

Working PAPER

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Data and Decision Making: Same Organization, Different Perceptions

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Abstract

In this study, survey information from staff in eight nonprofit organizations who were in a position to use data to make decisions showed that perceptions of data-driven decision making (DDDM) activities and culture in their organization varied widely. Survey information from staff at the organizations' funder (i.e., the foundation providing program funding and technical assistance to increase the organizations' use of DDDM) shows that they perceive far lower levels of DDDM activity and culture than do the organizations' staff. These differences in perceptions suggest that building an organization's reliance on DDDM must begin by building a common understanding about what activities are—or are not—being undertaken and that results from research on DDDM using information from only one respondent in an organization might not be reliable.

Keywords: Data-driven decision making, performance measurement, nonprofits

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Using verifiable data instead of intuition to make decisions can be a valuable business strategy in both for-profit and nonprofit organizations. Research on for-profit firms suggests that data-driven decision making (DDDM) increases their performance (LaValle, Lesser, Shockley, Hopkins, & Kruschwitz, 2010) and their output and productivity by 5 to 6% (Brynjolfsson, Hitt, & Kim, 2011). Research on nonprofit organizations suggests that DDDM increases the effectiveness of management decisions (LeRoux & Wright, 2010). Effectively using data to make decisions requires at least two key elements. First, the DDDM process must be embedded into an organization such that staff value and embrace the use of data over intuition in developing and implementing strategies (Julnes & Holzer, 2001). Such a process enables individuals to take appropriate and timely actions (LaValle, Lesser, Shockley, Hopkins, & Kruschwitz, 2010). Second, it requires a coordinated process of sequential DDDM activities in which an organization collects, analyzes, and uses data. Each stage is important. If data are not collected, organizations cannot analyze information to draw conclusions. If data are not analyzed consistently and correctly, staff might use it to draw incorrect conclusions. Finally, if the results of data analysis are not incorporated fully into decision making, the monies spent on collection and analysis is for naught.

Until recently, relatively few nonprofits had an incentive to adopt a DDDM strategy (Nonprofit Technology Network, 2012), in contrast to both for-profit firms and public sector organizations. The tide is shifting, however, as some funders are now providing financial incentives or technical assistance to institutionalize DDDM in the nonprofits they assist. The requirement is based on the belief that in order to position the social sector for impact and innovation beyond the limits of any one funder's engagement, DDDM must be developed and institutionalized at the organization level.

This research examines DDDM in eight nonprofit organizations by assessing it from the perspective of both staff in a position to use data at a nonprofit organization and funders working to increase it. It shows that large differences exist in the perceptions of and support for an organization's DDDM activities both among staff at an organization and between funders and organization staff. The divergence in views of an organization's DDDM suggests that attempts to increase reliance on data to make decisions might be hindered by a lack of consensus on what it actually means to use data to make decisions. One potential way to build consensus might be to use the survey administered for this study as a baseline assessment of stakeholders' perceptions about DDDM. Tabulations from the survey could be used, for example, to identify discrepancies between the beliefs and perceptions of the change agent—either funder or nonprofit executive—and staff. These tabulations could also serve as a basis for discussion about what it means to use verifiable data instead of intuition to make decisions.

A. DDDM and Organizations with a Social Mission

For-profit and nonprofit firms are sometimes distinguished by their mission, with for-profit firms maximizing profits and nonprofit organizations maximizing services (Steinberg, 1986). Profits and revenues measure success in for-profit firms, and these organizations fail when they cannot generate revenues to cover costs. Meanwhile, donations, expenditures, and operating expense ratios have historically been used to capture success in nonprofit organizations (Kaplan, 2001), which fail when they cannot generate government and philanthropic support to provide services. Although profits and revenue might aptly measure whether a for-profit firm achieves its

business mission, more nuanced measures of donations and operating expenses are required to understand a nonprofit's success. Increasingly, funders of nonprofits see DDDM as a way to assess whether an organization is accomplishing its social mission and effectively targeting their resources (Kaplan, 2001; Speckbacher, 2003). Such an emphasis, combined with the increasing competition for funding, has increased the use of evidence-based funding in organizations with a social mission, which, in turn, has increased the resources devoted to assessing their performance (Carman & Fredericks, 2008; Davenport, 2006).

Unfortunately, few research studies can be used to guide funders or executives of mission-driven organizations who strive to increase use of data in decision making. At least two specific gaps leave unanswered questions about how data processes are coordinated in mission-driven organizations and how processes might be embedded into an organization's culture to systematically integrate data into decision making.

First, little is known about how mission-driven organizations systematically integrate data into their decisions. Studies examining DDDM in nonprofits have assessed the types of data they collect (Carman, 2007; Carman & Fredericks, 2008) or the type of performance management indicators used (Carrilio, Packard, & Clapp, 2003; Zimmerman & Stevens, 2006). Such research generally examines one component of DDDM in isolation from other components and processes and from the organization's established culture of making decisions. LeRoux and Wright (2010) use a broader DDDM framework to examine an organization's reliance on performance and output indicators, including customer satisfaction and industry standards; however, their survey was not designed to understand how these individual DDDM components combine—or do not combine—to form a systematic process for collecting, analyzing, and using data to make decisions. Such static measures of DDDM activities (e.g., development of performance measures, collection of data) are necessary but not sufficient indicators of an organization's use of valid data to make decisions because the measures do not reveal the extent to which organizations have a coordinated process of sequential DDDM activities and a belief that using of data over intuition enhances decisions. If funders or nonprofit executives want to strengthen the use of evidence in making strategic and operational decisions, they must understand both how static measures of DDDM activities combine—or do not combine—to form a process by which DDDM is used and supported in nonprofit organizations.

A second potential knowledge gap exists in the accuracy of information about DDDM obtained from a single respondent in an organization, which is the basis of most research on DDDM (Table 1). If stakeholders hold different perceptions about an organization's DDDM activities and use, research relying on a single individual in that organization might be inaccurate and building a body of knowledge about DDDM—either within an organization or across nonprofits—would require information from multiple individuals in an organization. Alternatively, if stakeholders hold similar perceptions about an organization's use of data in decision making, the current practice of fielding surveys to individuals across organizations might efficiently build a body of knowledge about DDDM in nonprofit organizations.

