monitoring the rate of expenditures for each program, since spending money quickly was of paramount importance in stimulating the economy. It also allowed

13. House Committee on Oversight and Government Reform, "Testimony of the Honorable Earl E. Devaney Chairman, Recovery Accountability and Transparency Board before the Committee on Oversight and Government Reform." June 14, 2011.
14. Earl Devaney's post for the *Chairman's Corner* blog on Recovery.gov, "Accountability and Transparency: Template for the Future." June 14, 2011. http://www.recovery.gov/News/chairman/Pages/14Jun2011.aspx.
15. From a transcript of President Barack Obama's Elkhart, Indiana town hall. February 9, 2009.
16. OMB Memorandum "Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009" (M-09-10) by Peter Orszag. February 18, 2009.

state officials to have a much more complete picture than ever before of how federal money flowed through their states. Since much of the money came with a use-it-or-lose-it condition, states had a powerful incentive to move funds through their agencies efficiently to support teachers, weatherize homes, upgrade infrastructure, and implement the numerous other programs supported with recovery funds. The promptness of expenditures capitalized on data generated through the recipient reporting process to motivate better delivery of government programs and public services.

Armed with data, more ambitious state officials tasked with implementing the Recovery Act in their states were able to troubleshoot and motivate spending in near-real time.[17] It was more difficult to operationalize the goal of ensuring that funds be awarded in a "fair and reasonable" manner since recovery funds were allocated across programs through separate processes, and awarded to contractors via different state-level bidding systems. As a result, the expenditures tracked by state and federal transparency websites reflected the outcomes of separate policy and administrative structures. Data regarding recovery expenditures therefore did not provide insight into the decisions driving past or future allocations or the mechanisms by which contracts were awarded.

What Information Did the Recovery Act Disclose?

As a response to the national economic crisis that began in 2008, the Recovery Act's principal aim was to drive investments that could quickly spur economic activity and create jobs. The metrics required by the Recovery Act's transparency provisions were intended to allow the public to track the rate of spending and the number of jobs created as a result of the program.[18]

The Recovery Act's transparency provisions built on existing federal spending disclosure requirements established by the Federal Funding Accountability and Transparency Act (FFATA) of 2006, authored by then-Senator Barack Obama (D-Illinois) and Senator Tom Coburn (R-Oklahoma). As a landmark transparency law, FFATA required prime and sub-recipients of federal grants, loans, and contracts to report to agencies on their spending, which was then disclosed on the USASpending.gov website. By 2009, only the prime recipient reporting system had been implemented and FFATA faced considerable challenges in collecting consistent, complete, and timely data.[19] Recovery Act disclosure used FFATA as a model and called for collecting many of the same fields of information as FFATA, including information on sub-awardees. The Recovery Act also added requirements for recipients to estimate the number of jobs created or retained with federal funds and to disclose the compensation of top-paid executives (see below).

Information on Funding Flows

The Recovery Board built an independent reporting and disclosure system separate from the FFATA system. Both prime and sub-recipients of Recovery Act funds submitted spending information through a new nationwide data collection system set up by the Recovery Board at FederalReporting.gov. Through this data intake portal, the Recovery Board and federal agencies could access and review recipient reports for quality assurance purposes. The Recovery Act then required recipient reports to be posted on the federal disclosure website, Recovery.gov,

17. While the Recovery Board required quarterly reports of expenditures from recipients, federal agencies tracked spending on a weekly basis and made those reports available to the public. As an example, see the U.S. Department of Transportation's weekly updates http://www.dot.gov/recovery/weeklyUpdates.html

18. American Recovery and Reinvestment Act of 2009.

19. OMB Watch blog post "USASpending.gov to Increase Transparency through Subrecipient Reporting." September 14, 2010, http://www.ombwatch.org/node/11269. See also the Sunlight Foundation's Clearspending.org website, which evaluates the reliability of data on USASpending.gov.

no more than 30 days after the reporting deadline. In many ways, the Recovery Act reporting system fulfilled and exceeded the ambitions of FFATA. By generating detailed, multilayered recipient reports, the Recovery Act experience acted as a proof of concept for more ambitious public transparency of federal spending data. In turn, it influenced further implementation of FFATA by shaping OMB guidance on sub-recipient reporting.[20]

Recovery Act Reporting Requirements

To follow the money from allocation to expenditure to impact, the Recovery Board required recipients of funds to input 99 fields of numeric and narrative data related to six dimensions of spending. Recipients submitted reports detailing the following information on a quarterly basis, or every 90 days:

Who: The name and DUNS number[21] of the recipient organization and the corresponding federal funding agency. Sub-grantees were also identified if the recipient organization contracted with other organizations to carry out its work. In cases where federal contracts accounted for at least 80 percent and $25 million of a recipient's annual gross revenues, they also disclosed the names and salaries of the five most highly compensated officers in the organization.

What: The title and description of the project or activity funded by the Recovery Act. Recipients described the overall purpose and expected outputs of grants and loans. Entities reporting on contracts described all services performed or supplies invoiced during the reporting quarter. Reports also required an activity code, either the North American Industry Classification System (NAICS) or the National Center for Charitable Statistics (NTEE-NPC).

Where: There were two ways to identify the geographic location of award recipients, by the entity or contractor receiving the funds or by place of performance, where the work was actually carried out. Both types of geographic locations were identified by the street address, city, state, and zip code of a recipient entity or sub-grantee. The number of the congressional district was also included.

Cost: Funding amounts reported by an entity were conveyed in three ways. "Award amount" referred to the total amount of funds allocated by the federal government. "Funds invoiced/received" were the amount of Recovery Act funds received by the entity through draw-down, reimbursement, or invoice. And "expenditure amount" was the amount that a recipient had paid to another organization or to employees.

Progress: Recipients self-evaluated the completion status of the project, activity, or contract in one of four progress categories: not started, less than 50 percent completed, completed 50 percent or more, or fully completed.

Jobs: Recipients estimated the number of jobs created or saved and provided a narrative description of the employment impact of recovery-funded work. The number of jobs was not a head count of employees supported by Recovery Act funds but rather a calculation of full-time equivalents (FTEs). An FTE was measured by the number of hours in a full-time schedule worked within the three months of a reporting quarter.

The remarkable level of detail in the data reported by recipients allowed for an extraordinary view into the flow of federal funds. Further, recipients generated these reports every 90 days, and in some cases on a weekly basis, enabling a dynamic and timely view into the movement of Recovery Act money. In particular, the metrics on program progress, funds received and

20. See OMB Memorandum "Open Government Directive — Federal Spending Transparency and Subaward and Compensation Reporting," by Jeffrey Zients. August 27, 2010.

21. A DUNS number is a standard nine-digit code used to identify a company or an organization. DUNS numbering is a proprietary system provided by Dun & Bradstreet. For more, see LaFleur and Grabell, "ProPublica's FAQs for Recovery.gov," at http://www.propublica.org/article/propublicas-faq-for-recovery.gov-1109.

expended, and the types of activities funded were key to facilitating the states' ability to assess the rate of spending in near-real time.

Information on Job Metrics

Given the way data on Recovery Act projects were structured, tracking the rate of spending turned out to be more straightforward than tracking the number of jobs created or saved.[22] Jobs metrics attributable to Recovery Act funds had to be created without the benefit of precedent—always problematic in new transparency systems. The methodology set by OMB to estimate jobs made it difficult to accurately capture employment impact for several reasons.

- First, the number of hours that constituted a full-time job varied by employer and by industry so that the denominator in the FTE calculation shifted project by project.
- Second, recipients were allowed to account only for the number of hours that were directly funded by the Recovery Act, even if a position was funded through other sources as well.
- Third, indirect and induced jobs were not captured—those workers supported by Recovery Act-funded work but not directly paid for with Recovery Act dollars (those calculations were done by the Council of Economic Advisers).

After the first reporting period, OMB updated the methodology for counting FTEs by no longer requiring a cumulative count of hours worked over a project lifecycle, that is, across multiple reporting quarters.[23] Rather, recipients had to report job estimates on a quarterly basis. As a result, the number of Recovery Act-funded jobs could not be aggregated across quarters due to the risk of double counting. Finally, since the thousands of funding recipients—few of whom had experience in estimating job creation—had the responsibility of reporting job counts, calculating FTEs turned out to be an inexact science.[24]

Concerns about Data Quality

The issue of data quality became a significant controversy during the first reporting period in late 2009, when OMB was still tinkering with reporting rules and recipients were struggling to understand the new system. The media, advocacy groups, and politicians identified substantial data problems, most notably recipient reports that attributed new jobs to non-existing, or "phantom," congressional districts.[25] After the first reporting period, the Recovery Board and OMB implemented measures to drastically improve data quality by pre-populating fields like a recipient's congressional district and instituting logic checks in the data collection system.[26]

Data quality in regard to the jobs estimates proved particularly vexing. The December 2009 OMB guidance on reporting job estimates used very conservative assumptions in estimating jobs funded by the Recovery Act to avoid politicized charges of over-counting jobs.[27] Spending

22. Ianthe Dugan and Justin Scheck, "Cost of $10 Billion Stimulus Easier to Tally than New Jobs," *The Wall Street Journal.* February 24, 2012.
23. For updates in job counting methodology see OMB Memorandum "Implementing Guidance for the Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009" (M-09-21) by Peter Orszag, June 22, 2009 and OMB Memorandum "Updated Guidance on the American Recovery and reinvestment Act—Data Quality, Non-Reporting Recipients, and Reporting of Job Estimates" (M-10-08) by Peter Orszag, December 18, 2009. The December 18, 2009 update was in response to a GAO recommendation to "standardize the period of measurement for [Full Time Equivalents]." (OMB Memorandum M-10-08, p. 1)
24. See Phil Mattera's post "Recovery Act Groundhog Day: ARRA Jobs Data Continue to Perplex" on the *States for a Transparent and Accountable Recovery Coalition* blog, January 31, 2011. http://www.accountablerecovery.org/blog/recovery-act-groundhog-day-arra-jobs-data-continue-perplex.
25. See LaFleur's "Phantom School Districts Tagged for Stimulus Dollars;" Klein's "Key House Dem Wants Answers on Recovery.gov Errors;" and Isendstadt's "Parties Launch Stimulus P.R. Offensives."
26. OMB Memorandum "Updated Guidance on the American Recovery and Reinvestment Act—Data Quality, Non-Reporting Recipients, and Reporting of Job Estimates" (M-10-08) by Peter Orszag, December 18, 2009.
27. Author interview with OMB's David Vorhaus, December 17, 2010.

impacted job creation through both direct effects (hiring people to do the work) and indirect effects (additional employment spillovers, such as jobs created in supplier organizations or through spending by those directly employed). Estimating job creation is methodologically difficult because it requires knowledge of a counter-factual: what the employment situation would have been absent Recovery Act spending. The OMB guidance did not include indirect job creation. Nor did it allow estimation of cumulative employment effects. As a result, the jobs numbers generally looked small relative to the Recovery Act expenditures associated with them.[28]

This early experience with reporting errors compromised the credibility of the data. Unreliable data initially frustrated journalists and advocates trying to understand the impacts of Recovery Act spending.[29] It also motivated critics to brand the Recovery Act as a failed government program because of the modest size of the reported employment effects, the significant discrepancy between those numbers and the much higher numbers reported by the Council of Economic Advisors, or assertions that the transparency requirements were simply propaganda.[30] Several states struggled to bridge the gap between the lower bound estimates of direct, quarterly FTE effects and a broader measure of job effects. Figure 1 presents excerpts from the Maryland and Massachusetts recovery sites, which attempted to supplement the official FTE numbers with other estimates of job impacts. Maryland's Recovery Act website provided figures for direct, indirect, and induced jobs. Massachusetts displayed the total FTEs side by side with a headcount of people receiving recovery-funded paychecks, a figure also displayed cumulatively across reporting quarters. These examples illustrate the absence of consensus metrics in this crucial area.

Impact of Spending

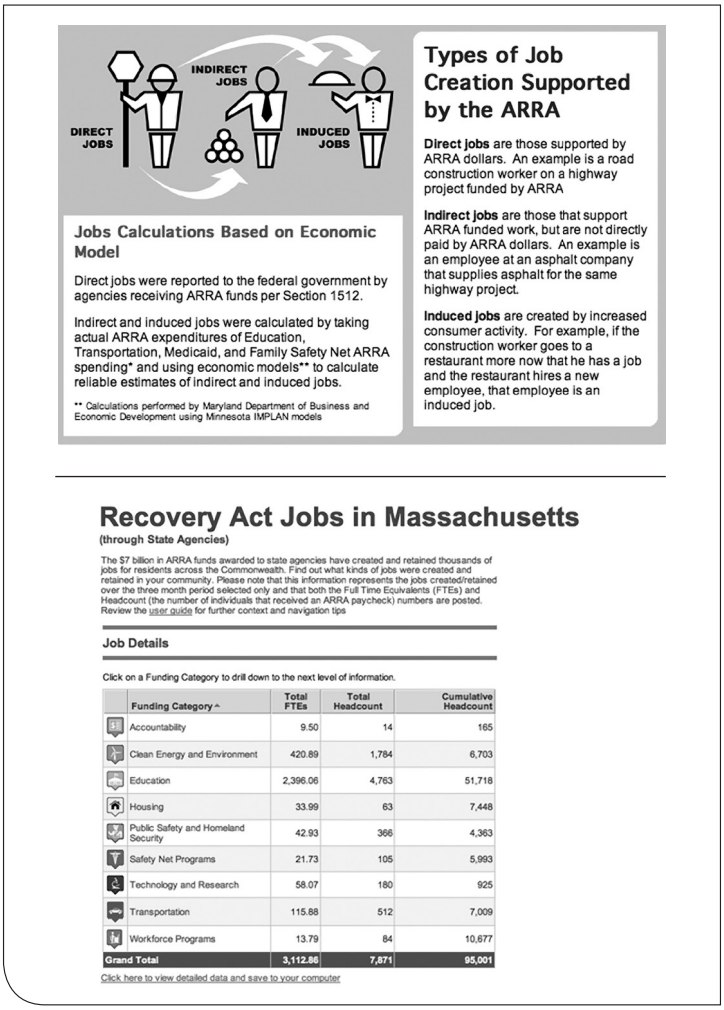
Another constraint of the data was the absence of metrics to help assess the impact of Recovery Act spending on particular demographic groups, a goal of the advocacy organizations we examined. The Recovery Act did not require recipients to report demographic data about the people or places receiving federal funds, making it difficult for states and public users to determine how spending targeted economic need. Recovery Act reports also did not include any information about the quality of jobs created or saved with public funds. In examining the number and narrative for FTEs, users of this information could not see whether recovery jobs counted as full- or part-time employment, the accompanying wages or benefits received, or the number of hours that constituted a full-time job in any given industry (the denominator for the FTE calculation). Massachusetts addressed this challenge by adding demographic indicators to its own Recovery Act data collection system, asking funding recipients to report on the race, ethnicity, gender, disability status, and zip code of people working on Recovery Act projects. The Massachusetts recovery office used this data internally to assess the effectiveness of Recovery Act spending in addressing economic need.

