Data Quality to Further Philanthropy’s Mission

by Daniel Shapiro and Scott Cody

Corporate philanthropy has a dual mission of pursuing public welfare and supporting the values of parent corporations. Assessing the alignment of philanthropic activities with these missions can be challenging, but today’s data-rich environment provides prospects for meeting that challenge. Taking advantage of these opportunities requires access to high-quality data. This Giving Thoughts article considers how companies can play an active role in facilitating the collection, management, and analysis of robust performance data by grantee recipients to better assess the activities of both recipients and the charitable contributions.

The Dual Mission for Corporate Social Responsibility

There are two mutually supportive reasons for corporations to promote and engage in socially responsible activities. Not only does corporate social responsibility (CSR) create positive outcomes for society, it can also have a beneficial impact on a company’s business. More than half of the respondents to a global online survey conducted by Nielsen reported they preferred to work for socially responsible companies, would pay extra for products and services from companies committed to positive social impact, made at least one purchase in the past six months from a socially responsible company, or check product packaging to ensure sustainable impact.¹

Although many companies engage in socially responsible activities, few effectively measure their success. For example, fewer than half of the companies surveyed in a Deloitte study discussed how they could assist nonprofit recipients collect data on the social impact of a project, work with nonprofits to develop metrics to assess the impact of volunteer time, or require nonprofits who receive volunteer time to report back on the impact.²

This is a missed opportunity. Understanding whether a company’s philanthropic activities are having a positive impact can help determine whether the activities are truly aligned with the corporate mission. Moreover, evidence of positive effects can reinforce employees’ morale, customers’ goodwill, and the corporate brand.

**Better Data Are Easier to Collect**

Measuring and demonstrating the success of philanthropic campaigns requires the collection of high-quality data. Although data collection efforts can assume many forms and involve varying levels of investment, collecting basic performance statistics should be within the capabilities of most social service organizations. Such organizations collect data related to fundamental performance metrics (such as the numbers of participants enrolled, staff trained, families served, and so on) for standard program management and day-to-day operations. The process does not require the creation of complex systems, should not be off-putting, and is essential for knowing whether a program is meeting basic goals, responsibly dispersing resources, and functioning as expected.

With the benefit of modern digital tools, social service organizations can collect even more data with less effort. More data, and more data tools, are available today than ever before. Administrative data contained in standard case management systems provide a rich source of information that is close at hand. Affordable web-based case management systems—including some that focus specifically on nonprofit social service providers—are widely available and affordable. These systems streamline the process of collecting basic performance measures and can vastly expand the number and accuracy of measures collected. Properly configured, these systems make it a relatively straightforward exercise to look at program performance by site, participants’ characteristics, the type of intervention implemented, or other dimensions of interest. These off-the-shelf solutions can empower social service organizations to assess the extent to which their programs are implemented with fidelity and to associate specific program elements with participants’ outcomes.

**New data sources**

Data collected through mobile devices can supplement administrative data systems. For example, some social service organizations administer assessments to program participants using tablets or other hand-held devices. These assessments can be conducted in the homes or other locations, and the data can be linked with other records instantaneously. Additionally, organizations use smart phone apps to deliver information and services to program participants. These apps provide opportunities for participant feedback and other data that organizations can use to monitor program performance.

Organizations can also use data from other applications. In particular, social media—such as Facebook, Twitter, and Tumblr—can be an untapped source of information that can shed light on program impacts and outcomes. Although the information contained in unstructured social media traffic might appear difficult to exploit, it is becoming increasingly accessible. Third-party vendors such as Twitter’s Gnip (www.gnip.com) and DataSift (www.datasift.com) provide program interfaces and value-added services that enable users to access, filter, and analyze data from social media.