Table 1. Summary of Selected Research on DDDM

<i>Article</i>	<i>Methods</i>	<i>Sample</i>	<i>Key DDDM measures</i>	<i>Key outcomes</i>	<i>Key findings</i>
Nonprofit organizations					
Carman (2007)	Interviews with leaders and surveys to organizations	Executives of 178 New York nonprofits providing social and housing services to those with disabilities	Types of data collected and how used	Descriptive study, no outcome	Reported high levels of data collection but do not relate to use
Carman and Fredericks (2008)	Survey with a site visit to 3 nonprofits	189 Indiana human service nonprofits	Types of data collected, how they are collected, who is responsible, how are they paid for	Descriptive study, no outcome	Most say they do evaluation using internal resources
Carrilio, Packard, and Clapp (2003)	Survey and site visits	Staff at 17 organizations with statewide child abuse prevention initiatives	Use of computerized management information system and guidance to practitioners in measuring program processes and client outcomes	Descriptive study, no outcome	Programs could provide process data, but not client improvement
LeRoux and Wright (2010)	Survey	Executive directors at 314 nonprofit social service organizations in 16 U.S. metropolitan areas	(1) workload and output indicators, (2) unit cost and efficiency measures, (3) outcomes and effectiveness measures, (4) client or customer satisfaction, (5) external audits, and (6) industry standards and benchmarks	Effectiveness at making strategic decisions	Greater reliance on performance measures increased effectiveness of strategic decision making but client or customer satisfaction and industry standard benchmarks were not so related, suggesting nonprofit managers overlook such information in strategic decision making
Zimmerman and Stevens (2006)	Survey	Executive directors in nonprofit organizations in South Carolina	Whether (1) performance or outcome measures are a part of program evaluation, (2) initial motivators are present for incorporating performance measures, (3) operational changes were made as a result of using performance measures, (4) would recommend performance measures use to other nonprofit organizations	Descriptive study, no outcome	There was a significant relationship between (1) agencies using performance measurement and the requirement to do so by an outside source; and (2) agencies currently using performance measures and those willing to recommend that others use them

<i>Article</i>	<i>Methods</i>	<i>Sample</i>	<i>Key DDDM measures</i>	<i>Key outcomes</i>	<i>Key findings</i>
For-profit firms					
Bynjořsson, Hitt, and Kim (2011)	Survey	Human resource managers and chief information officers in 179 large, publicly traded firms	Firm's position on DDDM relative to other firms. Index created from three questions (1) use of data for creating new product/service, (2) use for business decision making, (3) existence of data for decision making	Sales, return on investment, and productivity	Firms that adopt DDDM have output and productivity 5 to 6% higher than expected
LaValle, Lesser, Shockley, Hopkins, & Kruschwitz (2010)	Survey	Business executives, managers, and analysts (around the world) from Massachusetts Institute of Technology alumni, <i>Sloan Management Review</i> subscribers, IBM clients, and other interested partners	Data and analytics on financial management and budgeting, operations and production, strategy and business development, sales and marketing, customer service, product research and development, general management, risk management, customer experience management, workforce planning and allocation	Descriptive study, no outcome	Top-performing organizations (self-reported) used analytics five times more than lower performers, although the survey found widespread support that analytics offers value. Leading obstacle to widespread adoption is lack of understanding of how to use data to improve the business and a lack of management bandwidth due to competing priorities
Public-sector organizations					
Ikemoto and Marsh (2007)	Interviews	36 examples from 7 K–12 school districts provided by district leaders, school principals and other school leaders, and teachers	Simple versus complex data and simple versus complex analysis and decision making	Descriptive study, no outcome	Data used might vary in way collected, points in time (one time versus longitudinal), type, and level of detail. Analysis and decision making also vary and organizations can be characterized as basic, analysis-focused, data-focused or inquiry-focused
Julnes and Holzer (2001)	Survey	Individuals who knew about performance standards in state and local government entities	Requirements to use performance measures for output, outcomes, and efficiency, and which performance measures are used	Descriptive study, no outcome	Two stages of performance measurement exit: adoption (development of measures) and implementation (use), with different influences in each

<i>Article</i>	<i>Methods</i>	<i>Sample</i>	<i>Key DDDM measures</i>	<i>Key outcomes</i>	<i>Key findings</i>
Marsh, Pane, and Hamilton (2006)	Surveys and interviews and focus groups, observations, and document reviews	Superintendents, principals, teachers, and classes at K–12 schools and districts	Types of data (input, process, or outcome); use of data (test scores); data support (accessibility, quality, and motivation to use)	Descriptive study, no outcome	Educators view data as useful and focus attention on outcomes, but do not appear to use input process or satisfaction data as much as outcome data. Not clear that educators have needed elements for successful DDDM, including skills, time, motivation, timely and valid data; and alternative to actions to take in response to information

These information gaps leave funders or nonprofit executives needing additional knowledge if they want to build an organization's capacity to draw on data instead of intuition when making decisions. They need a basis for understanding the processes by which DDDM activities—data collection, analysis, and use—fit together in nonprofit organizations and need to assess whether staff share an understanding of what DDDM means in the organization. Difficulties would arise if some stakeholders define data collection and analysis of organization performance as occurring when reviewing clients' case notes, whereas others define them as occurring when a trend analysis quantifies the number of services provided, for example. Such disparate views of DDDM would be manifested in a lack of congruency as to whether an organization collected, analyzed, and used data in decision making. Some staff might report that data are collected and used in decision making when case file information was meticulously recorded and used in service delivery, whereas other staff might report a lack of data use. Similar problems would arise if not all staff value using data in decision making. Gaps in the DDDM process might exist if some staff assess whether client needs are met based primarily on intuition because they believe quantitative data cannot capture client needs or quality of services, for example. Because DDDM is a process in which multiple individuals use data to make timely actions, such gaps could prevent data from being used effectively. Similarly, those wanting to affect change in DDDM practices must assess whether other stakeholders have a shared belief that using data to make decisions is more effective than using intuition. If a funder sees an organization as needing to build reliance on data when making decisions about service delivery and the organization staff currently believe they ground decisions in data (for example), attempts to build DDDM systems might be met with resistance.

We further the knowledge of how organizations driven by a social mission integrate data into their decisions by examining perceptions of an organization's DDDM activities and culture among multiple stakeholders. We conceptualize DDDM activities as sequential events in which organizations (1) collect the data needed to make decisions that enhance their services delivery and business operations, (2) analyze the data collected in a manner that they can be verified and used to make decisions, and (3) use data systematically to drive decision making. We conceptualize a DDDM culture as a shared belief in the value of using data in decision making and a shared understanding about an organization's DDDM processes, activities, and supports. We examine congruency in these perceptions about DDDM among all organization staff in a position to use data to make decisions and between organization staff and staff at a funder that is actively engaged in building DDDM in the organization.

B. Methods

We use information from stakeholders of eight nonprofit organizations to understand both perceptions of how data might be used to make decisions in organizations with a social mission and the extent to which the perceptions of it might vary among organization staff, and between organization and funder staff. The nonprofits in the sample were selected by a venture philanthropy foundation in an open competition to receive funding and technical assistance to develop or expand mission-driven businesses called social enterprises. The explicit expectation was that the nonprofits would develop or expand social enterprises based on the use of valid data. To strengthen the use of data in decision making, the funder convened monthly meetings with each organization to review business financials, performance, and social outcomes, and research and evaluation staff from the funder met with organizations to strengthen performance management systems and influence their use of data to fulfill a social mission.