28. Employment estimates by the President's Council of Economic Advisors (CEA) were not displayed on the Recovery Board's transparency website. Instead, a link existed to the CEA documents at http://www.recovery.gov/About/Pages/The_Act.aspx. Author interview with OMB's David Vorhaus, December 17, 2010.

29. See Moffeit and Hubbard's 2010 *Denver Post* article,"Tally of Stimulus Jobs Cites 9,406 in Colo. A State Official Says 'It's Really Impossible' to Calculate the Full Impact of Spending."

30. See Nagesh's 2010 *Hillicon Valley* blog post titled "Rep. Issa: Stimulus Website is 'Propaganda.'" Critics also branded the Recovery Act project road signs as further propaganda. For example, Tina Korbe's August 15, 2010 opinion piece in the *Washington Examiner*, "Were Recovery Act Signs Simply Roadside Propaganda for Obama?" and local reports like Jack Minor's article, "Local Governments Forced to Erect Signs Praising Washington," in Colorado's *Greeley Gazette*.

Figure 1: Maryland's and Massachusetts' Estimates of Recovery Act-Funded Jobs



Sources: Screenshots of websites in Maryland (http://statestat.maryland.gov/recoveryjobs.asp) and Massachusetts (http://www.mass.gov/recovery/track-the-jobs/)

An alternative way for users of data to assess demographic impacts of Recovery Act spending without requiring recipients to report more information was to link Recovery Act data with existing demographic data sources. But this approach also presented challenges due to inconsistent and proprietary common identifiers in the Recovery Act data. For instance, the geographic data collected did not indicate counties or census tracts, which are the geographic identifiers for demographic data in the U.S. Census, but were based on zip codes and congressional districts. The unique identifier used by the federal government to track entities receiving federal funds, the DUNS number, was an expensive, proprietary system that remained out of reach for many public users of Recovery Act information.[31]

In designing a reporting system to adequately capture spending, the OMB and the Recovery Board had to balance the benefits of providing detailed, accurate, and timely data against the costs of overwhelming the hundreds of thousands of grantees with additional reporting requirements. Given that recipients were already being asked to input 99 data fields to

31. For this and other challenges in using DUNS numbers to identify federal funding recipients, see the House Committee on Oversight and Government Reform testimony by Craig Jennings on behalf of OMB Watch. June 14, 2011.

FederalReporting.gov, OMB had to weigh adding further to this reporting burden by requiring more data, but the Recovery Board insisted on keeping the number to 99 fields.[32] As a result, easing reporting burdens in this way undermined the larger aim of allowing information users to track demographic impacts.

32. Author interview with Nancy DiPaolo of the Recovery Board, October 22, 2010.

Part II: Implementing Transparency Requirements in Six States

All 50 states mirrored the federal effort toward transparency of Recovery Act spending by setting up their own websites, even though the Act did not include such a requirement.[33] The Recovery Act did, however, call for either governors or mayors to certify that they accepted "responsibility that the infrastructure investment is an appropriate use of taxpayer dollars," and that "[a] state or local agency may not receive infrastructure investment funding … unless this certification is made and posted." The most bare-bones state Recovery Act websites included just these letters of certification.[34] In most cases, however, the purpose of state-level recovery websites was to provide citizens with information to track how federal funds flowed through state government to recipients and specific projects. The most committed states envisioned these websites as portals for engaging citizens with the aim of achieving more transparent, accountable and participatory federal spending. In these states, as spending reports were uploaded to Recovery.gov, they were simultaneously posted to state websites at the end of each reporting quarter.

An important mechanism that enabled states to establish their own transparency websites was the federal government's decision to reimburse states for administrative costs associated with fulfilling the Recovery Act's reporting and oversight requirements. The OMB allowed up to half of one-percent (0.5 percent) of the total Recovery Act dollars received by each state to be used for activities such as data collection, audits, and investigations of waste, fraud, and abuse.[35]

Reporting Recovery Act Funds

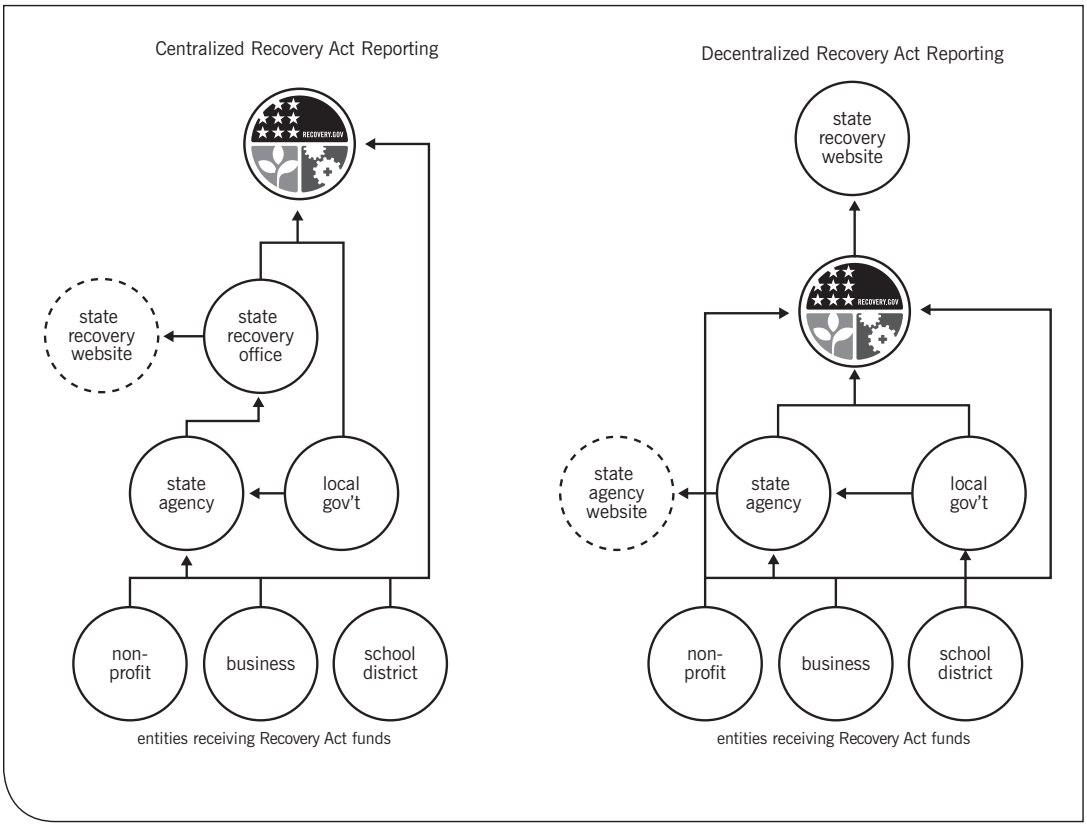
Early on, states had to decide *how* they would submit recipient reports to the Recovery Board.[36] They had two options:

- **Centralized reporting:** a state office first compiled and checked the accuracy of reports from all recipients of Recovery Act funds in their state and then submitted them as a batch to the Recovery Board.
- **Decentralized reporting:** recipients of funds submitted their reports directly to the federal government, bypassing state oversight.

33. The Recovery Act did not require states to build their own recovery websites, it only required states to post certifications that they would use funds to create jobs and promote economic growth. See the U.S. Government Accountability Office's 2010 report "Recovery Act: Increasing the Public's Understanding of What Funds are being Spent On and What Outcomes are Expected," p. 23. http://www.gao.gov/new.items/d10581.pdf.
34. For example, see Ohio's state Recovery Act website at http://recovery.ohio.gov/.
35. OMB Memorandum "Payments to State Grantees for Administrative Costs of Recovery Act Activities" (M-09-18) by Peter Orszag, May 11, 2009, p. 2.
36. OMB Memorandum "Updated Implementing Guidance for the American Recovery and Reinvestment Act of 2009" (M-09-15) by Peter Orszag. April 3, 2009. p. 26.

Figure 2 illustrates this distinction in how states organized themselves for reporting expenditures. In centralized reporting states, prime and sub-recipients of Recovery Act funds submitted spending reports to the state recovery office for review, and the state recovery office then uploaded the information onto FederalReporting.gov. Thirty days after the quarterly reporting deadline, spending data were posted both on the federal (Recovery.gov) and state websites. However, if a federal agency allocated funding directly to a non-state entity, such as a non-profit, business, or even a local government, these recipients would submit their reports directly to the Recovery Board, bypassing the state. In those instances, spending was not reviewed by the state recovery office and not accounted for on state websites. In Massachusetts, about one-third of total dollars allocated to the state did not go through state agencies.[37] Consequently, spending data included on state websites and Recovery.gov did not always coincide, making it difficult to reconcile figures between sources and complicating analyses and interpretation of information by public users.

Figure 2: Structure of Recovery Act Reporting in Centralized and Decentralized States



Note: Figure drawn from author's analysis of state Recovery Act reporting structures.

Decentralized-reporting states did not compile or review recipient reports from their states before they were submitted to the Recovery Board. The recovery websites for decentralized states drew their data directly from Recovery.gov and from weekly spending reports that state departments and agencies were required to submit to counterpart federal agencies (in addition to the quarterly reporting requirement). For example, the office of the state comptroller of public accounts, which maintained the Texas recovery website, updated its data more often than Recovery.gov did because it linked to the state agencies' weekly reports.

37. Jeffrey Simon (director, Massachusetts Recovery and Reinvestment Office) statement to Recovery Accountability and Transparency Board Advisory Panel hearing, August 5, 2010. From author's notes.

According to figures by the National Governors Association, 25 states chose to submit spending reports through a centralized system and another 25 states chose decentralized reporting.[38] This distinction in reporting architectures provided a convenient parameter for choosing the six states to include in this study. The three centralized-reporting states examined are Colorado, Maryland, and Massachusetts. The three decentralized-reporting states are Mississippi, Texas, and Washington.

Case Study Overviews of Implementation in Six States

Table 1 provides an overview of other relevant characteristics of case study states, including political party, prior experience with spending transparency or data-driven decision-making (e.g., performance management), public user strength, and Recovery Act spending per capita.

Table 2 offers details about the content and management structure of each case study state's Recovery Act website. The discussion that follows summarizes how states organized internally to implement Recovery Act transparency and characterizes the user groups for Recovery Act information.

Table 1: Overview of Case Study State Characteristics

State	Governor	Recovery Act reporting	State prior experience with Transparency Reporting	Degree of data use by stakeholders	Population (2010)	Recovery awards (Billions through 12/2011)	Awards per capita
Colorado	Hickenlooper* (D)	Centralized	None	Strong	5,029,196	$5.6	$1,114
Maryland	O'Malley (D)	Centralized	Performance Management	Strong	5,773,552	$6.7	$1,163
Massachusetts	Patrick (D)	Centralized	None	Moderate	6,547,629	$7.8	$1,185
Mississippi	Barbour (R)	Decentralized	None	Weak	2,967,297	$2.9	$970
Texas	Perry (R)	Decentralized	Transparency	Strong	25,145,561	$16.8	$667
Washington	Gregoire (D)	Decentralized	Performance Management	Weak	6,724,540	$8.4	$1,255

* Colorado Governor Hickenlooper (D) assumed office in January 2011. Recovery Act implementation began in 2009 under former Colorado Governor Bill Ritter (D).

Sources: National Governors Association, 2010 U.S. Census, Recovery.gov (updated 1/30/12) and author's analysis.

38. Author's e-mail communication with David Quam of the National Governors Association.

Table 2: Overview of Recovery Act Websites in Case Study States

State	Content: Description of Websites	Management: Website Responsibility	Last Update	Website Score from *Good Jobs First*
Colorado	Charts illustrating overall spending. Interactive map of expenditures (linked to state data summary widget from Recovery.gov). PDF downloads of county-level funding reports, project reports, and individual contracts. Fraud, waste, and abuse hotline number. Testimonials in videos, quotes, and reports of how Recovery Act investments have impacted lives. **http://www.colorado.gov/recovery/**	Colorado Economic Recovery Accountability Board	June 30, 2011	72 (Rank: 4)
Maryland	Charts illustrating overall spending. Interactive map of expenditures by project and category contrasted with economic need. Accounting of direct, indirect, and induced jobs. PDF downloads of minority and disadvantaged business participation in Recovery Act funding. Additional FAQs on the Recovery Act and benefits. **http://www.gov.state.md.us/statestat/recovery.asp**	Governor's StateStat Office	May 3, 2012	87 (Rank: 1)
Massachusetts	Summary of spending and number of individuals impacted (including headcount of Recovery Act funding recipients). Weekly citizen updates and testimonials of how spending has benefited lives. Interactive map of expenditures and projects by town, congressional district, and counties. Searchable database of job counts, spending amounts, and vendors with ability to download data in multiple machine-readable formats. Button to report fraud, waste, and abuse. **http://www.mass.gov/recovery**	Massachusetts Recovery and Reinvestment Office	March 31, 2012	65 (Rank: 10)
Mississippi	Interactive map of expenditures by project and spending category. Searchable database of all spending with Excel spreadsheet downloads. PDF downloads of individual recipient reports. Press releases, background info, and links related to the Recovery Act. **http://stimulus.ms.gov/msgo/mssr.nsf**	Department of Finance and Administration	March 31, 2012	17 (Rank: 45)
Texas	Map of expenditures by county. Searchable database of weekly spending with downloads in multiple machine-readable formats. Information on how to interpret spending reports. PDF downloads summarizing quarterly spending by category. Fraud, waste, and abuse hotline number. Archive of Recovery news in Texas and blog entries narrating impact of spending in Texas. Links to state agency recovery websites. FAQs on Recovery Act legislation. **http://www.window.state.tx.us/recovery/**	State Comptroller of Public Accounts	March 14, 2012	18 (Rank: 42)
Washington	Summary of jobs created/saved and amount of grants, contracts, and loans. Interactive map of expenditures by project and spending. Downloads of awards and jobs data statewide in Excel spreadsheet format. Links to state agency Recovery websites. Resources for citizens, including links to job websites and how to get funding. Reporting guidance for Recovery Act funding recipients. Testimonials of how investments have impacted lives. **http://www.recovery.wa.gov/**	Governor's Office of Accountability and Performance	December 31, 2011	54 (Rank: 19)

Sources: Author's research (February 2012) and website scores and rank from Good Jobs First report *Show Us the Stimulus (Again)* by Mattera et al. (2010).

Case Study Selection

Three states that were widely regarded to be the most successful in implementing Recovery Act transparency systems (Colorado, Maryland, and Massachusetts) were selected as case study subjects.[39] Three other states whose distinctive characteristics deserve attention were also studied (Mississippi, Texas, and Washington).