UN Global Pulse (www.unglobalpulse.org), a collaboration with United Nations partners and public sector institutions, is demonstrating how innovative data collection methods can shed light on the success and impact of social programs. Global Pulse identifies issues that can be assessed with the use of real-time data monitoring and then designs and conducts the research projects. Samples of its studies include an assessment of the use of mobile phone data as a proxy for indicators of food security; analysis of social media to measure the impact of HIV advocacy and prevention campaigns; using public Facebook posts to analyze attitudes toward contraception use; and exploring how risk factors of noncommunicable diseases can be inferred from social media and online internet searches.
Better Data Enable Better Analysis

Basic performance monitoring—in which programs establish targets and monitor whether and when they have achieved those targets—is a necessary step in evaluating program success. However, corporate funders, who are in a sense investing in social service organizations, often do not want to know only whether program targets are met, but whether the program caused the targets to be met.

This is an important distinction, which has been addressed in previous Giving Thoughts publications, such as “Deconstructing Impact Investing.” Whether they focus on education, public health, child well-being, or other outcomes, social service organizations are often only one of many factors that can influence those outcomes. For example, a corporation might invest in services to reduce the rate at which disadvantaged youth drop out of high school. A number of factors influence dropout rates, which vary over time. The corporation wants to ensure that, if dropout rates decline, the decline was caused at least in part by the services they fund. Otherwise, the corporation’s investment had no influence on a trend that would have happened anyway.

Organizations can use rigorous experimental techniques to examine the impact of services while controlling for other factors. These techniques go beyond basic performance monitoring by comparing outcomes of people who received services to outcomes of those who did not. In many cases, the increasing availability of data makes it easier to observe outcomes for both groups.

Rapid-cycle evaluation

Social service organizations can also use rigorous experimental techniques to test program improvements. These experiment-based analytics, known as rapid-cycle evaluation (RCE), can be used to test changes in how, when, and where they deliver services. The private sector has used these types of operational experiments with increasing frequency, as firms try to identify what changes in processes, products, and marketing will increase their competitive edge. Social service organizations can use RCE to identify program enhancements that can keep program participants engaged in program services, create larger benefits for participants, and reduce operating costs (without compromising impacts).

For example, a social service organization providing financial consultation to low-income people without bank accounts might struggle to keep their constituents engaged in program services. Such a program could use RCE to test changes in the messages they provide to participants, where they provide consultation, whether they employ incentives (and if so, how much), and so on, to identify those changes that keep participants engaged in services and ultimately improve their financial well-being.

Predictive analytics

Social service organizations can also employ predictive analytics to better serve their participants. Predictive analytics go beyond describing what is currently happening and provide program management with information regarding what is likely to happen in the future. With these predictions in hand, program administrators can better address the needs of program participants.

For example, a program providing prenatal health services to low-income women could use predictive analytics to identify women who might have high-risk pregnancies and then provide additional intensive services to these women. In this way, the organization uses data to identify areas in which additional resources can have the biggest impact and then target those resources efficiently. In their most sophisticated application, predictive analytic models can be embedded into agency intake and eligibility systems to enable frontline staff to make real-time decisions regarding the most appropriate services for which an applicant qualifies.

Corporate philanthropists have a vested interest in ensuring that the social service organizations they support can leverage these types of analyses. Such analytics can help them not only track whether their support is achieving its goals but also improve the chances that the social service organizations they support are indeed successful. However, whatever the type of data collection effort and analytical approach, certain fundamental principles must be in place to ensure that the information collected is of the quality necessary to inform program assessment.

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5 Cody and Asher, “Smarter, Better, Faster.”
High-Quality Data Access

Inaccurate data can be detrimental to the effectiveness of program assessments, and by extension, to the proper allocation of future program funding. As argued in a Giving Thoughts blog post in May 2014, programs should take care to collect accurate and consistent data to avoid a dynamic of “garbage in—garbage out.”

No responsible organization would ignore the fundamental principles of financial management, but yet many organizations pay scant attention to managing the quality of their data, and thus risk squandering real value. Organizations should incorporate four common-sense approaches to data management:

1. Identifying a program’s critical data elements;
2. Determining ahead of time the criteria upon which to assess data quality;
3. Assessing the quality of critical program data; and
4. Investigating and remediating any identified problems.