The eight nonprofit organizations in the study each hosted social enterprises that comprised our sample. The social enterprises were distinct business ventures from the organizations and provided

employment opportunities for the organizations' clients. Unlike more traditional mission-driven organizations, social enterprises have dual missions: a business mission to generate revenue for financial viability and a social mission to use transitional employment and social supports to assist people with substantial barriers to employment to succeed in the labor market. Effective DDDM process for enterprises with both a business and social mission would include the use of data both to make business decisions that lead to financial viability (e.g., information on customer demand or satisfaction) and to make social mission decisions that maximize service provision (e.g., information on the skill development of workers).

The social enterprises operated nine different types of businesses, including street cleaning, lobby services, cleaning services, grounds keeping, pest control, and retail stores. They differed greatly in size (employing 10 to 500 workers annually), age (started between 1991 and 2012), and targeted populations (individuals with mental health disabilities, formerly homeless individuals, parolees and formerly incarcerated individuals, and at-risk young adults). The small number of organizations in the study, all of which were purposefully selected by a single funder, means that patterns identified should be considered preliminary and confirmed in future research.

When the venture philanthropic foundation selected the organizations for funding, it also supported a mixed-methods evaluation that included a survey about the DDDM activities and culture in the social enterprises (available in Appendix B). The survey was fielded as part of site visits conducted in April 2013. Site visitors asked staff involved in decision making about the social enterprise to complete a questionnaire with a 5-item Likert scale to rate statements about DDDM activities and culture, including:

- how often the social enterprise collects different types of data
- how often the social enterprise assesses different types of data
- how the social enterprise uses data
- the social enterprise's resources for and commitment to DDDM
- his or her beliefs about using data to make decisions.

All organization staff involved in making decisions about social enterprises completed a survey. The 36 respondents included 17 who considered themselves to be organization management, 14 who considered themselves social enterprise management, and 18 who considered themselves frontline or support staff (individuals reported multiple roles).

In May 2013, staff at the venture philanthropic foundation who provided funding and technical assistance around DDDM to the social enterprises were asked to complete the same instrument, enabling us to understand whether the staff providing assistance in using data to make decisions held the same perceptions about the DDDM as the organization's staff. These eight funder staff independently completed 32 questionnaires, one for each of the organizations to whom they provided technical assistance.

1. Measures of DDDM

We used information from these questionnaires to develop three summary indices of perceptions of DDDM: one index of DDDM activities and two of culture. The activities index captures the extent to which organizations collect, analyze, and use data in decision making. The two culture indices include one that captures the organization's culture around DDDM and one that

describes individuals' beliefs about using data in decision making (used for organization staff only). We quantified an organization's DDDM culture as one in which it committed the resources needed to collecting and analyzing data to facilitate informed data-driven decisions and quantified an individualized DDDM culture as one in which the staff believe that using data furthers the social and business missions of the social enterprise and are comfortable using data for those purposes.

We used a three-step process to develop each index. We first mapped answers (other than don't know) to each question onto a 5-point scale, with higher numbers indicating a greater inclination toward DDDM. Answers of don't know or otherwise missing responses were assigned to the average across all organizations and respondents (i.e., imputed using the overall mean value). We normalized each item to have a mean of 0 and a standard deviation of 1. We then summed the normalized scales across items and renormalized each sum so each index had a mean of 0 and standard deviation of 1. A higher value of an index indicates a higher perceived level of DDDM. Cronbach's alpha was 0.91 for the activities index (with a range of 0.89 to 0.97 when computed for each of the eight organizations individually), 0.89 for the organization culture index (range of 0.61 to 0.92), and 0.80 for the staff culture index (range of 0.71 to 0.98).

2. Analytic Methods

We used several different analyses to examine differences in perceptions of DDDM activities or culture. Initially, we compared average levels of DDDM activities and culture across all organizations using each component of the summary indices. This analysis builds an overall understanding of the general perceptions about DDDM for organizations in our sample and provides a cursory assessment of differences between organization and funder staff.

We built on this description with an analysis of variance (ANOVA) of the three indices and assessed variation between and among staff at different organizations in their perceptions of DDDM. We perform an ANOVA for organization staff (only), funder staff (only), and both organization and funder staff (together) to assess whether within-organization or between-organization differences drive variation in the indices. Because the F-statistic generated from the ANOVA captures the ratio of between-organization variation and within-organization variation, its significance ($p \leq 0.05$) indicates that differences in perceptions between organizations is greater than differences within organizations. We would expect this if organization staff held similar views about DDDM (assuming variation in perceptions across organizations). An F-statistic of less than 1 implies greater variation in perceptions within an organization than between organizations, and a statistic greater than 1 implies more variation between organizations than within organizations.

Finally, we used Fleiss' kappa to assess the similarity of staff views of an organization's DDDM. Fleiss' kappa is a statistic typically used to analyze interrater reliability when more than two individuals provide ratings. It captures how the observed agreement in ratings compares with the expected amount of agreement if ratings occurred at random. Because the kappa statistic relies on individuals rating the same issues, it is appropriate in assessing similarity of views of an organization's DDDM. We follow Landis and Koch (1977) and rate values of kappa less than 0.20 as indicating limited agreement. We would expect higher levels of kappa if staff agree about an organization's DDDM activities or culture.

C. Findings

Differences in the components that make up the DDDM indices foreshadow the overall variation in assessments of DDDM (Table 2). We found that most organization staff see their organization as undertaking some DDDM activities, but the extent of consensus about the

undertaking varies considerably by activity. For example, more than 90% of staff reported their organization collects data on an employee's job performance, but only about 55% reported data are collected on the life circumstances of workers after social enterprise employment (even though a central goal of these organizations is to improve workers' long-run circumstances).

Perceptions of organization staff suggest that data are often collected but less often analyzed. This might be expected given the sequential nature of DDDM (that is, data must be collected if it is to be analyzed). For example, although more than 90% said the organization collects data on job performance, only about 81% said someone in the organization analyzes it, and although about 64% said the organization collects information on the demand for business, only about 44% say someone analyzes it. Conversely, staff are generally more likely to report their organization uses data than to report data are analyzed: the percentages using data fall closer to percentages of data collection than data analysis. For example, about 89% of staff believed their organization uses data to improve job performance, and 67% believed it uses it to identify business opportunities. Importantly, about 70% believed discussions of data are turned into actions. One potential explanation for this difference is in what it means to analyze data.

In general, organization staff reported that they believe in using data to make decisions, but reported less confidence in their organization's ability to do so (Table 2). All organization staff said they believed that using data could improve services provided to employees and 83% said they believed using data builds an understanding of how the enterprise operates. Only 14% believed using data took away from spending time helping employees (the population they desire to help). Somewhat fewer staff believed the organization's culture supports DDDM: about 72% believed that using data is part of their organization's culture, 69% said that their organization uses data well, 50% said that the organization has sufficient resources to collect data, and 44% said that the organization has an efficient data collection system in place.