Factors guiding case selection included (see Tables 1 and 2 for details):

- Data reporting structure: either centralized or decentralized submission of recipient reports to the Recovery Board
- Quality of state Recovery Act spending websites as determined by an independent assessment by Good Jobs First, a national policy advocacy group[40]
- Engagement of potential users for Recovery Act data, including interest from policy advocacy and media organizations as factors likely to propel accountability of spending
- Variation by amount and speed of Recovery Act expenditures, state population, political party control, and geographic region

User engagement was determined according to the number of advocacy groups working on Recovery Act accountability in a given state and by assessing their level of sustained effort around the available information. This study focuses on a subset of advocacy groups identified by the States for a Transparent and Accountable Recovery (STAR) Coalition as working to "ensure that the implementation of the American Recovery and Reinvestment Act of 2009 is transparent, accountable, fair and effective."[41] Many of these groups were concerned that Recovery Act spending address the economic needs of disadvantaged communities.

The level of media interest in each state was tracked by determining the extent to which local media organizations dedicated reporting resources to following Recovery Act expenditures and their impacts on local communities. Advocacy and media factors combined to produce an assessment of user strength as strong, moderate, or weak.

The analysis for each case is based on interviews with public officials, journalists, and advocates at state and national levels. Other sources include press reports, field visits to Recovery Act project sites, and evaluations of state websites by independent groups and the author. The U.S. Government Accountability Office (GAO) tracked Recovery Act implementation in 16 states, four of which overlap with this study: Colorado, Massachusetts, Mississippi, and Texas.[42] The GAO reports serve as additional background to understand state-level implementation of Recovery Act spending disclosure.

Case Studies of States Regarded as Highly Successful

Colorado

Colorado began its implementation of the Recovery Act under former Governor Bill Ritter (D), who established the Colorado Economic Recovery Accountability Board (CERAB) to support his office's economic recovery team in overseeing the implementation and monitoring of recovery expenditures. CERAB set up the Colorado state recovery website and held public meetings

39. Author interviews with federal officials and national-level policy advocates.
40. Good Jobs First produced two assessments of state-level Recovery websites; the first, *Show Us the Stimulus: An Evaluation of State Government Recovery Act Websites* in July 2009 and the second, *Show Us the Stimulus (Again),* in January 2010.
41. See http://www.accountablerecovery.org/. This website features a "State Accountability Overviews" page with links to watchdog groups in each state. http://www.accountablerecovery.org/state_overviews.
42. The GAO reviewed state Recovery Act spending in 16 states and the District of Columbia. See "Following the Money: GAO's Oversight of the Recovery Act" at http://www.gao.gov/recovery/bimonthly/states/

reviewing activities by state agencies. The GAO also tracked the state's efforts through bimonthly audits. Colorado's greatest challenge in reporting expenditures was its data intake system, part of which had been implemented in the 1980s and had not been updated since 1999. The state modified existing technology systems to collect and submit Recovery Act recipient reports and generate data for the recovery website. A new governor, John Hickenlooper (D), took office in 2011 when many of the allocated funds had been expended in the state. Efforts to maintain the state website then diminished, with a last data update in June 2011.

Stakeholders were strongly motivated to work with Recovery Act information in Colorado. When data first became available to the public in late 2009, the *Denver Post* deployed a two-person team to track Recovery Act spending. One of these journalists was a data reporter who focused solely on analyzing spending data. On the advocacy side, a broad coalition of groups established the ARRA (American Recovery and Reinvestment Act) Alliance to share information on implementation of the Act in Colorado and to interact with CERAB. The coalition was led by the Colorado Fiscal Policy Institute, which hired a policy analyst to capture the impact of the Recovery Act on employment, localities, and the social safety net, among other issues.

Maryland

Maryland based its Recovery Act reporting and transparency efforts on the existing StateStat process, refashioning it as RecoveryStat.[43] Governor O'Malley's (D) director of StateStat, Beth Blauer, also served as the state's Recovery coordinator. In its approach to complying with the Recovery Act's disclosure requirements, Maryland merged performance management with transparency. O'Malley's team primarily focused on the pace and quality of expenditures. To that end, the RecoveryStat team reviewed spending data throughout a reporting period. A few weeks before a reporting-quarter deadline, the governor also convened all cabinet secretaries in face-to-face RecoveryStat meetings to monitor and troubleshoot implementation by using the reporting data to guide discussions. This focus on performance was evident in the state's website. It prominently displayed two gauges tracking the percent of funds expended and the percent of contracts and grants received by minority and disadvantaged businesses. The RecoveryStat team was also responsible for building a data mapping tool with ESRI, the GIS software giant, that many other states adopted to geospatially display Recovery Act spending data.

Like Colorado, Maryland stakeholder interest in Recovery Act information was strong. Advocacy groups organized themselves into a coalition called Recovery Watch Maryland to track Recovery Act spending. The Maryland Budget and Tax Policy Institute led this effort and contracted with a dedicated researcher to work with Recovery Act data. A few media outlets reported on the effect of the Recovery Act on Maryland's economy, mostly focusing on Baltimore, and the local public radio station, WYPR, produced a nine-month series called *Show Me the Stimulus*.[44]

Massachusetts

Massachusetts had little experience with electronic reporting and disclosure of federal contracts, grants, and loans prior to the state's implementation of the Recovery Act's transparency provisions. Governor Patrick (D) established the Massachusetts Recovery and Reinvestment Office (MRRO) to manage spending and fulfill the state's reporting responsibilities to the federal government. The MRRO built two websites to carry out its work: an internal, administrative site

43. For more on StateStat see Robert Behn, "Designing PerformanceStat" in *Public Performance & Management Review* (2008) and Tina Rosenberg's blog post in *The New York Times*, "Armed with Data, Fighting More than Crime," May 2, 2012.
44. WYPR's *Show Me the Stimulus* is archived at http://showmethestimulus.wordpress.com/

for performance management and a public-facing site for transparency purposes. The data collected from recipients of Recovery Act funds gave the state a view of how federal funds flowed through state agencies for the first time. The director of MRRO, Jeffrey Simon, capitalized on this new tool for managing Recovery Act investments by generating a weekly priorities list for the governor that included the top five and bottom five projects in terms of spending rate, and monitored any grant that was not yet 15 percent spent or 70 percent committed. The MRROs management strategy for the Recovery Act also involved weekly site visits to projects benefiting from the Act's funds.

Stakeholder interest in Recovery Act data in Massachusetts proved moderate, less than in Maryland and Colorado. While a few advocacy groups expressed interest in guiding Recovery Act spending early on, no sustained coalition tracked the outlay of funds as the Recovery Act progressed in implementation. Nevertheless, input from Common Cause and the Massachusetts Budget and Policy Center helped shape the functionality of the state's Recovery Act website. The major newspapers in Massachusetts did not dedicate reporters to a Recovery Act beat, although smaller newspapers reported on local expenditures.

Case Studies of States Having Distinctive Characteristics

Mississippi

Mississippi's effort to track Recovery Act spending involved the state auditor, the Department of Finance and Administration (DFA), and Governor Haley Barbour's (R) office. His Director of Federal Policy served as the state's Recovery Act lead. The DFA added special accounting codes to the existing Statewide Automated Accounting System to separately track the receipt, obligation, and expenditure of Recovery Act funds by state agencies. Concurrently, DFA enhanced its administrative data warehouse to collect Recovery Act contract documents, grant and sub-grant award documents, and all recipient reporting data not captured in the Statewide Accounting System, including funds for local governments, regional agencies, and universities in the state. Data collected in this system flowed directly to the governor's state recovery website. Meanwhile, the state auditor's office focused its efforts on enforcing compliance with reporting guidance by entities outside the purview of state agencies.

In Mississippi, stakeholder use of Recovery Act data was moderate, with the media as the main user of spending data. One reporter each at the *Mississippi Business Journal* (Jackson), the *Northeast Daily Journal* (Tupelo), and the *Associated Press* tracked recovery spending in varying levels of detail over nearly the entire course of Recovery Act implementation (from 2009 to 2011).[45]

While the advocacy community worked together to ensure that funding would target low-income populations, it acknowledged the challenge to building coalitions with other nonprofits in the state as a barrier to engaging with Recovery Act data for accountability purposes.

Texas

As a decentralized-reporting state, Texas involved many stakeholders in its implementation of the Recovery Act: the state legislature, the office of the governor, the state auditor, the state comptroller of public accounts, and the state agencies. The Texas state legislature set the budget in biennial sessions and had just begun to convene in January 2009 when the Recovery Act was signed into law. State Representative Jim Dunnam (D-Waco) chaired the Select Committee on Federal Economic Stabilization Funding to oversee Recovery Act spending in

45. As an example, see reporting by Wally Northway for the *Mississippi Business Journal.*

the state, holding 26 public hearings and posting updates on Recovery Act implementation in Texas on a dedicated website. However, this Select Committee only lasted until December 2010 when Rep. Dunnam lost his reelection bid, at which point the committee's website expired as well.[46] Governor Perry (R), who had publicly criticized federal expenditures under the Recovery Act, nevertheless convened a Stimulus Working Group on a weekly basis, comprised of representatives from major state agencies, to ensure statewide communication of Recovery Act expenditures. The state auditor monitored the quality of recipient reports and investigated tips on fraud, waste, and abuse.

The state comptroller's main task was providing a transparency portal for the Recovery Act. The comptroller built the Texas recovery website as a subsection of the state's existing transparency website established in 2007.[47] Since Recovery Act funding flowed in a decentralized manner through existing federal-state agency partnerships and programs, the comptroller's office added a unique funding code to identify Recovery Act money within its fiscal tracking systems. Together with the office of the governor, the comptroller solicited weekly reports from state agencies on Recovery Act awards and allocations, which were then posted on the comptroller's recovery website. This office also maintained an inventory of all Recovery Act awards in Texas subject to recipient reporting requirements, and verified that these reports were submitted completely and accurately.

Texas had perhaps the strongest media-based users of Recovery Act data of any of the states included in this study. The state comptroller's website featured a section on news stories about the Recovery Act in Texas. As of June 2011, it listed over 400 articles from state and local media outlets. The state's archive of articles did not include the extensive reporting done outside traditional newsrooms by an investigative journalist for *Texas Watchdog*. Recovery for Texas, a coalition of 10 public interest advocacy groups led by Texas Impact, also tracked the Recovery Act closely by producing reports pressuring state government to maximize impact from federal expenditures.

Washington

Washington State embedded Recovery Act reporting into its existing Government Management Accountability & Performance (GMAP) effort. Like Maryland's StateStat, GMAP was a long-standing performance management system: the governor reviewed agency goals against performance data on a quarterly basis.

The Recovery Act reporting requirements added new dimensions to the GMAP program, which began tracking Recovery Act funding outlays and job creation. In this decentralized-reporting state, recipients of Recovery Act funds reported directly to the federal government but they also simultaneously submitted those reports to Governor Gregoire's (D) accountability and performance office. This office monitored whether state agencies met their reporting deadlines to the Recovery Board and ensured that the numbers reported to the state matched those reported to the federal government. The management of Recovery Act spending in Washington became embedded in the governor's existing priority areas for GMAP, including health care, public safety, transportation, and education. As part of the GMAP process, the governor convened public accountability forums with lead public officials for each of these portfolios. These forums were broadcast on public access television and accessible via YouTube.

46. Author's interview with Bee Moorhead and Morgan Hargrave. Also see Bee Moorhead's report for the advocacy group Texas Impact, "It Ain't Over Till it's Over: The Texas Legislature and the American Reinvestment and Recovery Act," March 23, 2011 and Andrew Seifter's post "New Report Details How Lone Star Legislators Did Away With Lone Stimulus Committee" on *Clawback: Good Jobs First* blog, April 5, 2011.

47. Tracy Loew, "States Put Spending Details Online; Public can Check Where their Taxes Go" in *USA Today,* February 23, 2009.

Three accountability forums between July 2009 and June 2010 focused exclusively on Recovery Act implementation.[48]

Stakeholder use of the Washington State Recovery Act data was more limited than in the other states examined. Articles in the state's major newspaper, the *Seattle Times*, focused mostly on the nationwide impacts of Recovery Act spending. Advocacy groups also did not take up the task of tracking dollars from the federal government to the state, though a few noted the convenience of the state's transparency website as a quick source for fiscal data to support their policy positions.

48. For example, the public can view a June 16, 2010 meeting titled "Governor Gregoire's Accountability Forum on the Federal Recovery Act" on YouTube. http://www.youtube.com/watch?v=dtAqGG7k6I8&lr=1

Part III: Findings

This discussion of findings is organized by answers to two main questions:

- What did Recovery Act transparency provisions accomplish at the state level?
- Who used Recovery Act information at the state level, and what did they do with it?

Based on our review of six states, we found that the Recovery Act transparency provisions resulted in the following:

- **Finding One:** State compliance with federal spending disclosure requirements was very high. States exceeded Recovery Act transparency requirements in building comprehensive online portals for the data.
- **Finding Two:** Transparency requirements served as a deterrent which contributed to low rates of fraud, waste, and abuse of funds.
- **Finding Three:** The quality and timeliness of transparency data improved over the course of implementation. There was, however, a lack of consensus on performance metrics, particularly with respect to job creation.
- **Finding Four:** Spending transparency became institutionalized in some states and at the federal level.

We also found that three key information user groups at the state level engaged with Recovery Act data differently:

- **Finding Five:** State officials were principal users of Recovery Act data as it allowed them to manage and track federal spending in near-real time.
- **Finding Six:** There was high, but uneven, use of data by journalists and advocates due to uneven data quality and lack of context for understanding the impacts of spending.
- **Finding Seven:** Individual citizens found a mismatch between the kinds of data provided by Recovery Act websites and their main interest: finding a job supported by the Recovery Act or applying for a grant or contract funded by the Recovery Act.

These findings suggest that greater transparency in federal spending can help further program goals and minimize misuse of funds. Transparency does not always do this, however. Transparency systems flounder if they are applied to situations where there is a lack of good data, communication barriers exist, or there is simply a lack of interest in new information. These factors can frustrate good intentions to improve government performance.

Yet, Recovery Act spending transparency experience appears to reflect several preconditions for improved government performance. The preconditions needed for successful implementation of transparency policies have been identified through prior research by Fung, Graham, and Weil.[49]

49. Archon Fung et al., *Full Disclosure: the Perils and Promise of Transparency,* 2007. pp. 174–175.

Precondition One: An information gap exists that can be bridged by better public data.
Outside of the Recovery Act, federal grant spending had been relatively opaque as funds flowed through states and localities. Our analysis of Recovery Act transparency suggests that this information gap can be filled by data reported directly by government officials and grant recipients.

Precondition Two: There is a substantial demand for new data.
Recovery Act transparency generated immediate interest from a wide variety of users—public officials themselves, journalists, advocacy groups, and job-seekers, for example.

Precondition Three: Communication is practical.
In leveraging advances in information technologies to disclose data, both government officials and media and advocacy organizations demonstrated the capacity to translate complex data sets into user-friendly maps, charts, and narratives.