These principles seem straightforward, but implementing them seriously requires commitment on the part of funders and program management. Indeed, implementing a data governance regime focused on the collection, management, and use of the highest quality data to inform program assessment and management decisions will ensure the most successful outcomes. Data governance is a practice that the private sector has widely embraced to manage its crucial information assets—federal and local governmental agencies have done so as well. Data governance involves assigning responsibility for defining and maintaining high-quality information across all parts of an organization. In short, it is the exercise of decision making and authority for data-related matters.

Corporate foundations can play a significant role in advancing the capacity of funded social service organizations to collect and manage high-quality performance data and to become competent in their use. By making it a priority for their funded organizations, and by providing appropriate technical assistance, foundations can help ensure that social service organizations develop and adhere to data standards, manage data as a valuable asset, and implement practices to monitor and improve data quality.

Critical data elements and common data standards

As Gina Anderson has argued, foundations now collect more data and share it more than in the past, activities that increasingly define philanthropic best practices. However, in the absence of common data standards to ensure that organizations compare apples to apples, the utility of such data collection and sharing is limited. The first step in creating the capacity to share information within and across organizations is explicit communication about the definitions for key constructs. Although a seemingly simple requirement, developing and promulgating standard data definitions requires initiative on the part of management and intentional planning.

For example, a little more than a decade ago the US Department of Labor (DOL) faced a similar challenge when attempting to assess the impact of employment training programs. To ensure that programs were assessing similar outcomes, DOL implemented common measures regarding employment entry, job retention, and earnings in 2005. In addition to providing clear definitions of the key performance indicators, DOL also disseminated precise and explicit descriptions of the detailed records (for example, program participants’ employment information) and data elements (such as the specific date a program participant started employment) necessary to calculate the aggregate measures to report. Defining performance measures and their components in such an explicit manner had the dual benefit of laying out clear instructions to states and program providers on the type of information to maintain and of enabling DOL to validate and verify the quality of information being submitted by funded social service agencies in a transparent and meaningful fashion.

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7 Shapiro and Cody, “If You Can’t Trust the Data, Measurement Is Meaningless.”
Today, corporate philanthropic organizations face a similar problem as they confront the challenges of evaluating the impact and efficacy of their funded programs. The approach employed by DOL can serve as guidance to corporate foundations as they engage their nonprofit recipients in program assessment. Providing clear and explicit guidance concerning the definitions of key performance indicators of interest, and the detailed protocols on how to calculate those indicators will enable the nonprofit social service organizations to focus on collecting the right information and will provide a means for the philanthropic funder to validate the quality of the information provided.

Data are an asset that must be managed

Although a social service organization’s data are owned by the organization rather than by individuals, it is important that specific roles (and the individuals or teams that fill those roles) be accountable for proper data management. It is often convenient to designate data owners or stewards to help organize and implement that management function. Most often, data stewards are subject matter experts familiar with how the data are used, rather than the technical staff who maintain and support databases and applications. In addition, stewards often are responsible for determining the criteria for assessing data quality (for example, timeliness, valid values, and verifiable sources of information) and obtaining sign-off from program management on those criteria.

Also, data stewards often have the right to decide who can access enterprise data, including rights to create, read, update, and delete such data.

Several factors should be considered when creating a data stewardship function:

- **What is the type of data being managed?** For instance, data dealing with specific transactions (enrollment, assignment to programs, out-placement) could have different requirements than metadata (data about data) or reference data (data that define the permissible values to use for common constructs such as income, ethnicity, or employment status). In most organizations, stewards are expected to work with only one or a few data types.

- **How many subject areas should data stewards first be assigned?** Data governance pilot projects often strive to govern a manageable set of data elements within a single subject area. Stewards are initially accountable for standardizing data elements, specifying and enforcing valid values, and addressing data quality issues.

- **How should stewardship to data areas be assigned?** Some organizations assign a single enterprise data steward with ultimate accountability for data within a subject area or domain. Others create communities of data stewards who work with those data. Another approach is to assign data-related responsibilities to functional roles rather than to stewards.