Table 2. Measures of DDDM Activities and Culture.

	<i>Organization staff</i>		<i>Funder staff</i>	
Number of observations	36		32	
Activities				
	Very Often or Often	Don't Know	Very Often or Often	Don't Know
Collect				
Before an employee starts work, we collect data on...				
Work skills	86.1	2.8	53.1*	34.4*
Need for job supports	83.3	0.0	46.9*	40.6*
Need for life supports	66.7	5.6	43.8	40.6*
While an individual is working, we collect data on...				
Job performance	91.7	5.6	53.1*	28.1*
Job development or job placement	88.9	5.6	34.4*	31.3*
Work assignments	86.1	8.3	59.4*	34.4*
Work or life stability supports	69.4	5.6	18.8*	34.4*
After an individual leaves work, we collect data on ...				
Employment status	77.8	0.0	37.5*	21.9*
Life circumstances	55.6	2.8	15.6*	37.5*
We collect data on...				
Demand for business	63.9	8.3	28.1*	56.3*
Customer satisfaction	55.6	13.9	12.5*	56.3*
Assess				
We assess data on...				
Performance during social enterprise employment	80.6	8.3	37.5*	28.1*
Employment after social enterprise employment	77.8	2.8	31.3*	34.4*
Skills and needs before social enterprise employment	72.2	2.8	34.4*	46.9*
Skills developed during social enterprise employment	69.4	8.3	28.1*	21.9
Supports during social enterprise employment	66.7	8.3	12.5*	40.6*
Demand for business	44.4	19.4	15.6*	56.3*
	Strongly Agree or Agree	Don't Know	Strongly Agree or Agree	Don't Know
Use				
Discussions of data are translated into actions				
We use data to...	69.4	5.6	37.5*	31.3*
Help improve job performance	88.9	2.8	28.1*	25*
Make the social enterprise more productive	86.1	8.3	31.3*	37.5*
Identify and develop needed supports	77.8	2.8	28.1*	34.4*
Increase efficiency	77.8	13.9	34.4*	40.6*
Help develop life skills	75.0	2.8	15.6*	31.3*
Identify and develop training programs	66.7	2.8	28.1*	25*
Identify business opportunities	66.7	13.9	18.8*	50*
Improve employment after social enterprise	61.1	8.3	18.8*	34.4*
Improve life circumstances after social enterprise	50.0	5.6	9.4*	40.6*
Culture				
	Very Often or Often	Don't Know	Very Often or Often	Don't Know
Organization culture				
I believe using data to make decisions is part of the organization's culture				
	72.2	0.0	31.3*	21.9*
I believe using data in this organization is not done well (inverse for index)				
	30.6	2.8	31.3	25.0*
In my organization, we...				
Have staff with expertise in data analysis	61.1	0.0	28.1*	28.1*
Have sufficient resources to collect data	50.0	0.0	28.1	28.1*
Have an efficient data collection system in place	44.4	0.0	21.9*	25.0*
Individual beliefs				
I believe that using data...				
Can improve services provided to employees	100.0	0.0	n.a.	n.a.
Benefits the work we do with employees	97.2	0.0	n.a.	n.a.
Makes me uncomfortable (inverse used for index)	8.3	0.0	n.a.	n.a.
Is not how to help our population (inverse used for index)	8.3	2.8	n.a.	n.a.
Builds an understanding of how the enterprise operates	83.3	0.0	n.a.	n.a.
Takes away time spent helping employees (inverse for index)	13.9	2.8	n.a.	n.a.

Note: An asterisk (*) indicates statistically significant difference between organization and funder staff at the $p \leq 0.05$ level. n.a. indicates that the measure was not used for the population.

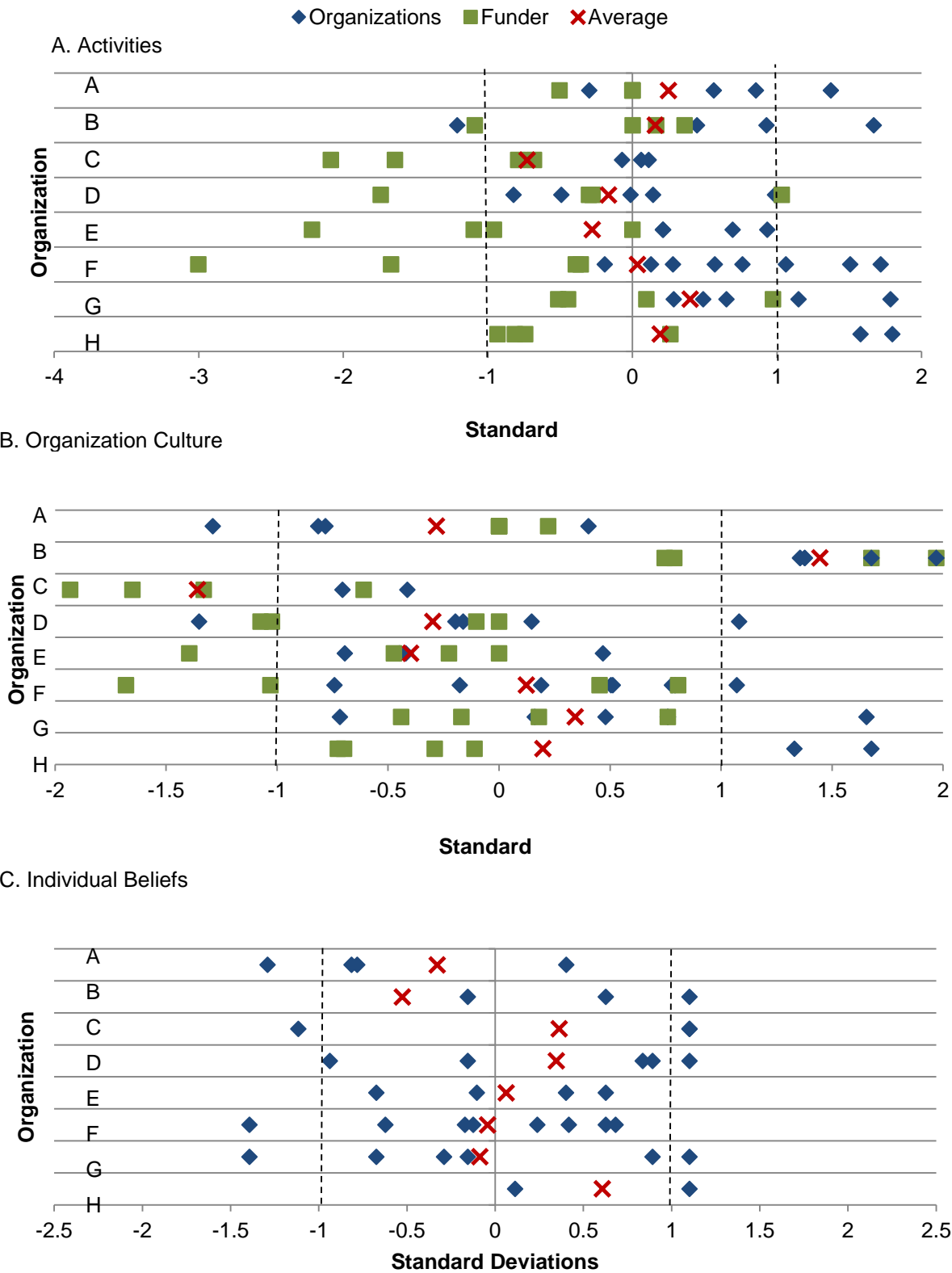
1. Different Perceptions of Staff and Funder