Precondition Four: Public spending can be improved by greater transparency.
While the Recovery Act was limited in nature, making it difficult to draw definitive conclusions, its greater transparency and deliberate oversight and prevention efforts may have contributed to a low level of fraud and to efforts by federal and state officials to improve the management of spending. The Act was a top-down, short-term initiative with relatively few leverage points for advocacy groups to influence program spending. Nevertheless, many advocates echoed the sentiments of Ed Sivak of Mississippi's Economic Policy Center: the Recovery Act transparency experience was critical to "setting the stage for increased transparency enhancements in other aspects of state governance and set the bar for future expectation for government spending," producing "information online about state contracting and budgets that wasn't there before."

What Did Recovery Act Provisions for Transparency Accomplish at the State Level?

The three goals of the Recovery Act's transparency provisions examined in this study are:

- **Goal One:** Make the uses of all funds transparent to the public by presenting clear, accurate, and up-to-date spending information online.
- **Goal Two:** Mitigate fraud, waste, and abuse.
- **Goal Three:** Ensure that "funds are awarded and distributed in a prompt, fair, and reasonable manner."[50]

Finding One: State compliance with federal spending disclosure requirements was very high. States exceeded Recovery Act transparency requirements in building comprehensive online portals for the data.

In implementing the Recovery Act's ambitious disclosure system, the OMB and the Recovery Board's intentions were to "deliver a website that allows citizens to hold the government accountable for every dollar spent."[51] We found a high level of sustained compliance with the Recovery Act's quarterly reporting requirements from recipients of contracts, grants, and loans. The advanced digital technologies available for organizing, mapping, and visualizing data from recipient reports, in turn, presented a remarkable window into federal expenditures. Online

50. OMB Memorandum "Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009" (M-09-10) by Peter Orszag, February 18, 2009.
51. Ibid.

access to reporting data allowed the public to follow the money as it flowed from the federal government to the states and down to communities in a comprehensive and timely way. States built their own websites, matching the content, if not the format, of Recovery.gov since the information in both the federal and state systems consisted of the same data fields. The Recovery Act did not require them to do this, but they were supported with implementation funding.

Most state websites investigated were user-friendly, designed primarily with citizens in mind. These sites, for example, invited visitors to search for projects in their community by zip code (Maryland, Massachusetts, and Washington), city (Mississippi) and county (Texas), and featured compelling narrative accounts of how recovery investments were making a tangible impact on people's lives (Colorado, Massachusetts, and Texas). To varying degrees, these websites also presented professional users like journalists and advocates with downloadable data files allowing for more sophisticated analyses of Recovery Act spending.

Finding Two: Transparency requirements served as a deterrent which contributed to low rates of fraud, waste, and abuse of funds.

When a new transparency system is put into place, sometimes those responsible for disclosing information about their actions will improve their practices in anticipation of the disclosure.[52] In the case of the Recovery Act, transparency may have driven a process of anticipatory deterrence in funding recipients.

The pressure to "get this right" came down strongly from the federal government to the states. All governors or mayors were required to provide certifications to the federal agencies promising that they would not misappropriate funds. Vice President Joe Biden set a stern tone on enforcing accountability at a White House meeting of all state-level recovery heads in March 2009: do not fund prohibited items with stimulus funds. President Barack Obama also made an appearance at this meeting to inspire recovery heads by stating "You've got a wonderful mission. Seize this opportunity to put your shoulders to the wheel of history."[53] Massachusetts' Jeffrey Simon noted that this meeting was critical in setting the states' attitudes for program implementation. "They gave a clear, unambiguous message to us, and to governors and cabinet secretaries, that what we were doing was very important." Another observer, a former policy advisor to both New Jersey Governors Corzine (D) and Christie (R), noted, "the Feds put the fear of God into us." He recalled tracking down individual recipients of even the most insignificant funds to make sure the state could account for the information provided to the Recovery Board. To address those areas of spending that had the potential to be problematic in terms of accountability, state governments also realigned their priorities, performed risk analyses of fraud, carried out fraud prevention workshops for staff, and boosted their internal auditing capacities.[54]

The Recovery Board also enhanced its oversight of federal funds through two innovations: the Recovery Operations Center and the Wall of Shame. The Recovery Operations Center was a control room with a wall of computer screens situated among the Recovery Board's otherwise nondescript offices in downtown Washington D.C. Inside, analysts used sophisticated predictive modeling and risk analysis techniques on large sets of data culled from recipient reports and other government databases to search for the likelihood of fraud by Recovery Act-funded projects. "The idea: shift the focus from detecting fraud to preventing and interrupting fraud."[55]

52. Archon Fung et al., *Full Disclosure: the Perils and Promise of Transparency,* 2007. p. 66
53. Quoted in Vermont's (former) recovery czar Tom Evslin's behind-the-scenes account of this meeting: http://recovery.vermont.gov/blog/stimulus-czar-summit.
54. The GAO reports detail this process for Mississippi. Also from author interviews with Beth Blauer of Maryland's RecoveryStat office and Jeffrey Simon of Massachusetts' Recovery and Reinvestment Office.
55. Earl Devaney's post for the *Chairman's Corner* blog on Recovery.gov. December 14, 2011. http://www.recovery.gov/News/chairman/Pages/14Dec2011.aspx

The Recovery Board's second transparency-related innovation was the Wall of Shame. After each reporting quarter, the Recovery Board posted a list on its website identifying the names of recipients that had not complied with the Recovery Act's reporting requirements.[56] The lists "named and shamed," and non-reporting entities were organized on the list by state, presumably so public officials could then track them down closer to home. The Recovery Board Chairman testified to Congress in June 2011 that "… for the first quarter of 2011, the number of two-time non-reporters [was] down to 17, and the number of three-time (or more) non-reporters is down to seven. This is out of more than 201,000 reported awards for the quarter." Chairman Devaney attributed the low rates of fraud, waste, and abuse (and non-reporting) "… to the transparency embedded in the Recovery Act."[57]

Counter to the expectations of the Recovery Board, we did not find evidence in the states we studied that individual citizens participated as "Citizen IGs" in identifying fraud, waste, and abuse in significant numbers. State officials indicated that the public watchdog role of their Recovery Act transparency websites did not perform as initially expected. Despite the Report Fraud, Waste and Abuse buttons and telephone hotlines, states received few citizen reports of misspent funds and even fewer legitimate claims.

At the federal level, data through March 2012 indicated that the Recovery Board and federal agency IGs received 8,363 complaints of potential wrongdoing associated with recovery funds, 1,901 of which triggered investigations.[58] Also, by the end of 2011, there were 298 criminal convictions and $7.2 million in lost funds out of over $200 billion in federal contracts, grants, and loans received by the states.[59] The proportion of funding recipients who have been criminally convicted is just 0.001 percent of the 276,000 recipient reports filed to date with the Recovery Board. However, the true meaning of these figures is difficult to determine. The Recovery Board did not identify the sources of these complaints—whether from the general public, recovery recipients, or government whistleblowers—or the details of open investigations. Further, it was not possible to discern whether the reported amount of lost funds was a result of criminal behavior uncovered by the Recovery Board and the IGs or whether it was due to underreporting of expenditures by recipients.

While we cannot definitively establish that transparency-related, anticipatory mechanisms resulted in low rates of fraud in the Recovery Act program, it appears that the internal institutional effort to combine predictive modeling, risk analysis, "shaming," and anticipatory deterrence may have worked to drive accountability and keep fraud in check.

Finding Three: The quality and timeliness of transparency data improved over the course of implementation. There was, however, a lack of consensus on performance metrics, particularly with respect to job creation.

The Recovery Act transparency experience provides some clues as to the potential sustainability of broader disclosure systems for federal spending. As defined by Fung, Graham, and Weil, a sustainable disclosure system improves over the course of implementation in three ways:[60]

- The scope of information collected expands relative to the scope of the problem addressed.
- The accuracy and quality of information increases.

56. Recovery Accountability and Transparency Board, "Wall of Shame." http://www.recovery.gov/Accountability/Pages/noncompliers.aspx.
57. "Testimony of the Honorable Earl E. Devaney Chairman, Recovery Accountability and Transparency Board before the Committee on Oversight and Government Reform," House Committee on Oversight and Government Reform. June 14, 2011. p. 5.
58. Recovery Accountability and Transparency Board, "Oversight Actions." http://www.recovery.gov/Accountability/Pages/investigations.aspx.
59. Earl Devaney's post for the *Chairman's Corner* blog on Recovery.gov. December 14, 2011. http://www.recovery.gov/News/chairman/Pages/14Dec2011.aspx
60. Archon Fung et al., *Full Disclosure: the Perils and Promise of Transparency,* 2007. Chapter 5.

- The use of information by public users and government officials increases.

Recovery Act transparency improved on all three dimensions to varying degrees. On the first dimension, involving the original reporting requirements of FFATA, Recovery Act transparency broadened the scope of information collected to include reporting by sub-recipients of federal funds, one tier below prime recipients. This approach allowed users of the information to track the chain of recipients further than previously possible. Demonstrating that this level of reporting detail was possible, Recovery Act transparency in turn influenced this modification in the reporting requirements of FFATA.

On the second dimension, Recovery Act disclosure requirements notably improved the accuracy and quality of information. This is attributable to a concerted and collaborative effort among reporting entities, state officials, and federal agencies, along with training and adjustments led by the Recovery Board and the OMB. During the first year of implementation, reporting was a fluid and evolving situation. OMB issued 10 different technical and clarifying guidance documents in as many months (February 18–December 18, 2009).[61] The iterative process of improving reported data and motivating efficient and effective expenditures required coordination both laterally (within states) and vertically (with the federal government).

Federal and state officials interviewed as part of this research study concurred that by the third reporting period in 2010, data intake systems were running smoothly and recipients had become more proficient in their reporting routines. Journalists and advocates who used the data also contributed to improvements in Recovery Act disclosure by pointing out data errors and inconsistent analytic results. In working with complex and sometimes unreliable spending data, they reached out to public officials to flag issues and raise questions. This iterative back-and-forth between interested groups and public officials helped to refine the reporting system, improve the data, and, further down the impact chain, benefit the overall management of federal funds.

On the third dimension of sustainability, where an increased use of information might be expected, the findings show consistent use of Recovery Act data by government officials but a decline in interest from public users after the first year of Recovery Act implementation. It is unclear whether the short-term nature of the Recovery Act discouraged sustained engagement with the available information or whether this decline in public use points to a more general challenge for federal spending transparency.

Finding Four: Spending transparency became institutionalized in some states and at the federal level.

The layered information systems built in support of the Recovery Act serve as a "proof of concept" for the implementation of recipient reporting of all federal contracts, grants, and loans as originally envisioned by FFATA in 2006.[62] Public officials at the federal level considered the Recovery Act transparency experience a remarkable success. As a result, it has become a model for federal spending disclosure government-wide. The Obama administration and Congress alike have proposed applying recovery-style transparency to track all federal contracts, grants, and loans. In June 2011, the President named a Government Accountability and Transparency Board to provide recommendations on establishing a centralized system for

61. For a full list of OMB Memoranda concerning the Recovery Act, see the White House's Recovery Act website http://www.whitehouse.gov/omb/recovery_default.
62. FFATA went into effect in October 2010. According to Craig Jennings of OMB Watch, the federal government used the transparency requirements in the Recovery Act as a "test bed for transparency" for FFATA.

collecting and monitoring spending by federal agencies.[63] On the same day, Representative Darrell Issa (R-California) introduced the Digital Accountability and Transparency Act (DATA) of 2011 to establish an independent body for tracking all federal spending on a single website modeled on the Recovery Board and Recovery.gov.[64] At the time of this report (Summer 2012), it appears that the federal government is moving forward with bipartisan support to institute recipient reporting and transparency requirements for many contracts, grants, and loans. On April 25, 2012, the full House of Representatives approved the DATA legislation (HR 2146) by a voice vote.[65] The expectation is that Senator Mark Warner (D-Virginia) will reintroduce the DATA legislation in the Senate during the second half of 2012.

Institutionalization at the State Level

At the state level, there is disparity in the extent to which Recovery Act transparency efforts have been sustained by the states in the three years since implementation of the Recovery Act began. Some states, like Massachusetts, have embedded the recovery experience into broader, statewide fiscal transparency efforts. A few states, most notably California, have rolled back transparency by letting their Recovery Act websites go dark.

When we began this study, conversations with public officials, journalists, and advocates alike revealed a widespread belief that the transparency achievements introduced by the Recovery Act could not be dismantled. Once the public had access to information, citizens would expect it to be available in perpetuity, making it difficult for policy-makers to roll back disclosure efforts. As Recovery Act transparency has matured in the three years since it began in 2009, a more complicated pattern has emerged. Some states have consolidated their transparency efforts while others have abandoned their nascent recovery websites. After the midterm elections of 2010, 26 new state governors took office in early 2011, with 15 states changing political parties. Some recovery websites survived the transition intact, including Iowa and New Mexico, while others disappeared, like California, or were stripped down to a list of governor's certification letters, like Florida, Kansas, and Ohio.[66]

Yet, overall, a yearly assessment of statewide fiscal transparency websites carried out by researchers at the United States Public Interest Group (U.S. PIRG) shows that most states are improving the quality of their disclosure over time.[67] The U.S. PIRG study measures state transparency websites according to the breadth of information provided (all government expenditures, including contracts, spending, subsidies, and taxes) and the quality of their search facilities, including the ability to query, sort, and download data.[68] Appendix I compares the difference in fiscal transparency website scores (out of 100) between U.S. PIRG's assessments

63. Erik Wasson's post "White House Announces Spending Transparency Board," The Hill's *On the Money* blog, June 13, 2011. Also see Mike Maciag, "Proposal Calls for Major Shift in Federal Spending Transparency," Governing Magazine's *By the Numbers* blog, December 16, 2011.

64. Gautham Nagesh post "Issa Bill would Create Single Website for Government Spending Data," on the *Hillicon Valley* blog, June 13, 2011. http://thehill.com/blogs/hillicon-valley/technology/166043-issa-bill-would-create-single-website-for-government-spending-data.

65. See the Associated Press article "House Backs Bill Limiting Government Spending on Conferences, Creating More Transparency." April 25, 2012.

66. Florida's recovery site went from http://www.flarecovery.com to http://www.flgov.com/recovery_reports/, where the public only has access to former Governor Crist's certification letters to the federal government until October 2010. In Kansas, the former site at https://governor.ks.gov/recovery shows an error message, while Governor Brownback's state website offers FAQs and state certifications at https://governor.ks.gov/road-map/arra. The Ohio recovery website, http://ohio.gov/admin/recovery.htm, underwent maintenance for over a week in March 2011 and reemerged as a certifications-only site. The author first noted these transparency rollbacks on March 29, 2011 on a Progressive States Network call, "Accountability and Recovery. Following the Money." http://www.progressivestates.org/node/27082

67. U.S. PIRG "Following the Money 2012" report.

68. U.S. PIRG's methodology awarded points to state websites according to whether they exhibited certain qualities like detailed expenditure information (30 points), including individual payments, which should be searchable by vendor (eight points) and keyword or activity (eight points). Ten points are awarded to websites that include grants and awardee-specific economic development incentives. Other examples of scoring criteria include whether the information can be downloaded (three points) and if Recovery Act funding is disclosed (two points).

in 2010 and 2012. This figure actually understates the extent to which state level fiscal transparency improved, as U.S. PIRG's evaluation criteria grew more stringent between 2010 and 2012.