- **Should data stewardship be tied to compliance and/or data use?** Some organizations assign accountability for related sets of data. For example, because the Health Insurance Portability and Accountability Act requires protections of all personally identifiable information in an organization, some social service organizations put teams in place to locate those data across systems, specify controls for the information, and monitor compliance.10

Data quality must be assessed and maintained

Creating precise and clear definitions of key program performance indicators and assigning stewards to manage the data comprising those measures are two critical steps toward ensuring high-quality data and assessment. Equally important is the implementation of a process to continually monitor data quality and remediate any problems encountered. It is a best practice to address data quality issues in an automated manner as much as possible. This can be accomplished by incorporating data quality edits into an organization’s systems (such as case management systems) to ensure that only a valid range of data values can be accepted and that illogical situations (such as a participant leaving a program before enrollment) are flagged during data entry.

However, critical data often originate outside an agency’s immediate control or resource constraints prohibit automated remediation. An alternative to an automated solution is to use data quality reports and then address issues through improving data collection procedures and processes.

The important point is to assess data quality in a consistent and granular manner to expose any issues and act as a catalyst for continued data quality improvement.

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An organizational commitment to data quality could entail several components:

- **A strategic plan for improving data quality for key program performance indicators.** The plan should be based on an understanding and analysis of the current state of data and their impact on the organization’s ability to assess program impact.

- **Effective methods and tools to define, collect, and manage information associated with critical data.** This includes data profiling—the process by which an organization identifies the characteristics and integrity of data.

- **Data cleansing—or the mechanism, rules, and processes used to modify and correct data.** Data cleansing also includes the activities necessary to validate and verify corrected data using a predefined set of business rules. Data cleansing can be a one-time or ongoing activity.

- **Management of metadata.** Metadata, or data about data, represent the knowledge gained through the data quality assessment and remediation processes. By capturing and retaining metadata as they are developed, the knowledge gained by one data quality team is made available for use by others. Metadata and their management are key contributors to an organization’s ability to build and strengthen its data quality capabilities.

**Conclusion**

Timely and cost-effective evaluation of philanthropic activities is important for corporations to understand whether their efforts are providing social or business value (the dual mission of CSR). A precondition of such assessments is the implementation of data management procedures that can ensure high-quality data are available for rigorous assessments. Proper data management requires the commitment of management and personnel, and corporate funders could support this effort at recipient organizations with technical assistance and other expertise.

The capacity of social service organizations to collect, manage, and analyze high-quality data from their programs will vary widely. A program’s level of maturity will likely be a key determinant of its capacity to capture and process the information needed to rigorously and accurately assess impacts. Pilot programs usually have little in the way of case management or performance measurement systems in place and might struggle to support even those activities related to direct service delivery.

In these cases, it might not be feasible for the program to invest the time and staff necessary to ensure the collection and quality of appropriate data. On the other hand, programs being brought to scale across multiple sites would very likely have basic systems in place that could form the information basis for rigorous assessments. There are likely real opportunities in these more mature programs to collect the type and quality of program data described within this report.

**Funding data collection**

Regardless of program maturity, the availability of funding levels over and above that required for direct program delivery will be a limiting factor to the program’s data collection and management efforts. Data management is an infrastructure and overhead investment in that it does not yield a direct benefit to program participants. However, data management is a necessary precondition to ensuring information is available to accurately and rigorously assess a program’s performance. It also enables tools that may improve service delivery, a direct benefit to program participants. If corporate funders want to avoid throwing good money after bad, it is important that social service organizations, in conjunction with their funders, evaluate the impact of their interventions.

A possible solution to this conundrum would be for corporations to provide the technical assistance necessary to grow programs’ capacities to collect, manage, and analyze outcome and impact measures. Part of that assistance would be an assessment of data collection efforts and the associated level of rigor appropriate for a given program. In addition to focusing on the administrative information generated through a program’s case management activities, ancillary data sources that could shed light on outcomes and impact could also be identified.

By and large, companies have well-defined data management regimes in place and the expertise needed to help guide grant recipients. A hybrid investment of human and financial resources to support the management and analysis of recipients’ program data might be an efficient and effective way of ensuring the feasibility of timely, rigorous, and accurate assessments.
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