Figure 1 demonstrates that staff at the funder typically thought DDDM was less common and less culturally supported than organization staff had reported. This figure shows the average value of each index in each organization, as well as the range of index values. It reveals that funder staff frequently rated DDDM activities and culture one or more standard deviations below the average rating provided by organization staff. The vast majority of the funder staff rated DDDM activities or organization culture below the lowest rating of any organization staff member, except in organization B. In half the organizations (C, E, F, and H), all of the funder staff rated levels of activities below the lowest rating provided by organization staff. Fewer discrepancies seem to exist between funder and organization staff in perceptions of organization culture, although in one organization (H) all funder staff rated DDDM culture lower than all organization staff, as did all but one funder staff member in another organization (E).

Descriptive analysis of individual survey items confirms the disagreement between funder and organization staff about an organization's DDDM activities and culture (Table 2). For example, more than 86% of organization staff believed their organization collects data on an employee's work skills, and 83% believed their organization collects data on an employee's need for job supports (its social mission). In contrast, only 53% of funder staff believed the organization collects data on work skills, and only 47% believed it collects it on the need for job supports. Such differences occur on every item examined, with perceptions on using data to make business decisions being starkest. For example, about 56% of organization staff said their organization collects data on customer satisfaction, compared with 13% of funder staff. About 44% of organization staff and 16% of funder staff said the organization analyzes data on business demand, and about 67% of organization staff, but only 19% of funder staff, said the organization uses data to identify business opportunities. These differences, as well as the relatively large percentage of funder staff who say they don't know about DDDM in organizations, are particularly striking in light of the assistance the funder has provided the organization to build or strengthen their use of data in decision making.

Large differences also exist between funder and organization staff when evaluating the organizations' DDDM culture (Table 2). Fewer than one-third of funder staff but 72% of organization staff believed the organization has a culture that emphasizes the use of data to make decisions, with about 70% of both funder and organization staff believing DDDM is done well. Both populations identified insufficient resources for DDDM as an issue. For example, only about half of organization staff and 28% of funder staff believed that the organizations have sufficient resources to collect data for use in decision making.

Figure 1. Within and Between Organization Indices of DDDM



Note: Indices have a mean of 0 and standard deviation of 1 across respondents. The x axis measures standard deviations from the mean. Missing values are replaced with overall mean. Calculations are based on 36 surveys from organization staff and 32 surveys from funder staff.

2. Differences in Perceptions Across Organization Staff

The differences in the perceptions of an organization's DDDM activities and culture are not confined to differences between funder and organization staff: organization staff hold disparate views of DDDM activities and culture in their organization (Figures 1A and 1B), and their beliefs about DDDM differ widely (Figure 1C). The indexed responses of organization staff perceptions of DDDM activities and culture often have a range of more than 1.5 standard deviations within an organization (see Table 3 for precise ranges). Particularly inconsistent perceptions exist in organizations B, C, D, and G when we define inconsistency as the prevalence of organization staff rating DDDM more than one standard deviation above or below the organization mean. Such disparities exist with respect to DDDM activities in organization B, culture in organization D, and beliefs in C and G.

Perceptions of DDDM culture were more disparate than the perceptions of activities in most organizations, suggesting a particularly strong lack of consensus among these measures. The exceptions are organization B, in which all staff perceived a high level of organization culture, and organization C, in which all rated culture as below average (i.e., below the mean of 0). In three of eight organizations, staff perceptions of organization culture fall both above and below the average of all organizations, as was true in six of eight organizations for beliefs about the value of DDDM.

Formal statistical tests confirm differences in perceptions of staff about their organizations' DDDM activities and culture. Our ANOVA suggests that staff perceptions about DDDM activities and their beliefs about using data to make decisions are as different across organizations as they are within an organization: the only F-statistic significantly different than 1 is for organization culture (Table 3). Such patterns hold for both organization staff and funder staff perceptions of DDDM activities. The Fleiss' kappa (κ) analysis (Table 4) also confirms the dissimilarity of staff views of DDDM activities, culture, and beliefs: it is generally below 0.2, our cutoff for slight agreement. Only one organization (B) shows evidence of staff agreeing on the nature of the organization's culture ($\kappa = 0.37$). Staff in only one organization (C) have slight agreement ($\kappa = 0.29$) on which activities occur in support of DDDM. Individual beliefs about DDDM align somewhat more in three organizations (D, F, and H), for which the Fleiss kappa scores suggest slight agreement ($\kappa = 0.29$, $\kappa = 0.20$, and $\kappa = 0.33$, respectively).

Table 3. Within and Between Variation in DDDM Activities and Culture: Analysis of Variance

	Average level within an organization			Range in standard deviations		
	Activities	Culture		Activities	Culture	
		Organization	Individual beliefs		Organization	Individual beliefs
Total						
Number of observations	68	68	68	68	68	68
Organization						
A	0.25	-0.28	-0.33	1.88	1.69	1.95
B	0.16	1.45	-0.53	2.87	1.22	4.78
C	-0.73	-1.36	0.36	2.19	2.45	2.22
D	-0.16	-0.30	0.35	2.77	2.43	2.04
E	-0.28	-0.40	0.06	3.14	1.86	1.30
F	0.03	0.12	-0.04	4.71	2.75	2.07
G	0.40	0.34	-0.09	2.30	2.37	2.49
H	0.19	0.20	0.61	2.73	2.40	0.99
Across all organizations	0.00	0.00	0.00	4.80	4.84	4.78
ANOVA <i>F</i> -statistic	1.02	8.80	0.42	--	--	--
<i>p</i> -value	0.430	0.000	0.879	--	--	--
Organization staff						
Number of observations	36	36	36	36	36	36
Organization						
A	0.62	-0.62	-0.33	1.67	1.69	1.95
B	0.46	1.60	-0.53	2.88	0.61	4.78
C	0.03	-1.33	0.36	0.18	2.45	2.22
D	-0.04	-0.10	0.35	1.81	2.43	2.04
E	0.51	-0.27	0.06	0.72	1.16	1.30
F	0.73	0.37	-0.04	1.91	1.81	2.07
G	0.65	0.52	-0.09	2.27	2.37	2.49
H	1.69	1.50	0.61	0.22	0.35	0.99
Across all organizations	0.54	0.20	0.00	3.01	4.84	4.78
ANOVA <i>F</i> -statistic	1.53	6.23	0.42	--	--	--
<i>p</i> -value	0.199	0.000	0.879	--	--	--
Funder staff						
Number of observations	32	32	n.a.	32	32	n.a.
Organization						
A	-0.13	0.06	n.a.	0.50	0.22	n.a.
B	-0.14	1.30	n.a.	1.45	1.22	n.a.
C	-1.30	-1.38	n.a.	1.41	1.32	n.a.
D	-0.32	-0.55	n.a.	2.78	1.07	n.a.
E	-1.07	-0.52	n.a.	2.22	1.40	n.a.
F	-1.36	-0.36	n.a.	2.65	2.49	n.a.
G	0.03	0.08	n.a.	1.49	1.20	n.a.
H	-0.56	-0.46	n.a.	1.20	0.62	n.a.
Across all organizations	-0.60	-0.23	n.a.	4.04	3.90	n.a.
ANOVA <i>F</i> -statistic	1.85	5.84	n.a.	--	--	--
<i>p</i> -value	0.124	0.001	n.a.	--	--	--