Based on U.S. PIRG's analysis, the quality of state transparency improved in 33 states, stayed more or less the same in six states (with scores increasing or decreasing by one point), and declined in 11 states, including those that dismantled their recovery websites. Colorado is one of the states that declined in overall state fiscal transparency over the past two years. Colorado had a gubernatorial transition in 2011, although it did not involve a change in party control. Among the other case study states, Maryland, Texas, and Mississippi made positive, but below-average gains in their scores, while Massachusetts and Washington showed dramatic improvement.

To investigate those factors that may be driving differences in the adoption of fiscal transparency in states, we performed a preliminary analysis exploring the possible influence of transparency on rates of Recovery Act expenditures and how statewide transparency scores evolved during the years of Recovery Act implementation (for all figures, see Appendix II). In comparing the mean percent of funds spent, we found a difference between decentralized and centralized reporting states early on: centralized states spent 60 percent of allocated funds by the end of 2009, compared with 46 percnet in decentralized states. This difference completely disappears by the end of 2010. None of the other potential factors explored here—population size, political transitions, or political party control—have any effect on rates of recovery expenditures. It seems that the rate of Recovery Act spending during a period of economic crisis is independent of the state characteristics that we examined or the structure of recipient reporting.

Statewide transparency improved a great deal during the Recovery Act years, as measured by U.S. PIRG's assessments in 2010 and 2012. Mean scores (on a scale of 100) improved from an average of 47 across the 50 states to a score of 69. The mean scores increased particularly in states with centralized reporting, with large populations, and where the same governor stayed in office throughout the Recovery Act implementation period. (For more detailed information concerning difference in state transparency website scores by U.S. PIRG, see Appendix I.)

Massachusetts is an example of state-level transparency improvement as a consequence of Recovery Act reporting. In 2011, Massachusetts applied lessons from managing and disclosing recovery funds to establish the Open Checkbook statewide fiscal transparency portal.[69] The goals of this effort were to achieve:

> More informed and evidence-based decision making; real-time awareness, greater ability to monitor, manage, and fix problems; more meaningful public engagement; and increased clarity about performance tradeoffs and resource allocations. In addition, the public is demanding and the federal government is mandating more transparency and accountability.[70]

According to state officials, Massachusetts pressed for spending transparency both to improve its management of state resources and to earn the public's trust. In assessments of state budget transparency websites by U.S. PIRG, the score for Massachusetts jumped from zero in 2010—indicating the absence of a budget transparency website—to 92, ranked fifth in the country for 2012.

69. Open Checkbook is accessible through the Mass.gov portal http://www.mass.gov/portal/.
70. Governor Deval Patrick, "Accountability and Transparency: FY2012 House 1 Budget Recommendation," 2011. http://www.mass.gov/bb/h1/fy12h1/exec_12/hbudbrief6.htm.

A relevant consideration in understanding the sustainability of transparency systems is the value of engaging public users (journalists, advocates, and individual citizens) with disclosed data. The dismantling of Florida's Recovery Act website provides an example. When the advocacy group Good Jobs First inquired about the dismantling of Florida's Recovery Act website, Governor Scott's spokesman gave three reasons: the high cost of website maintenance given low visitor numbers, the governor's opposition to the Recovery Act, and the rationale that the recovery website wasn't really "open government" but rather "hand-picked data prepackaged and designed to sell [the] stimulus program."[71] Florida's response highlights open questions about whether use metrics for transparency websites are valid indicators of information's value, whether transparency is a nonpartisan endeavor, and whether the credibility of government disclosure websites at the state and federal levels affects transparency efforts.

Institutionalization at the Federal Level

Spending transparency systems are becoming embedded at the federal government level—through the Government Accountability and Transparency Board and the proposed DATA legislation. A White House intern who worked on Recovery Act implementation in 2010 observed, "The untold story of the stimulus is its transformation in governance and accountability."[72] Transparency for accountability in Recovery Act spending appears to have had a more powerful internal effect on governance—both for federal agencies and states—and a less powerful external effect in communicating the impact of investments to the general public.

The Recovery Advisory Board addressed the credibility of transparency at its first public hearing in August 2010. Board members acknowledged that recovery reporting entities were struggling to present funding information in a way that communicated meaningfully to people and documented expenditures in a clear and accessible manner. Those attending the hearing debated whether narratives of how federal investments impacted individual lives were appropriate to translating complex data into clear and accessible information for users, as Massachusetts, Colorado, and Washington had done, or whether this approach compromised credibility and objectivity by "editorializing the stimulus."[73] Jeffrey Simon, Director of the Massachusetts Recovery and Reinvestment Office, stressed: "the challenge of turning data into information … is compounded by the ambiguity of who the audience is for the information."[74] Simon's office opted to highlight the impact of Recovery Act funding on people's lives as part of the broader civic engagement objective for the website.

The renowned information designer and Recovery Advisory Board member, Edward Tufte, objected to this practice, instead advocating for a "just the facts" approach that documents funding activity without "pitching" and "marketing" as a way to convey accountability more convincingly. This highlights the importance of anticipating who the public users of information will be and what kinds of information will engage them effectively. This does not necessarily imply that the government, as the discloser of federal expenditures, has to be the interpreter of all data for all audiences.

Governments may consider incorporating the role played by public groups like advocates and journalists to propagate transparency by reaching interested citizens and contributing to mid-course corrections in adjusting transparency systems. Commenting on Recovery.gov, Jerry Brito of

71. Quoted in Andrew Seifter, "Governors React to Questions about Stripped Down Recovery Act Websites," *Clawback: A Blog of Good Jobs First,* May 3, 2011. http://clawback.org/2011/05/03/governors-react-to-questions-about-stripped-down-recovery-act-websites/

72. Interview with Patrick Corrigan, October 4, 2010.

73. A comment by Edward Tufte during the Recovery Accountability and Transparency Board's Public Hearing held August 5, 2010 in Cambridge, Massachusetts captured in author's notes. Official minutes are titled "Recovery Independent Advisory Panel, *Public Meeting Summary."*

74. From author's notes of Recovery Accountability and Transparency Board's Public Hearing held August 5, 2010 in Cambridge, Massachusetts

Stimuluswatch.org told *The New York Times*: "What we want is the raw data. We don't need a beautiful site."[75] Still, the Recovery Act's mandate to post data on a "user-friendly, public-facing website," combined with the depth and scope of Recovery Act spending information, likely accounts for states' efforts to demystify the Recovery Act for the average citizen. The Texas recovery website even includes a section called "On the Money: Texas Stimulus in Plain English."

Who Used Recovery Act Information and What Did They Do With It?

How did the information disclosed by the requirements of the Recovery Act become embedded in the activities of its users to achieve public accountability goals? Findings are presented for three sets of information users: public officials, journalists and advocacy groups, and individual citizens.

Finding Five: State officials were the principal users of Recovery Act data, as it allowed them to manage and track federal spending in near-real time.

Recovery Act transparency generated a strong *internal government audience* for spending information. Because the Recovery Act's transparency system excelled at tracking spending, public-sector managers responsible for implementation exploited this unprecedented ability to follow money through their states in near-real time. State officials had strong incentives to track the rate of expenditures. Funds were meant to be deployed quickly and effectively, and came with a use-it-or-lose-it conditionality. If the data revealed potential barriers in certain pipelines of funds, managers could adjust and redeploy funding for more rapid and impactful outcomes.

The states that capitalized on recipient reports for data-driven, internal management purposes were Maryland, Washington, and Massachusetts. Officials in both Maryland and Washington had a track record of working with data-driven performance management processes before the Recovery Act was enacted. But the federal requirements for Recovery Act reporting were more stringent and scaled the levels of accountability further down than any prior experience. Recovery reporting therefore provided states with a higher level of detail than the performance data they already collected, particularly with regard to expenditures and contracts. As Pam Pannkuk of Washington's Office of Accountability and Performance pointed out, "All agencies already had performance measures, but they weren't attached to dollars. [The Recovery Act] piece added funding, performance, and jobs. Normal government performance measures don't have those categories."[76]

Even in a decentralized reporting state like Washington, where the governor could only exercise control over how Recovery Act funds flowed through state agencies without a holistic perspective, Governor Gregoire (D) set the expectation that agency heads should be monitoring their expenditures to ensure no money got sent back to the federal government. When housing weatherization numbers dropped below the target needed to ensure future funding for the program, the governor took corrective action, assuring agency leadership that progress "was being monitored" by her office of accountability and performance. Implementation of the program then marked significant improvements.[77] Recovery Act spending therefore folded into and enhanced the state's existing government management accountability process.

75. Noam Cohen, "Take $787 Billion. Now Show Where it's Going," *The New York Times,* March 21, 2010. http://www.nytimes.com/2010/03/22/business/media/22link.html
76. Author interview with Pam Pannkuk, January 30, 2012.
77. Ibid.

Maryland, a centralized reporting state, took a sustained, high-touch approach to data-driven management for Recovery Act spending. Beth Blauer, the director of Maryland RecoveryStat, held meetings every two to four weeks with cabinet heads to track accomplishments, assess progress against specific milestones, and articulate plans for the expenditure of dollars in the pipeline. These were data-rich discussions: Blauer sat flanked by wall-sized screens as she dynamically displayed spreadsheets, graphs, and charts, and the state's online recovery map, to guide public officials in measuring performance against goals. A few weeks before each quarterly reporting period deadline, Governor O'Malley (D) convened all cabinet heads in the governor's reception room at the Maryland state capitol to carry out this same exercise in connecting programmatic goals with spending to ensure maximum state outcomes from federal funds.

Maryland agency staffers, however, reported that they faced a difficult learning curve in their efforts to comply with reporting requirements. To generate all the data used at the top to manage resources, staff balanced multiple responsibilities: in addition to reporting for StateStat, they had to report for RecoveryStat, respond to multiple audits, and still perform their normal jobs implementing programs. The Maryland Department of Transportation (MDOT) had to comply with multiple reporting systems on different timelines: Recovery and StateStat reporting happened on a quarterly basis, while reports for federal transportation grants were due monthly. MDOT tracked over 400 data elements on infrastructure spending alone.

Data quality was a challenge that hung over all reporting, with staffers conscious that because "the governor is supporting this, the data can't be wrong." They noted the importance of having "people you trust to manage the numbers and understand why they look the way they do." While staff considered these reporting systems a "painful way to do transparency," they nevertheless acknowledged that "certainly, we are doing a better job on [Recovery Act] spending and programs because of the reporting."[78] As an internal audience for transparency, agency leadership also benefited from using recovery data to show legislators projects in their districts as a strategy to avoid budget cuts.

In Massachusetts, the availability of Recovery Act data marked the first time Governor Deval Patrick (D) was able to monitor performance trends for federal contracts, grants, and loans across all state agencies. The Massachusetts Recovery and Reinvestment Office (MRRO), with no prior experience in spending transparency or performance management, improvised a weekly "monitoring priorities list" for Governor Patrick that included the top five and bottom five performing projects in the state. Jeffrey Simon, director of the MRRO, used this list both to make cabinet secretaries aware of their agencies' relative performance and to acknowledge good work.

With access to this information, and knowing that the governor also saw the list, cabinet secretaries were motivated to improve program implementation. As part of its internal assessment of expenditures, the MRRO also gathered demographic indicators for its recovery-funded projects at the behest of the governor. While these demographic data were not a part of the information provided on the state's Recovery Act website, the state commissioned academic analyses of these data to better understand the effectiveness of expenditures.[79] The full report was then published and posted on the Massachusetts recovery website.

A possibly tangential but nontrivial dynamic generated by the internal government users for recovery data was that it "linked people within the government together."[80] Chris Smith,

78. From author's conversation with leadership staff at Maryland's Department of Transportation and Department of Housing and Community Development. December 16, 2010.

79. David Sparks et al., *Demographic Analysis of Recovery Supported Jobs in Massachusetts, Quarters 1 and 2,* 2010.

80. From author's conversation with leadership staff at Maryland's Department of Transportation and Department of Housing and Community Development. December 16, 2010.

formerly the director of Colorado's economic recovery team, reflected on this effect of the Recovery Act's reporting requirements:

> The biggest take away for me as a state official on the Recovery Act … is the network of people established with state agencies. You are required to have a recovery contact in each state agency. I would be able to call on them with any questions, even when not related to the Recovery Act. You realize that it's all your job.
>
> You need to have that red phone list of who you're going to call. Even if my contact didn't have an answer, he would know whom to call. This quick dissemination of information through state bureaucracy was very helpful. We established the same network between states and with the federal government. It was a big shift to go from knowing the federal government as an entity to knowing individuals within agencies. This [was] a lasting change.[81]

Improved governance of federal funds is an important outcome of public officials' ability to track Recovery Act data in detail. Some state officials used data to manage the pace and quality of expenditures in a dynamic and agile way. Opening a window into how federal money flowed through state government presented an opportunity for leaders to monitor and motivate state agencies toward better performance. This effect was particularly strong in centralized reporting states. Likewise, assurances that recipient-reported data would be used for oversight by traditional IGs and state auditors, together with the Recovery Operations Center's computationally driven approach to risk assessment, appear to have minimized instances of fraud, waste, and abuse.

Finding Six: There was high, but uneven, use of data by media and advocacy groups due to uneven data quality and lack of context for understanding the impacts of spending.

An unparalleled advantage of digitally enabled transparency is that publicly available information is dynamic and inexpensive to reproduce and recombine with other data sources. Digital information, when available in a disaggregated, machine-readable, and non-proprietary format, allows sophisticated users to organize and manipulate data in multiple ways.[82] In the case of information about federal Recovery Act spending, those who appeared to have the analytic interest, capacity, and resources to handle such large and technical data files were rarely individuals. Instead, they tended to be organizational users like media and advocacy groups. Journalists and advocates added to the comprehensibility of the data, improved data quality by asking questions and troubleshooting problems, and at least in one case we found, achieved accountability victories in identifying instances of inadequate implementation of recovery projects.

National Organizations: Media and Advocacy Groups

At the national level, we identified five substantial efforts by organized groups to increase the comprehensibility of Recovery Act data to the general public and to journalists and advocates. These groups built their own online applications and search engines with the data available for download from Recovery.gov, and stepped into a translator role for Recovery Act data nationwide.[83] Three of these efforts were short-term ventures, winding down as Recovery Act implementation came to an end. But ProPublica's *Eye on the Stimulus* has maintained up-to-

81. Author interview with Chris Smith, former director, Colorado Economic Recovery Team. January 10, 2012.
82. Open Government Working Group, "Open Government Data Principles" (2007).
83. The Recovery Accountability and Transparency Board's "Download Center" provides access to all recipient and agency reported data on Recovery Act spending. http://www.recovery.gov/FAQ/Pages/DownloadCenter.aspx.