Note: Level is measured as the average value of the index, with each index having a mean of 0 and a standard deviation of 1.

n.a. indicates that the measure was not used for the population.

Table 4. Within and Between Variation in DDDM Activities and Culture: Fleiss' Kappa

<i>Average Level within an organization</i>			
<i>Culture</i>			
	<i>Activities</i>	<i>Organization</i>	<i>Individual beliefs</i>
Total			
Number of observations	68	68	68
Organization			
A	-0.05	-0.06	0.00
B	0.11	0.28	0.03
C	0.04	0.11	0.09
D	0.05	-0.03	0.29
E	-0.06	-0.07	0.07
F	0.04	-0.02	0.20
G	0.01	0.09	0.15
H	-0.03	-0.10	0.33
Organization staff			
Number of observations	36	36	36
Organization			
A	0.10	-0.08	0.00
B	0.07	0.37	0.03
C	0.29	-0.14	0.09
D	0.08	-0.08	0.29
E	0.01	0.01	0.07
F	0.06	0.01	0.20
G	-0.03	0.07	0.15
H	-0.08	0.05	0.33
Funder staff			
Number of observations	32	32	n.a.
Organization			
A	-0.05	-0.13	n.a.
B	0.17	0.11	n.a.
C	0.02	0.37	n.a.
D	-0.07	-0.06	n.a.
E	-0.12	-0.08	n.a.
F	0.04	-0.08	n.a.
G	0.01	0.00	n.a.
H	0.05	-0.09	n.a.

Note: n.a. indicates that the measure was not used for the population.

D. Discussion

This study examined the perceptions of DDDM activities and culture in eight nonprofit organizations using survey information from (1) all staff within an organization who are in a position to use data to make decisions and (2) staff at a funding organization who worked directly with the nonprofit to increase use of data in decision making. We examined perceptions

of three types of DDDM activities (collecting, analyzing, and using data to make decisions) and two facets of DDDM culture (organization culture and staff beliefs about the value of DDDM). We show that perceptions about DDDM in each dimension differ greatly among staff at an organization and between funder and organization staff. Perceptions of DDDM activities and culture held by organization staff often had a range of more than 1.5 standard deviations within an organization, and staff perceptions about DDDM activities and their beliefs about using data to make decisions are as different within an organization as they are across organizations. Funder staff perceive that the organizations have far lower levels of DDDM activities and culture than the organization staff: The vast majority of staff at the funder rated an organization's DDDM activities or culture below the lowest rating provided by any organization staff.

One possibility for differences in perceptions of DDDM between funder and organization staff is that they define data in different ways. Frontline staff in the organizations often had a social work background, and discussions with them during site visits suggested that they interpret data to mean qualitative information (Maxwell, Rotz, Dunn, Rosenberg, and Berman, 2013). In contrast, discussions with staff at the funder (and some higher-level organization staff) suggest these individuals view data as quantitative information.

A lack of common understanding of data and DDDM among organization staff and between funders and organizations might limit efforts to use verifiable data to assess impacts of services provided by nonprofits and to scale promising social interventions. Results of this study can be used to identify three areas that might facilitate building DDDM systems within a mission-driven organization. First, the incongruity in perceptions of an organization's DDDM activities and culture suggests that funders or executives wanting to increase reliance on data in decision making should begin by developing a common, organizational understanding of what DDDM means, which DDDM activities should be and are—or are not—currently undertaken, and the value of DDDM. Before developing a DDDM investment or capacity-building plan, a champion of DDDM should clearly articulate his or her expectations and parameters. Such a plan should include an orientation to organization principles, an emphasis on the value DDDM can have on an organization's ability to execute its mission, and a clear description of an organization's vision for its target beneficiaries. The DDDM survey used in this study provides a basic structure for assessing DDDM in an organization that can be easily completed by an organization's line staff, managers, and executives and funder staff. The results of the survey might then be used to initiate a discussion of what DDDM means.

Second, funders must not take for granted that an organization will have a culture amenable to DDDM. Ultimately, funders and the organizations they support want to accomplish a similar social mission. Although some organizations see DDDM as an option to increase progress toward their goals and to provide funders with information to more effectively target their resources, others might not. Many of the organizations we studied did not have the culture in place to support DDDM, even though the funder was explicit in its requirement that data be used for decisions to build or expand enterprises for which they sought funding. In absence of a culture of grounding decisions in verifiable data, financial investments in DDDM might be unproductive, making it as important for funders and executives seeking change to build a foundation for an organizational learning culture as it is to provide financial resources for building DDDM activities. Although funders, in particular, can often easily finance an organization's new data system, they might struggle with the more complex and nuanced task of

influencing the organization's culture to use data. In this regard, they must be conscious of the power dynamics at play in the funder-grantee-beneficiary relationship and ensure that DDDM is supported by a culture of using the right data to make the right decisions that support the right outcomes in the right moment. When data are used to make high-stakes decisions that affect not just an organization's capacity to carry out its mission but also the people who depend on the essential services that an organization provides, funders and organizations must work closely together to ensure that data are defined and used properly in decision making.

Finally, findings from the study have important implications for researchers, evaluators, and those seeking to advance DDDM in mission-driven organizations. Disparities within organizations in staff perceptions of the use of data in decision making suggest that caution must be used in collecting and analyzing data on DDDM. The large variation in perceptions of DDDM in an organization shown in this study suggests that analysis based on information from a single respondent in an organization might produce different conclusions with a new draw from the distribution of respondents in the organization. Indeed, results from this study suggest that research based on surveys on DDDM collected from a single individual at each organization of interest might suffer from potentially large biases due to the mismeasurement of critical variables (i.e., attenuation biases). Researchers attempting to assess the use of data in decision making or to establish impacts of DDDM should therefore demonstrate the robustness of their results to different samples or provide evidence of the robustness of their results to different respondents in an organization.