Table 3: Recovery Act Transparency Applications Built by National Organizations (As of June 2012)

Organization	Website	Audience	Last update
Mercatus Center (George Mason University)	Stimulus Watch	Individual citizens	September 2009
OMB Watch	Recovery Act Recipient Reports Database	Advocates, journalists	March 13, 2012
Center for Social Inclusion, Gamaliel's Transportation Equity Network, Good Jobs First, OMB Watch	Equity in Government Accountability and Performance (EGAP)	Advocates, journalists, citizens	April 2012 (launch)
ProPublica	Recovery Tracker: Eye on the Stimulus	Journalists, citizens	February 2012
Sunlight Foundation	Recovery Explorer	Journalists, advocates	March 7, 2010

Source: Data gathered by author from websites and interviews.

date Recovery Act data for over two years. The *Equity in Government Accountability and Performance* (EGAP) project, built by a partnership of advocacy organizations, launched in April 2012.

These independently produced applications were attempts to fill gaps in the Recovery.gov website. Early on, OMB Watch criticized the Recovery Board's website because it lacked the capacity for searching, aggregating, or analyzing the recipient-reported data, a function also unavailable in state-level websites. In November 2010, the Recovery.gov website introduced an Advanced Recipient Data Search Widget, though interactive maps remained the principle focus of the Recovery Board's efforts to engage the public with Recovery Act data. Each of the non-government sites listed in Table 3 offers a custom-built interface to access Recovery Act data, targeting different audiences and emphasizing the various aspects of spending at differing levels of depth. More examples can be found in Appendix III: Third Party Recovery Act Transparency Websites.

As of this writing, ProPublica's Eye on the Stimulus project is the longest-standing non-government site with updated data from Recovery.gov. ProPublica is an independent, nonprofit news organization, and as part of its mission to provide capacity building tools for data journalism, it compiled a database from Recovery.gov and other government sources to lower the barrier for reporters in engaging with recovery data. Eye on the Stimulus combined simple data visualizations with interactive graphs for all states and all federal agencies. It also provided downloads of state-specific datasets and a detailed guide to using Recovery.gov and state websites. On average, ProPublica received 236 dataset requests per quarter during 2010 and 2011 from interested journalists around the country.[84]

Also targeting sophisticated data users, the Recovery Act Recipient Reports Database by the group OMB Watch at Fedspending.org was a fine-grained, comprehensive database for professional fact-finders and analysts. It served as the basis for Equity in Government Accountability and Performance, an ambitious online database and mapping application built for advocates and journalists to evaluate Recovery Act spending decisions. Two years in the making, Equitygap.net combines Recovery Act spending data with demographic information from the U.S. Census' American Community Survey. It is a powerful tool that enables interested groups and individuals to map recovery spending against economic need. The first iteration of the

84. E-mail communication with Jennifer LaFleur of ProPublica, June 6, 2011, and April 17, 2012.

EGAP tool is focused on transportation spending, but the supporting organizations expect to eventually integrate metrics to assess other impact-related dimensions, such as the creation of green jobs or the deployment of broadband networks to disadvantaged communities.

State-Level Organizations: Media and Advocacy Groups

At the state level, two examples stand out for enhancing the comprehensibility of Recovery Act spending beyond the efforts of state recovery websites. On the media side, *The Patriot Ledger* newspaper embarked on a multi-part series in the summer of 2010 to highlight the effects of the Recovery Act in southeastern Massachusetts. As part of its reporting, the paper built an online, searchable database combining Recovery Act information from federal and state sources that readers on the South Shore of Boston could use to explore, sort, and compare spending and jobs data for their own towns.[85]

On the advocacy side, Recovery Watch Maryland's *Monthly Monitor* newsletter[86] sought to make the Recovery Act more comprehensible to other advocates, journalists, legislators, and interested individuals. This monthly newsletter provided context and interpreted recipient reporting data for the state of Maryland, along with in-depth examinations of particular programs like weatherization.

In the ecosystem of transparency, efforts by advocacy groups and journalists are not only useful for making complex information comprehensible to a broader public, but also play a vital role in improving data quality. It is true that there were many eyes on the Recovery Act data from inside government already: stakeholders at both the federal and state levels worked very hard to ensure that reporting data were accurate, particularly after the first reporting period raised serious concerns about the accuracy of recipient numbers disclosed by the Recovery Board.[87] As a step in ensuring data quality, the decentralized-reporting states—Washington, Mississippi, and Texas—required agencies to file quarterly reports to the state concurrently with those filed for the Recovery Board. In centralized-reporting states, offices like Maryland's RecoveryStat were "constantly looking at the data, making sure that the data looked healthy."[88] After the end of a reporting period, federal agencies and state agencies worked together to further improve data quality before publicly posting it on recovery websites.

Yet with all this oversight, reporting mistakes still slipped through, pointing to the difficulties of collecting so much data from so many individual entities so quickly to track so much money. In Colorado, Burt Hubbard, *The Denver Post's* data reporter, became a useful sounding board for Chris Smith, the director of Governor Ritter's economic recovery team. Smith recalls that at the end of each reporting cycle, "[Hubbard] would go through and do the same thing I was doing … double-check things, ask us questions about it."[89] As reflected in Hubbard's reporting, most questions tended to be about the jobs numbers reported by recipients of Recovery Act funds.[90] By working in tandem, efforts by Hubbard, the GAO's Recovery oversight team in Colorado, and federal agencies "… brought to light issues with data that the state office hadn't noticed."[91]

85. See Reardon's *Patriot Ledger* series: "Stimulus Spending: Follow the Money." June 12–17, 2010.
86. The *Monthly Monitor* newsletters were available on the Recovery Watch Maryland website which suffered a catastrophic server failure in early 2011. Without funding, the website went dark along with the archived newsletters.
87. Alec MacGillis, "Accounting for Stimulus Jobs: Be Careful What You Wish For," *The Washington Post.* November 18, 2009.
88. Author interview with Beth Blauer, director, RecoveryStat. September 22, 2010.
89. Author interview with Chris Smith, former director, Colorado Economic Recovery Team. January 10, 2012.
90. See Burt Hubbard's articles in *The Denver Post,* "For Better Or... Bust: Stimulus-Jobs Count in Colorado Inflated," on November 10, 2009 and "Errant Data Color Results: The First Year of the American Recovery and Reinvestment Act is Hampered by Reporting," on February 18, 2010.
91. Author interview with Chris Smith, former director, Colorado Economic Recovery Team. January 10, 2012.

Journalist Used Transparency to Monitor Recovery Act Program Effectiveness

Mark Lisheron of *Texas Watchdog* focused his reporting on implementation of the state's weatherization program, which expanded dramatically under the Recovery Act. In Texas alone, the Department of Housing and Community Affairs' (DHCA) program grew from a typical yearly budget of $13 million to weatherize 3,500 to 4,000 homes to $327 million to weatherize 38,000 low-income homes in a two-year period.[92] Lisheron began reporting on the implementation of weatherization on a regular basis in late 2009, based on a tip that some contractors to DHCA were performing substandard weatherization projects. As he tells it, data from the comptroller's Recovery Act website served as a first, partial view into his investigation:

> I never let the data tell the story all by itself. With each data drop, I would get a little glimpse of the whole picture. Then [I would] go back to the agencies and try to take it down as far as I could … [I] called regularly for public records requests from the Department of Housing and Community Affairs. They finally sent them to me on disk. (First, [they] made me go down and get them, boxes of files.) The government required 5-6 page forms to be filled out when [officials] would inspect weatherization jobs that had been done …Those reports are not available on any website, you had to ask … Once every two months I'd ask for all inspections reports to see if there was any improvement.[93]

As Lisheron identified contractors rated as bad performers in DHCA's weatherization inspection reports,[94] the agency began to take money away from struggling contractors and shift it to groups that were doing a better job of weatherizing homes.[95] In his opinion, the effectiveness of Lisheron's reporting was complemented by the federal government's ongoing oversight and threat that money could be taken back for noncompliance with federal standards. By summer 2011, the head of DHCA had resigned after difficulties that included publicity about unspent rebuilding funds from Hurricane Ike and trouble managing the expanded weatherization portfolio.[96]

These examples illustrate the multiple ways that organizational users of information can make valuable use of data that, for a variety of reasons (such as format or content), may not initially align with their interests. Before Recovery.gov and state websites improved their presentation of Recovery Act data, organizations like Sunlight Labs, ProPublica, and *The Patriot Ledger* took the raw data files and repackaged them to make the information more accessible to their target audiences. By working with the data for their own purposes, Recovery Watch Maryland and data journalists like *The Denver Post's* Burt Hubbard asked questions of the data and spotted reporting errors that had escaped multiple layers of internal oversight by government officials. And in complementing the data available from the Texas comptroller's website with internal agency records, *Texas Watchdog* was able to add the context needed to interpret recovery data, and eventually identify significant implementation problems in an important line of expenditures (see *Journalist Used Transparency to Monitor Recovery Act Program Effectiveness*).

92. Mark Lisheron, "Is Stimulus Working? Too Soon to Tell Because Money is Still on Its Way." *Austin American-Statesman.* September 6, 2009.
93. Author interview with Mark Lisheron, journalist, *Texas Watchdog*. February 21, 2012.
94. The Texas Department of Housing and Community Affairs' weatherization inspection reports obtained by Texas Watchdog are available at http://www.scribd.com/doc/45069408/Weatherization-Inspection-Reports
95. As reported by Mark Lisheron in the *Texas Watchdog*: "Shoddy Workmanship Found in $22 Million Federal Stimulus Contract to Improve Homes of the Poor," on May 13, 2010 and "High Costs, Low Production, Substandard Workmanship Dog State's Stimulus Weatherization Program," on September 20, 2010.
96. Mark Lisheron, "Texas State Housing Chief Resigns; Agency Failed to Use Hurricane Ike Rebuilding Funds, Oversaw Faulty Stimulus Program to Fix Up Low-Income Homes," in the *Texas Watchdog*, August 18, 2011.

Advocacy Groups Focused on the Quality of Transparency

Data challenges also influenced how the advocacy groups we studied engaged with Recovery Act data. Because it was difficult to capture the economic and employment impacts of spending—and even more difficult to affect spending flows— advocacy groups ended up focusing on a second-order goal: using available expenditure information as a lever to improve transparency.

The Maryland Budget and Policy Institute hired a researcher to work with recovery data but, as the organization's director Neil Bergsman recalled, this researcher ended up spending, "… a lot of time on the phone with the StateStat staff and [other state departments] to understand where the numbers came from and what they meant." At the Colorado Fiscal Policy Institute (CFPI), the Recovery Act policy analyst Alec Harris undertook an ambitious effort to make spending data more meaningful for other, issue-oriented advocacy organizations. He spent six months building a database to combine Recovery Act data with other sources to analyze whether federal spending was addressing economic needs in Colorado communities. To compare Recovery Act funds against need, Harris joined recovery data to demographics from the Census and from a proprietary zip code dataset used by marketers. He also added a foreclosure risk assessment dataset from the federal Department of Housing and Urban Development (HUD).

Once this analytic tool was in place, however, Harris was surprised that other advocacy groups in Colorado did not use it to assess how spending was targeting disadvantaged communities. Part of the explanation for this may be that the coalition groups in Colorado did not have the analytic capacity to utilize CFPI's tool. It may also be that there were no avenues to influence spending once allocations were set by the federal government, as discussed earlier. In this respect, Ed Sivak of the Mississippi Economic Policy Center noted that as an advocate, "there wasn't a whole lot you could do at the state level because a lot of funding was programmed at the federal level." Another user group for the CFPI database could have been journalists, but the group's efforts also failed to gain traction with reporters. Many papers lacked the capacity or resources to support data-driven reporting. In the end, it appears that difficulty in contextualizing data was a first barrier to civic action by advocates but, even when this capacity became available, groups further struggled to engage with the information. Data remained too complex relative to their organizational capacity and no levers existed at the state level to influence funding decisions.

Thus, advocacy groups focused on improving the quality of transparency at the state level rather than using available data to advocate for their substantive policy and spending objectives. At a national level, the Good Jobs First ranking of state Recovery Act spending websites motivated Massachusetts and Texas to improve their websites, and kept Maryland on its toes to stay in the lead.[97] Comments from Massachusetts Budget and Policy and Common Cause helped shape the functionality of the Massachusetts recovery website. Additionally, the coalitions of policy advocates in Maryland, Colorado, and Texas each published memos and reports addressed to the state recovery teams detailing recommendations on how the content and format of spending data could better meet their groups' interests.[98]

A common theme was the need to bolster reporting so spending could be compared with economic need (notwithstanding the experience of the Colorado Fiscal Policy Institute). Groups called for more detail on the quality of jobs created by the Recovery Act, including the median wage

97. During our interviews, state officials in these three states explicitly called out Good Jobs First's 2009 and 2010 *Show Us the Stimulus* reports as motivating improvements to their recovery websites.

98. See the Colorado Fiscal Policy Institute's report "Continuing Transparency and Improving Equity in Colorado After the Recovery Act" by Alec Harris (2010) and Texas Impact's report "It Ain't Over Till it's Over: The Texas Legislature and the American Reinvestment and Recovery Act" by Bee Moorhead (2011).

and benefits of recovery-funded jobs, and demographic data on the recipients of those jobs. Without this type of data to interpret the numbers reported by recipients, advocates felt they could do little toward assessing the impact of recovery spending on disadvantaged communities.

Media Attempted to Focus on Program Impact

Among the many potential public users, journalists were perhaps best positioned to draw the most value from Recovery Act data. Still, in the six states surveyed for this study, there were few sustained investigations into the impact and outcomes of Recovery Act expenditures. Only in Colorado did a major newspaper, *The Denver Post*, consistently report on recovery-related spending, though its efforts died down after 2010. Other media outlets that tracked Recovery Act spending tended to focus either on specific issues or local geographies. In Mississippi, Wally Northway of the *Mississippi Business Journal* reported almost exclusively on Recovery Act awards to Mississippi-based enterprises. And, as previously mentioned, Nancy Reardon of *The Patriot Ledger* in Massachusetts and Mark Lisheron at *Texas Watchdog* reported on Recovery Act spending and its impacts in multi-part series.

When asked why there was not more widespread use of recovery data by journalists, Lisheron and Reardon concurred that:

- The data were not very meaningful on their own.
- The large datasets posted for download were difficult to manipulate, while summary figures were commonly available only in static PDF format.
- The data on state websites and on Recovery.gov often did not coincide.