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APPENDIX A.

ROBUSTNESS OF ANALYSIS TO ALTERNATIVE TREATMENT OF MISSING DATA

Table 2 shows that 12 to 38% of respondents answered *don't know* to our questionnaire items, with funder staff more likely to respond in this way than organization staff. Respondents were also more likely to report an answer of *don't know* in certain domains, especially when asked about data-driven decision making (DDDM) as it relates to the business mission of the social enterprise. Many potential approaches can be taken to deal with a large number of *don't know* responses. In this study's main analyses, we imputed all missing data based on the overall sample mean. But the large number of valid options for imputation suggests that we need to cross-validate our results using alternative methods. Appendix Table A.1 contains such alternate estimates for the calculations of Cronbach's alpha (used to validate our creation of DDDM indices) and the analysis of variance (ANOVA) tests of within versus between variations (used to demonstrate the lack of cohesion in an organization around DDDM). Estimates of Fleiss' kappa are not included in this analysis, as the statistic is calculated by treating missing values as their own categorical response.

The columns of Appendix Table A.1 each contain the results obtained by using a different strategy to handle missing data:

1. **Original imputation:** missing data are replaced with the average response across all respondents.
2. **Imputation alternative 1:** missing data are replaced with the average response within organization.
3. **Imputation alternative 2:** missing data are replaced with the average response by respondent type (staff at funder or organization).
4. **Imputation alternative 3:** missing data are replaced with the average response within organization by respondent type.
5. **Omit missing:** missing data are omitted from the analysis.
6. **Set missing to neutral:** missing data are replaced with the most neutral response option (e.g., neither agree nor disagree).

Our results are robust to the imputation method used. Cronbach's alpha changes little across methods of handling missing data and always implies the elements of our indices demonstrate internal consistency. The ANOVA suggests that staff beliefs about DDDM are as different within organizations as they are across organizations. Furthermore, the analysis always suggests higher variation in ratings of DDDM culture across organizations than within organizations. The precise imputation measure matters for only one conclusion: Some imputations enable us to conclude greater agreement among funder staff on DDDM activities within an organization than across organizations, implying that funder staff have more consistent beliefs about DDDM activities than our main analysis suggests. However, because such agreement still does not exist under any imputation method when data from organization and funder staff is pooled, our overall conclusions do not change with different methods of handling missing data.

Appendix Table A.1. Robustness of Results to Alternative Methods of Handling Missing Data

	<i>Original imputation</i>	<i>Imputation alternative 1</i>	<i>Imputation alternative 2</i>	<i>Imputation alternative 3</i>	<i>Omit missing</i>	<i>Set missing to neutral</i>
Cronbach's alpha						
Activities	0.91	0.91	0.93	0.93	0.92	0.93
Organization culture	0.89	0.89	0.89	0.89	0.90	0.89
Individual beliefs	0.80	0.80	0.80	0.80	0.80	0.80
ANOVA F-statistics (<i>p</i>-value)						
All respondents						
Activities	1.02 (0.430)	1.76 (0.112)	0.84 (0.562)	1.44 (0.208)	1.01 (0.435)	0.75 (0.627)
Organization culture	8.80 (0.000)	10.66 (0.000)	9.14 (0.000)	8.78 (0.000)	7.79 (0.000)	9.15 (0.000)
Individual beliefs	0.42 (0.879)	0.42 (0.880)	0.42 (0.879)	0.42 (0.880)	0.41 (0.887)	0.41 (0.888)
Organization staff						
Activities	1.53 (0.199)	1.57 (0.187)	1.40 (0.213)	1.61 (0.173)	1.51 (0.205)	1.53 (0.198)
Organization culture	6.23 (0.000)	6.13 (0.000)	6.21 (0.000)	6.07 (0.000)	6.20 (0.000)	6.28 (0.000)
Individual beliefs	0.42 (0.879)	0.42 (0.880)	0.42 (0.879)	0.42 (0.880)	0.41 (0.887)	0.41 (0.888)
Funder staff						
Activities	1.85 (0.124)	3.08 (0.019)	1.53 (0.205)	4.38 (0.003)	1.84 (0.134)	1.44 (0.234)
Organization culture	5.84 (0.001)	7.36 (0.000)	6.39 (0.000)	8.79 (0.000)	5.72 (0.001)	6.30 (0.000)
Individual beliefs	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Note: Level is measured as the average value of the index, with each index having a mean (\bar{X}) of 0 and a standard deviation of 1.

n.a. indicates that the measure was not used for the population.

APPENDIX B: DDDM SURVEY

DATA DRIVEN DECISION MAKING

INTRODUCTION

Welcome to the *Mathematica Job Study* survey on using data to make decisions! We invite you to participate in this survey and hope you will find it interesting to describe if and how your organization uses data. By completing this survey, you will help us better understand what types of information organizations like yours collect, review, and use to help support your social enterprise and its employees.

There are no wrong answers to these questions and this survey is in no way an assessment of your job performance, functioning, or role. Indeed, your identity will be kept confidential and will not be shared with anyone beyond the research team and your name will not be on the survey. The information you provide will be combined with information from other individuals to help provide a general portrait of how information is being used to make decisions about social enterprise employees and operations. You may refuse to answer specific questions or discontinue your participation at any time.

The survey asks questions about: (1) the types of information or data that your organization collects on your social enterprise employees; (2) the types of information your organization analyzes; (3) how your organization uses data; (4) resources available for data collection and analysis; (5) your views on data collection and use; (6) who leads and who participates in using data to make decisions; and (7) your additional comments as well as some information about you. The survey should take no more than 15 minutes to complete.

As you read through the survey, answer each question with the response that best fits your experience or opinion. For most questions this means selecting the circle associated with your answer; for a small number of other questions it means filling in a blank.

Please do your best to complete the survey in one sitting, though it is alright if you need to take a break. Answer the questions to the best of your abilities with the knowledge that you have about your organization. Do not compare your answers to the answers of coworkers or other people in the organization.

If you have any questions or concerns about this survey, feel free to contact Nan Maxwell, the project director, at nmaxwell@mathematica-mpr.com or 510-830-3726.

Thank you for your participation!

Before you begin, please record the date and time that you began the survey:

Date: |__|_| / |__|_| / |__|_|_|_|

Time: |__|_| : |__|_| AM / PM (circle)

GENERAL INSTRUCTIONS

PLEASE MARK ALL ANSWERS WITHIN THE CIRCLES PROVIDED

PLEASE READ EACH QUESTION CAREFULLY. There are different ways to answer the questions in this survey. It is important that you follow the instructions when answering each kind of question. Here are some examples.