On the first point, data concerning jobs were very difficult to use. Even on the administration's own terms, employment estimates constituted the bottom-line effectiveness metric for the Recovery Act as a whole. But because of the difficulties in measuring the complete impact of spending on job creation, the methodology chosen by OMB focused solely on the direct full-time equivalents, or FTEs, created in a quarter. Understanding the jobs impact of the Recovery Act was therefore difficult, since these estimates could not be aggregated across reporting quarters and there were no other data provided to contextualize whether those jobs were part-time, full-time, or continued across reporting quarters. For example, Reardon's editor at *The Patriot Ledger* wanted to print the number of jobs created in the communities on the South Shore of Boston, organized per spending line-item. Given the data available, this turned out to be an impossible task. The newspaper ended up running a short piece explaining to readers why they could not tally the number of jobs created in their communities.[99]

Making sense of the volumes of available data often proved difficult for journalists. Reardon spent three weeks working with a spreadsheet she obtained through a public records request from the Massachusetts Recovery and Reinvestment Office as she prepared her series on Recovery Act spending (she began her work in November 2009, before the state's website went online). Reardon worked to decipher the bureaucratic acronyms and discern patterns in spending to find her stories. The series did not run until June 2010. In today's struggling newspaper industry, it is rare for reporters to have that much time with a story. As Chris Smith, the Colorado state director of Economic Recovery, explained: "Recovery Act reporting was so complicated and changed so quickly that most of our interactions with journalists involved explaining what the numbers meant. Journalists would then respond, 'Wow I'm never going to get that into a 500-word article, thanks for your time!'"[100]

99. Nancy Reardon, "Stimulus Funded Job-Count an Inexact Number," *The Patriot Ledger,* June 15, 2010.
100. Author interview with Chris Smith, former director, Governor Ritter's Economic Recovery Team. January 10, 2012.

Another challenge for reporters was that figures from state and federal websites did not coincide because both centralized and decentralized reporting states could only track in-state spending that went through the state treasury (see Figure 2). Funds that went directly from federal agencies to recipients could not be tracked by states and therefore were not included on state websites. Initially Lisheron, the reporter with *Texas Watchdog*, attempted to reconcile the accuracy of Recovery Act data between Recovery.gov and the Texas transparency website. Eventually, he relied solely on the state transparency portal, since he had contacts at both the comptroller's office and the Department of Housing and Community affairs who could answer his questions about the data. Lisheron summed up these multiple barriers for journalists working with recovery data by stating: "You can't go to one website, pull down information and report on deadline. You have to be an Egyptologist."

Finding Seven: Many citizens visited Recovery Act websites to find a job supported by the Recovery Act or apply for a grant or contract funded by the Recovery Act. Designers of Recovery Act transparency requirements originally intended the public information on the website to engage citizens in improving the accountability in the spending of ARRA and to detect fraud, waste, or abuse. Instead, we found that an audience of individual citizens did not engage as some expected. "We wish the public would respond to [recovery] information, but they haven't," stated Katherine Klosek, an analyst with Maryland's RecoveryStat team. Public officials in states that ranked both high and low in the Good Jobs First assessment of websites lamented the lack of citizen engagement on their recovery sites, indicating that the user friendliness of transparency may not be the most decisive factor in attracting an audience for data.

According to state officials in Maryland and Massachusetts, the primary purpose of visitors to those state websites was to find recovery-funded jobs and contracts. Chairman Earl Devaney of the Recovery Board commented in a public hearing about Recovery Act transparency that "jobs are the number one thing people discuss when the [Recovery Act] comes up in focus groups."[101] In mid-2010, at the height of Recovery Act spending, analytics for the Massachusetts transparency website revealed that six in 10 visitors were seeking employment or information on how to get a contract and "of the top six pages visited, four had to do with finding a job."[102] The GAO also reported that "many public inquiries on the Recovery Act addressed the availability of funding and jobs, not individual awards."[103] Indeed, the Recovery Act legislation said that to the extent possible, information on how to get jobs and contracts should be included as part of spending transparency. To comply, the Recovery.gov website pointed individuals to other websites that featured job listings such as USAJobs.gov or state job websites. And, in response to public demand for more information on finding jobs and contracts, Massachusetts, Maryland, and Colorado linked to employment resources on their recovery websites and Texas featured a primer on getting Recovery Act contracts.[104]

Maryland's RecoveryStat team did find success in engaging citizens with spending data when Governor O'Malley (D) and Beth Blauer, the head of RecoveryStat, went on a state tour convening town hall meetings on the Recovery Act. They used the state website as a backdrop for these meetings and Blauer was able to navigate questions from the audience by illustrating answers via the website and its mapping function. This experience indicates that perhaps

101. Author's notes from the Recovery Accountability and Transparency Board Public Hearing, August 5, 2010. Cambridge, MA.
102. Author's notes from the Recovery Accountability and Transparency Board Public Hearing, August 5, 2010. Cambridge, MA., and author conversation with Jeffrey Simon, director MRRO, September 2010.
103. U.S. Government Accountability Office, "Recovery Act: Increasing the Public's Understanding of What Funds are being Spent On and What Outcomes are Expected," 2010. p. 24. http://www.gao.gov/new.items/d10581.pdf
104. Three other states also added links to jobs: Arkansas, Iowa, and North Carolina. List of state job sites on "Job Sites By States" page on Recovery.gov.

engagement strategies that combine offline (face-to-face) and online communication of information regarding the impact and outcomes of government programs may be more effective in targeting individual citizens. To that point, Eva DeLuna Castro, Texas' Center for Public Policy Priorities, commented, "the most helpful information for the average person were the Recovery Act signs."

Figure 3: Recovery Act Sign outside the Longfellow National Historic Site in Cambridge, Massachusetts

Photo by Francisca Rojas

While infrastructure projects displayed the Recovery Act's logo, identifying how spending directly impacted individuals was more of a challenge. Massachusetts, Colorado, and Washington made significant efforts to feature on their websites testimonials and narratives of people benefiting from Recovery Act funds as a way to communicate the program's impact. To commemorate the one-year anniversary of the Recovery Act, Massachusetts featured photographs of the "365 Massachusetts Faces of Economic Recovery." Yet, the benefits of the Recovery Act proved to be like other hidden government benefits.[105] During site visits to three schools in Massachusetts with the state's lead recovery official, we learned that teachers funded by the Recovery Act were not aware that their paychecks came directly from this federal program. Along with other challenges in using recovery data to assess outcomes, what the anecdote above highlights is that the ability to track expenditures does not necessarily translate into the ability to effectively capture the creation of public benefit—in particular the creation of jobs and addressing economic need.

The idea of some policy officials and state website designers that individual citizens would act as watchdogs was not fully realized.[106] This reminds us that in identifying the users of transparency we should differentiate between a broad audience—such as individual citizens—and an organizationally based audience—consisting of advocacy groups, journalists, and public officials.[107] While mass users interacted with recovery websites, they were often motivated by their desire to find jobs or contracts. This motive is mismatched with the data that Recovery Act transparency provided.

105. See Suzanne Mettler's *New York Times* op-ed on the submerged state, "Our Hidden Government Benefits," from September 19, 2011. Also, Michael Cooper's article "From Obama, the Tax Cut Nobody Heard Of" also in the *New York Times*, October 18, 2010.
106. Clint Hendler, "Obama on Recovery.Gov" in the *Columbia Journalism Review* (2009), also, Micah Sifry, *Wikileaks and the Age of Transparency* (2011), pp. 111–112.
107. Archon Fung et al. "Impact Case Studies from Middle Income and Developing Countries." 2010, p. 5. http://www.transparency-initiative.org/reports/impact-case-studies-from-middle-income-and-developing-countries.

On the other hand, when armed with the capacity, resources, and motivation to engage with Recovery Act information, organizational users actively tracked and monitored spending. Indeed, the missions of some organizations are dedicated specifically to pursuing accountability objectives and many did so, both at the state and national levels, in their efforts to use Recovery Act data to assess outcomes of spending. These groups were better positioned than individuals to strategically use collective action and forge a clearer path to accountability.

Part IV: Recommendations

Greater transparency in tracking the pace, character, and impact of federal contracts, grants, and loans in states is an important and constructive trend in collaborative federalism. The three years of experience with state and federal transparency in the Recovery Act program demonstrates that Congress and the executive branch possess the political will to improve such transparency of public spending. New technologies have transformed the capacity to do so.

The unprecedented Recovery Act transparency requirements both strengthened that trend in federal and state governments and provided some lessons for the future—even though the circumstances surrounding the Recovery Act itself were unique. Given the massive scale and broad scope of the Recovery Act, it is remarkable that the spending disclosure process worked as well as it did. That process was built in response to a dramatic economic crisis, enacted through legislation written in just a few weeks, and marked the first time government opened a broad window into the flow of federal contract, grant, and loan funds. The Recovery Act and the OMB guidance set tight disclosure deadlines accompanied by meaningful sanctions, provided machine-readable data that could be translated into maps and graphs, disclosed project-specific information, and required certification by governors or mayors that infrastructure projects constituted appropriate uses of taxpayer dollars. These basic elements, often missing in legislated transparency systems, provided an essential foundation for both public and private users of the data.

Based on our findings about the states' implementation of Recovery Act transparency requirements, how can effective disclosure strategies for government spending be designed and implemented in the future? Both in its strengths and in its limitations, experience with the Recovery Act suggests lessons for future efforts to improve transparency of federal contract, grant, and loan spending as funds flow through the states. They can also be applied in state governments to similarly report the flow of funds to ongoing projects at the local level.

We offer seven recommendations that could be adopted by either federal or state policymakers who are designing and implementing transparency systems.

Design Recommendations

Recommendation One: Be as clear as possible about the purposes of transparency. Clarity in the intended path from transparency to accountability or program goals can help to inform the design of transparency systems and the roles of policy-makers and actors outside of the government. Like many legislated transparency systems, Recovery Act transparency purposes were stated in general terms. OMB guidance suggested that the purpose of transparency was "so Americans know where their tax dollars are going and how they are being spent."

Transparency would allow "citizens to hold the government accountable for every dollar spent."[108]

However, it was unclear how transparency would contribute to spending accountability:

- By ensuring fair and reasonable use of funds
- By minimizing fraud, waste, and abuse
- By contributing to public confidence that the Recovery Act program was accomplishing its other purposes.

In other transparency systems we have studied, the path from disclosure of information to program effects usually involves several steps. These steps involve the process by which information from disclosers becomes embedded in the decision-making routines and activities of intended information users to achieve accountability goals.[109] Clarity of overall policy objectives can help legislators and other policy-makers understand the kinds of information that will be most important for realizing those objectives.

Recommendation Two: Be as clear as possible about intended information users and consider motivations and needs.

Like most disclosure policies, the Recovery Act provisions broadly identify users of spending information as citizens or Americans. But the engagement of diverse users depends on their varied interests and their capacity to use the information being disclosed. When the purposes of intended information users align with those of public policy, transparency efforts should be designed in ways that help meet user needs and capabilities. For instance, federal and state officials were able to use Recovery Act data to improve management of funds. Sometimes, however, the interests of users do not match the aims of an information policy. The kinds of spending data disclosed on Recovery.gov, for example, were not suited to helping people find jobs or contracts.

Policy-makers should employ focus groups, surveys, and consultations to determine the motives and needs of different kinds of users such as individual citizens, advocacy groups, journalists, and even government officials. The question of whether officials should strive to serve the broader information needs of individual citizens, journalists, and advocates, which are not related to the core purposes of the legislated transparency system, remains a situation-specific judgment call.

Recommendation Three: Ensure any new transparency systems be designed to disclose accurate, current, disaggregated, and comparable information that is accessible to a variety of users.

In targeting professional users of information, future disclosure strategies should seek to pursue "the broadest possible data release at the most disaggregated level. Users can always aggregate data for their analytic needs, but they cannot access disaggregate detail from aggregated data."[110]

This should include:

- Providing machine-readable, disaggregated, and timely spending information in non-proprietary formats creates a foundation for different groups to use disclosed information.

108. OMB Memorandum "Initial Implementing Guidance for the American Recovery and Reinvestment Act of 2009" (M-09-10) by Peter Orszag, February 18, 2009.
109. Fung, Graham, and Weil. 2007. *Full Disclosure: The Perils and Promise of Transparency.* Chapter 4.
110. National Research Council Committee on a Study of Food Safety and Other Consequences of Publishing Establishment-Specific Data. 2011. *The Potential Consequences of Public Release of Food Safety and Inspection Service Establishment-Specific Data,* p. 58.

- Disaggregated information makes it possible for users to transform data into maps, charts, and narratives that can be tailored to meet the needs of public officials, businesses, journalists, advocacy groups, and other diverse users.
- Tight disclosure deadlines ensure that data will be released in a timely manner and kept current, reflecting implementation in near-real time.

Although the recovery datasets were in some ways unwieldy, they provided a platform that organizations such as ProPublica and OMB Watch could use to build more user-friendly databases for different user groups and to remix recovery data with other data sources.

Implementation Recommendations

Recommendation Four: Create strong incentives for reporting compliance by using carrots to reinforce effective reporting and setting meaningful sanctions for non-reporting.

Requirements for disclosure do not always translate into accurate or timely disclosure. In fashioning reporting policies, creating positive incentives to encourage timely disclosure or encouraging innovations in the scope, quality, or methods of reporting information are important. Providing examples of best practices and showcasing particularly effective means of providing information could provide an effective means to create positive competition between disclosers among states or other disclosing parties.

Equally, disincentives for late reporting should also be used when appropriate. These need not be restricted to monetary sanctions. Among the Recovery Board's layered systems for oversight of federal Recovery Act funds was the Wall of Shame, included as part of the Recovery.gov website. This simple disclosure mechanism listed the names of all non-reporting funding recipients, organized by states. The "Wall of Shame" served as a meaningful sanction which, together with strong messages from federal officials and state executives that spending reports be submitted complete and on time, helped to drive high compliance with federal reporting and disclosure requirements.

Recommendation Five: Reduce reporting burdens where possible and ensure data accuracy by pre-populating spending reports with existing public data sources.

Ensuring the integrity and accuracy of data is fundamental to building trust in the disclosure system. Reducing the time and burdens associated with disclosure (while ensuring data accuracy and quality) is one way to do so. Creating reporting platforms and systems that facilitate the provision of data (in part by reaching out to those providing the data in creating and refining disclosure systems) is critical in this regard. For example, the Recovery Board was able to ensure data quality and ease funding recipients' reporting burden by instituting logic checks and pre-populating certain fields in its FederalReporting.gov platform.

Logic checks in the system ensured, for instance, that recipients could not report funds received that exceeded funds awarded. The initial problem of phantom congressional districts was resolved by automatically including a recipient's congressional district number in the electronic reports. Data collection systems can further mitigate reporting errors and burden if they are designed to automatically integrate other sources of existing data held by a state government or federal agency, like funding allocation amounts, core project details, or area demographics from the census.

Recommendation Six: Work with stakeholders to develop mechanisms and procedures that generate consensus on performance metrics for transparency reporting systems.

The utility of data rests on how well a transparency system's metrics capture activities that both policy-makers and information users seek to track. Most public transparency systems begin with imperfect metrics. The important issue often becomes whether disclosed information becomes more accurate, current, comprehensive, and understandable over time. Ensuring processes where disclosers and users of information collaboratively identify performance metrics is critical. It is also crucial that policy makers assess the extent to which a transparency system is able to produce accurate metrics on certain performance indicators.

Designers of Recovery Act transparency were charged with the unique task of implementing new metrics to track unusual and short-term spending. They had to ensure that data could be quickly gathered from all participating states and from hundreds of thousands of diverse projects. Even in this complex environment, metrics for Recovery Act spending were straightforward—it was a matter of tracking who received funds, what they were spent on, where projects were located, how they progressed and how much they cost. Early difficulties concerned data quality rather than the metrics themselves. Problems with spending measures were resolved iteratively between reporting entities, state officials and federal agencies, and resulted in improved reporting over time.

However, there was no such consensus around job creation measures. Even though capturing the number, duration, and quality of jobs was a critical objective of the Recovery Act, the transparency effort did not incorporate measures of job creation that allowed a consensus evaluation of projects on the job creation question. In retrospect, a better way to track ongoing employment impacts of the Recovery Act would have been to locate job creation estimates within an institution that could be judged a fair arbiter of making ongoing estimates (e.g. the Congressional Budget Office or the Federal Reserve Board) based on more sophisticated macroeconomic models. Lack of consensus on employment numbers posed an acute problem for Recovery Act transparency. It is not clear that it was possible to find an acceptable measure of job creation directly linked to federal expenditures. Although Recovery Act projects generated jobs, the underlying process was much more complicated, and expenditures worked through indirect as well as direct employment effects. Even though employment outcomes were critical to gauging the ongoing impacts of the Recovery Act, doing so through the disclosure system was almost doomed to fail because of the complexity of measuring these effects. Concerns that the administration had incentives to game such numbers led to a methodology that provided an extremely conservative measure of impact, and one with little public salience since it precluded aggregating cumulative effects over time.

Recommendation Seven: Incorporate monitoring and feedback mechanisms into transparency reporting systems and aim for continuous improvements.

The Recovery Act included an impressive infrastructure for monitoring and feedback that could serve as a model for future efforts.

Monitoring

Monitoring of compliance with transparency reporting involved both formal and informal efforts to ensure that data reported by recipients of federal contracts, grants, and loans were accurate, complete, and timely:

- *Formal* institutional efforts included coordinated data reviews by state and federal agencies, recovery offices (in centralized reporting states), and federal agencies' IGs during every 90-day reporting period. The GAO played a substantial oversight role by producing

bimonthly reviews of the use of federal funds in select states. And OMB guidelines provided ongoing clarification of the content of that data as well as an understanding of its limitations. The public also had the ability to report instances of fraud, waste, and abuse through Recovery.gov and on some state websites.

- The availability of disaggregated data on federal and state recovery websites also facilitated an *informal* process of data quality assurance carried out by interested private watchdogs like journalists and advocates. A process evolved whereby users flagged data quality issues they encountered in the course of analyzing spending data and consulted with state officials to address those data problems. Inquiries about data inconsistencies from journalists helped public officials identify recipient reporting mistakes.

Feedback

Transparency systems should incorporate feedback mechanisms for users of information to ask questions about the data to officials implementing disclosure systems. Website analytics also allow feedback systems to be automated, helping officials to identify which aspects of the disclosure system generates the most public interest. The Maryland, Massachusetts, and Colorado recovery websites all incorporated resources on employment opportunities after discovering that the most frequent searches related to jobs. Public data users therefore can play an important role in providing monitoring and feedback that contributes to identifying data needs and improving data quality over time.

Continuous Improvement

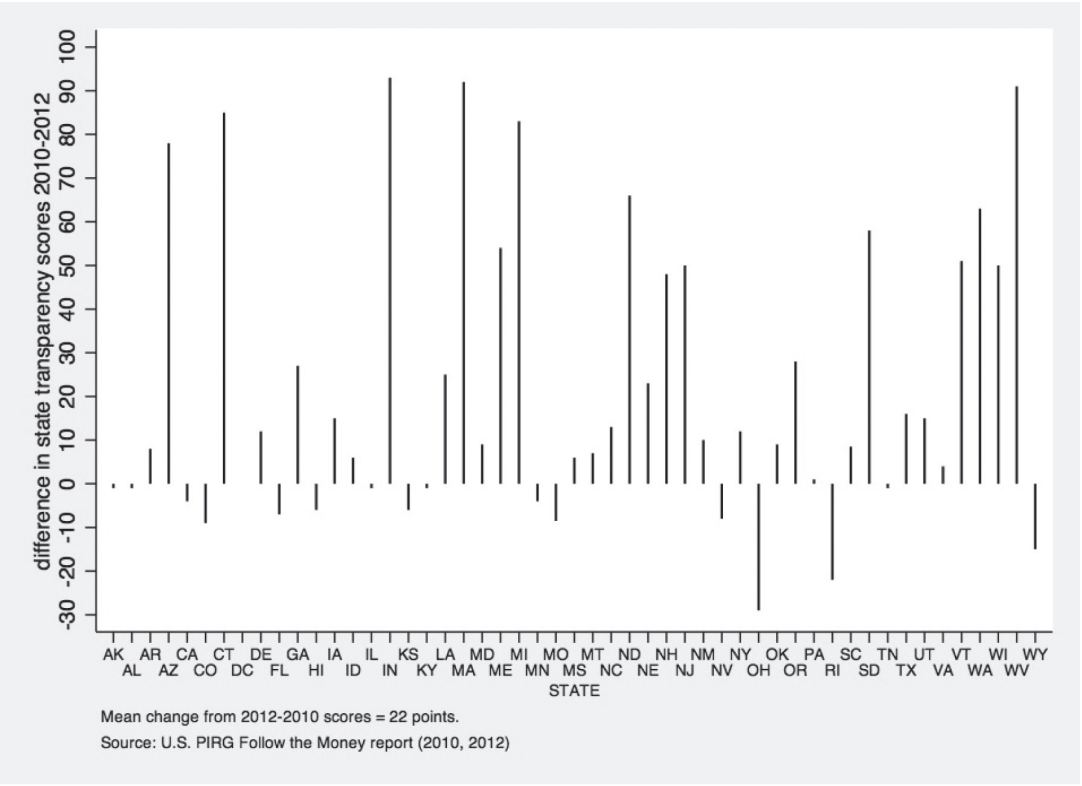
Many transparency policies, especially those created in moments of crisis, deteriorate over time. Others succeed in expanding the scope, accuracy, and quality of information, as well as its use. The Recovery Act's transparency effort exhibits two very different kinds of sustainability.

- First, the quality of information improved over time through monitoring and feedback of recipient-reported data by the Recovery Board and associated state-level efforts. Federal and state policy-makers should invest in such feedback mechanisms. Furthermore, they should continue deliberations and negotiations among information disclosers and users to attempt to reach consensus on metrics that matter, as well as determine which outcomes might be better served through reporting in other venues (such as job creation estimates).
- Second, and perhaps more important in the long run, state-level data warehouses, websites, and administrative procedures initially established to disclose Recovery Act spending information have expanded to improve the quality of fiscal disclosure in other parts of state contracting and spending, thus broadening the scope of transparency well beyond its original remit. Policy-makers and non-governmental organizations should seek to magnify this potential trend. State and federal policy-makers, for example, can begin to compare best practices for near real-time budget disclosure according to the experiences of state level transparency so far. They should consider whether they regard the rating criteria developed by organizations such as U.S. PIRG and Good Jobs First as appropriate. If not, state officials might offer their own criteria for peer design and ranking of state-level websites.

In expanding the scope of spending transparency, policy-makers should pay special attention to the challenges faced by interest groups, individual citizens, and journalists in using Recovery Act data. Through consultation with those user groups and others, they might develop budget transparency systems that are more accessible, and ultimately more valuable, in the years to come.

Appendix I: State Transparency Scores

State Transparency Scores increased between 2010–2012



Mean change from 2012-2010 scores = 22 points.

Source: U.S. PIRG Follow the Money report (2010, 2012)

Appendix II: Recovery Act Spending

Comparison of states: Recovery Act funds spent per year and scores for statewide fiscal transparency during Recovery Act implementation

States	Mean percent of Recovery Act funds spent, by year.			Mean scores for statewide fiscal transparency during Recovery Act implementation (from U.S. PIRG)		
	Through 2009	Through 2010	Through 2011*	2010	2012	Percent Change
Overall (n=50)	0.52	0.84	0.75	47	69	47%
Study cases (n=6)	0.48	0.75	0.73	53	83	57%
Decentralized (n=25)	0.46	0.85	0.75	57	70	23%
Centralized (n=25)	0.60	0.84	0.75	37	67	81%
Largest states (n=17)	0.50	0.80	0.73	49	78	59%
Small state (n=34)	0.54	0.86	0.76	46	63	37%
New governor (2010) (n=30)	0.54	0.85	0.74	53	65	23%
Same governor (2009 - 2011) (n=21)	0.50	0.84	0.75	41	72	76%
Democratic governor (n=20)	0.56	0.83	0.72	46	70	52%
Republican governor (n=29)	0.50	0.85	0.77	47	69	47%

Notes: The category "overall" combines means for all 50 US states, minus the District of Columbia. "Study cases" takes into account only the six states profiled in this study: CO, MA, MD, MS, TX, and WA. Large and small states are divided by whether they fall above or below the US mean population of 6,053,834. States included in the "new governor" category inaugurated a new governor halfway through the implementation of the Recovery Act, after the midterm elections of 2010. The columns showing percent of Recovery Act funds spent represent the proportion of funds allocated to the state at that time that were expended by state officials. Since additional Recovery Act funds were allocated after September 30, 2010, the percent can decline in one period relative to the percent in a prior period. Sources: National Governors Association, U.S. Census, Recovery.gov., U.S. PIRG "Following the Money," 2010 and 2012 reports.

Appendix III: Third Party Recovery Act Transparency Websites

Examples of Recovery Act websites by third parties

Project	Organizations	Recovery Act website
Coalition for an Accountable Recovery	Good Jobs First, OMB Watch, Project on Government Oversight, Sunlight Foundation (steering committee) + 34 other organizations	http://www.coalitionforanaccountablerecovery.org/
Equity in Government Accountability and Performance (EGAP)	OMB Watch, Center for Social Inclusion, Good Jobs First, Gamaliel's Transportation Equity network	http://equitygap.net
Recovery Act Recipient Reports Database	OMB Watch	http://www.fedspending.org/rcv/
Recovery Explorer	Sunlight Foundation	http://reporting.sunlightfoundation.com/recovery/
Recovery for Texas	Texas Impact, Texans Together, Public Citizen, Lone Star Chapter of the Sierra Club, La Fe Policy Research & Education Center, Texans for Public Justice, Center for Public Policy Priorities	http://recoveryfortexas.org/
Recovery Tracker: Eye on the Stimulus	ProPublica	http://projects.propublica.org/recovery/
States for a Transparent and Accountable Recovery	21 organizations including Apollo Alliance, Common Cause, Consumer Federation of America, Good Jobs First, Green for All, Smart Growth America, Transportation Equity Network, U.S. PIRG	http://www.accountablerecovery.org/
Show Me the Stimulus	*Maryland Morning* on WYPR	http://showmethestimulus.wordpress.com/
Stimulus Watch	Mercatus Center at George Mason University	http://stimuluswatch.org/2.0/

Appendix IV: List of Interviews

Federal government

Nancy DiPaolo, Assistant Director for Congressional & Intergovernmental Affairs, Recovery Accountability and Transparency Board
David Vorhaus, Recovery Act Coordinator, Office of Management and Budget
Patrick Corrigan, Former Intern, White House Recovery Implementation Office

National organizations

David Quam, Director, Office of Federal Relations, National Governors Association
Greg LeRoy, Executive Director, Good Jobs First
Phil Mattera, Research Director, Good Jobs First
Andrew Seifter, Recovery Act Analyst, Good Jobs First
Gary Bass, Executive Director, OMB Watch
Craig Jennings, Director, Federal Fiscal Policy, OMB Watch
Tom Lee, Director, Sunlight Labs
Daniel Schuman, Policy Counsel and Director of Advisory Committee on Transparency, Sunlight Foundation

Colorado

Chris Smith, (former) Director, Governor Ritter's Economic Recovery Team
Reed Rowley, Director, Governor Hickenlooper's Economic Recovery Team
Elena Nunez, Executive Director, Colorado Common Cause
Alec Harris, (former) Policy Analyst, Colorado Fiscal Policy Institute

Maryland

Beth Blauer, Director, StateStat & RecoveryStat
Katherine Klosek, Analyst, StateStat & RecoveryStat
Kieran Dowdy, Executive Aide, Deputy Chief of Staff
Betty Conners, Director Office of Finance, Maryland Department of Transportation
Connie Kennedy, Division Manager, Office of Finance & IT, State Highway Administration, Maryland Department of Transportation
William Ariano, Deputy Director, Community Development Administration, Maryland Department of Housing and Community Development
Kurt Sommer, (former) Maryland Department of Housing and Community Development
Neil Bergsman, Maryland Budget & Tax Policy Institute
Matthew Weinstein, Progressive Maryland

Massachusetts

Jeffrey Simon, Director, Massachusetts Recovery & Reinvestment Office
Naomi Grossman, Communications & Public Affairs Manager, Massachusetts Recovery & Reinvestment Office
Nancy Reardon Stewart, Journalist, (former) The Patriot Ledger
Phineas Baxandall, Senior Analyst and Program Director for Tax and Budget Policy, US PIRG

Mississippi

Ed Sivak, Director, Mississippi Economic Policy Center

Texas

Allison Onishi, Stimulus Web Project Developer, Texas Comptroller of Public Accounts
Michael Castellon, E-Communications Coordinator, Texas Comptroller of Public Accounts
Jeremiah Akin, (former) Team Lead/Data Team, Texas Comptroller of Public Accounts
Beth Hallmark, Creative Director, Texas Comptroller of Public Accounts
Bee Moorhead, Executive Director, Texas Impact
Morgan Hargrave, (former) Policy Analyst, Texas Impact
Eva DeLuna Castro, Senior Budget Analyst, Center for Public Policy Priorities
Leslie Helmcamp, Policy Analyst, Center for Public Policy Priorities
Mark Lisheron, Journalist, Texas Watchdog

Washington State

Pam Pannkuk, Accountability and Performance, Office of the Governor
Marilyn Watkins, Policy Director, Economic Opportunity Institute

Other

Luke Rosiak, Data Journalist, Sunlight Labs (former) and the Washington Times (current)
Justin Lambert, (former) Policy Advisor, New Jersey Governors Corzine and Christie

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