MARK (✓) ONE FOR EACH QUESTION

If you rarely, if ever, book hotel reservations,

a. Please rate how often you do each of the following activities:

1. Before leaving on a trip, you or your family book hotel reservations

VERY OFTEN	OFTEN	NEITHER OFTEN NOR RARELY	RARELY	VERY RARELY
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MARK (✓) ONE FOR EACH QUESTION

If you strongly agree, you would check the

b. Please rate how much you agree or disagree with the following statements:

1. I love ice cream

STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A: The first set of questions asks about the data your organization COLLECTS on your social enterprise employees. Please mark the circle that describes how often your organization collects data.

MARK (✓) ONE FOR EACH QUESTION

	VERY OFTEN	OFTEN	NEITHER OFTEN NOR RARELY	RARELY	VERY RARELY	DON'T KNOW
1. <u>Prior</u> to an employee starting work in a social enterprise, we COLLECT data on his/her . . .						
a. Work skills: knowledge, skills, and abilities relevant to working in the social enterprise (for example, knowledge of landscaping or construction)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Need for supports necessary for work (for example, transportation, clothing, childcare)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
c. Need for supports outside work (for example, financial, legal, substance abuse or mental health counseling, physical health care)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
2. <u>While</u> working in the social enterprise, we COLLECT data on an employee's. . .						
a. Job performance (including attendance, reprimands or conflicts with customers, other employees or managers)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Work assignments (for example, type of work, hours or days worked)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
c. Job development or job placement services that each social enterprise employee receives	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
d. Work or life stability supports (for example, transportation, childcare, housing, substance abuse or mental health counseling, physical health) that each social enterprise employee receives	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
3. <u>After</u> an employee leaves the social enterprise, we COLLECT data on his or her. . .						
a. Life circumstances (for example, whether they have stable housing)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Employment status	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
4. In our organization, we COLLECT data on. . .						
a. Demand for new types of businesses or expansion of current businesses	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d

MARK (✓) ONE FOR EACH QUESTION

	VERY OFTEN	OFTEN	NEITHER OFTEN NOR RARELY	RARELY	VERY RARELY	DON'T KNOW
b. Customer satisfaction with our product or services	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d

B: The next questions ask about the information or data that your organization ASSESSES.

Assess means systematically counting up the characteristics of employees (such as the number enrolled or number working), or looking at trends and patterns in the information you have (such as attendance or most frequently needed supports). Data assessment is one step beyond data collection. It means that you or your organization have some way of organizing and examining the data that you collect.

Please mark the circle next to the answer that best describes how often your organization assesses information.

MARK (✓) ONE FOR EACH QUESTION

	VERY OFTEN	OFTEN	NEITHER OFTEN NOR RARELY	RARELY	VERY RARELY	DON'T KNOW
1. In our organization we ASSESS data on . . .						
a. Employee skills and supports needs <u>before</u> they start in the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Employee job performance <u>while</u> they work in the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
c. Work and life stability support services that employees use <u>while</u> they are employed in the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
d. Development of employee skills <u>while</u> they are employed in the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
e. Employment of employees <u>after they leave</u> the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
f. Local demand for new types of businesses or expansion of our current business(es)	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
g. Customer satisfaction with our product or services	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d

C: The next set of questions asks about how your organization USES data. Please mark the circle that best describes how much you agree or disagree with each statement.

MARK (✓) ONE FOR EACH QUESTION

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DON'T KNOW
1. In my organization we USE data to . . .						
a. Identify and develop training programs for social enterprise employees	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Identify and develop work or life stability supports that social enterprise employees might need	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
c. Help social enterprise employees improve their job performance	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
d. Help social enterprise employees develop their life skills	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
e. Improve employment outcomes for employees <u>after they leave</u> the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
f. Improve life circumstances of employees <u>after they leave</u> the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
g. Make the social enterprise environment more productive	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
h. Make the social enterprise environment more supportive	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
i. Help managers work with social enterprise employees	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
j. Identify business opportunities for the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
k. Increase efficiency of business operations in the social enterprise	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
l. Provide funders with information they need	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
m. Explain or justify our decisions and actions about our social enterprise(s) to our board members	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d

D: This set of questions asks about the RESOURCES AVAILABLE for data collection and analysis in your organization. Please mark the circle that best describes how much you agree or disagree with each statement.

MARK (✓) ONE FOR EACH QUESTION

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGRE E	STRONGLY DISAGREE	DON'T KNOW
1. In my organization, we . . .						
a. Have an efficient data collection system in place	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Have sufficient resources to collect data	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
c. Have staff with expertise in data analysis	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
d. Translate discussions of data into actions	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
e. Focus on quality product/service and customer satisfaction	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
f. Focus on developing social enterprise employees into productive employees	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d

E: This set of questions asks about YOUR VIEWS of data collection and use. Please mark the circle that best describes how much you agree or disagree with each statement.

MARK (✓) ONE FOR EACH QUESTION

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DON'T KNOW
1. I BELIEVE that using data. . .						
a. To make decisions is part of the culture of this organization	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
b. Can improve services we provide to employees	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
c. Takes away from the time spent helping employees	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
d. Builds an understanding of how the social enterprise operates	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
e. Makes me uncomfortable	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
f. Benefits the work we do with our employees	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
g. Runs counter to my experience of how to help our target population	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
h. Is not done well in this organization	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d
i. Should be required by funders to support their funding decisions	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> d

F: The next set of questions asks you about who is leading and who is participating in using data to make decisions. Please complete the line or mark the circle that best describes your answer.

1. Who in your organization is LEADING the effort to use data to make decisions about how the social enterprise operates?

Please provide the title(s) and a brief description of his/her/their role(s) in the organization:

- No one
 Don't know

2. What type of individuals in your organization uses data to make decisions?

PLEASE CHOOSE ALL THAT APPLY

- Organizational management
 Social enterprise management
 Frontline staff (staff working directly with social enterprise employees)
 Everyone in the organization
 Other (*please specify*) _____
 No one
 Don't know

G: The final section allows you to provide comments about using data in your organization and asks a few questions about you.

1. How can your organization improve the way it uses data to make decisions about your social enterprise employees and operations?

2. We would like to make sure that we obtain responses to this survey from a variety of individuals throughout each organization. We are therefore asking you to provide the following information.

a. Your role in your social enterprise(s)

PLEASE CHOOSE ALL THAT APPLY

- 1 Organizational management
2 Social enterprise management
3 Frontline staff (staff working directly with social enterprise employees)
4 Support staff (staff providing employee work or life stability supports)
5 Other (*please specify*) _____

b. Months or years working at organization (for example, 6 months, 2 years, 18 months):

c. Highest level of education

PLEASE CHOOSE ONE ONLY

- 1 High school
2 Some college
3 College graduate (Bachelor's degree)
4 Graduate degree

d. Gender

PLEASE CHOOSE ONE ONLY

- 1 Male
2 Female
3 Other

e. Age

PLEASE CHOOSE ONE ONLY

- 1 25 or younger
2 26 to 39
3 40 to 55
4 56 or older

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