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Nonprofit Vulnerability Across Communities: An Examination of San Diego County

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Executive Summary

Assessing nonprofit financial health is important for strategic planning, management, and to inform public policy. The nonprofit sector is a vital link in the complex web of social, health, and human services delivery in the United States; and indeed, in many vulnerable communities, it is often the only link to services (Allard, 2009). Thus, examining the financial health of nonprofits will also give us a deeper understanding of how well, or poorly, communities are served. Additionally, at the organization level, given the difficulty in measuring nonprofit output and performance (e.g., social and human services cannot be easily quantified; Anheier, 2005), financial metrics can serve as a relatively objective and more tangible measure of nonprofit quality.

This study integrates two levels of analysis: community and organizational levels. Examining measures of financial health at the organizational level may identify organizations that are at increased financial risk; and examining aggregate variations across communities may identify underserved communities at increased risk of loss of vital social, health, and human services.

The primary dependent variable used for this study is "months of unrestricted liquid net assets" (MULNA). The formula used to calculate "months of unrestricted liquid net assets" MULNA is a two step process and utilizes three related financial metrics. The underlying metric used to calculate MULNA is "unrestricted liquid net assets" (ULNA) and is defined as "net assets minus positive equity in property and equipment." Positive equity is calculated by taking the sum of "land, building, and equipment" (LBE) and "investment in land, building, and equipment" (Invest_LBE) and subtracting property and equipment related debt (e.g., the sum of mortgage, loans, and tax exempt bonds). The result is total property & equipment equity. Property & equipment equity, however, may take on negative values, as the sum of related debt may be greater than the value of land building and equipment. Thus, in calculating unrestricted liquid net assets, only values greater than zero is considered. Subtracting negative property & equipment equity will result in erroneously overstating unrestricted liquid net assets, thus P&E equity will only take on values of zero or greater. P&E equity is then subtracted from unrestricted net assets to arrive at unrestricted liquid net assets (ULNA). Once ULNA is

calculated, determining MULNA is a simple procedure. ULNA is divided by pre-depreciation expenses (functional expenses minus annual depreciation) and multiplied by 12.

The data used for this paper is drawn from the National Center for Charitable Statistics (NCCS) 2005 Digitized Data file which contains 501c(3) public charities that filed a Form 990 or 990-EZ from 1998-2003. The Digitized Data files contain variables from every line of the pre-2008 Form 990. For demonstration purposes, this paper will only examine a cross section of this data, using 2003, the most recent year in the dataset.

The geographic scope for analysis is San Diego County, California. Specifically, the geographic units of analysis are zip codes. The model was fit using a random inter a multilevel random intercepts model.

Results suggest that the majority of nonprofits would not be able to withstand a financial shock that disrupt revenue streams for any length of time. Nearly 62% of all organizations have MULNA of zero or less, that is, organizations that do not have enough assets to cover a single month worth of operating expenses given a financial shock. Only 15% of organizations have MULNA of six months or more

and only 9% for one year or more. This also varies across zip codes in San Diego County with the least vulnerable organizations located in urbanized areas where needs maybe the greatest.

Educational institutions, including higher education institutions, have a greater MULNA compared to human service nonprofits. This may be due to the higher amounts of earned income in the form of tuition. Earned income, as most scholars point out, are unrestricted and allow organizations to use these funds at their discretion (Weisbrod, 1998; Young, 2007; Tuckman & Chang, 2006). Public and societal benefits may also have higher percentage of earned income or even donative income from individuals in the form of membership dues (i.e., Rotary clubs along with many fraternal organizations are categories as public and societal benefit organizations). Human service organizations, in contrast, may offer a broader range of services and thus serve a broader range of clientele. Human service organizations may also rely, to a larger extent on government and foundation grants and thus restricted revenue devoted to programs rather than any type of expenses (i.e., salary or administrative costs).

In relation to other types of revenue sources, it was expected that government grants will not contribute to increased MULNA as government grants are often program specific and restricted. As expected, direct public support in the form of individual donations is positively and significantly related to the dependent variable. Program service revenue or earned income was not significant and this was unexpected; this may be due, however, to under reporting of earned income.

This study is an exploratory and preliminary analysis but an important first step in assessing variations in nonprofit financial health across communities in San Diego County. Limitations of the analysis and data are discussed.

Introduction

Assessing nonprofit financial health is important for strategic planning, management, and to inform public policy. The nonprofit sector is a vital link in the complex web of social, health, and human services delivery in the United States; and indeed, in many vulnerable communities, it is often the only link to services (Allard, 2009). Thus, examining the financial health of nonprofits will also give us a deeper understanding of how well, or poorly, communities are served. Additionally, at the organization level, given the difficulty in measuring nonprofit output and performance (e.g., social and human services cannot be easily quantified; Anheier, 2005), financial metrics can serve as a relatively objective and more tangible measure of nonprofit quality.

This study integrates two levels of analysis: community and organizational levels. Examining measures of financial health at the organizational level may identify organizations that are at increased financial risk; and examining aggregate variations across communities may identify underserved communities at increased risk of loss of vital social, health, and human services.

Nonprofit financial health can be measured in a number of ways such as the use of financial ratios, measures of efficiency, or operating reserves (Bowman, 2011; Greenlee & Tuckman, 2007; Tuckman & Chang, 1991; Blackwood & Pollack, 2009). This study will focus on a measure that examines "months of liquid net assets" (MULNA)[1] also referred to as nonprofit operating reserves. This financial metric refers to the number of months that an organization can cover its functional expenses given a sudden financial shock that may disrupt revenue sources. This metric is similar to ones suggested by the Nonprofit Operating Reserves Initiative (2008)[2] and used by Blackwood and Pollack (2009).

Using the National Center for Charitable Statistics Digitized Data file for 2003, we model MULNA in San Diego County, California, by major subfields (e.g., health, human services, education, etc.) and also examine both organizational correlates (i.e., age, revenue structure, etc.) and zip code level demographic correlates (i.e., household income, unemployment rate, etc.). The paper will begin with a brief literature review on the geographic and community level studies of the nonprofit sector followed by a description of the variable and formula used to measure MULNA. This will be followed by a presentation of the model results and discussion of findings.

[1] We would like to acknowledge the Nonprofit Finance Fund (NFF) for sharing this formula. For more information on the Nonprofit Finance Fund, visit (http://nonprofitfinancefund.org/).

[2] Further information about the Nonprofit Operating Reserves Initiative (NORI) can be found at http://www.nccs2.org/wiki/index.php?title=Nonprofit_Operating_Reserves

Literature Review

Geographic and community level studies

From both a theoretical and a practical perspective, nonprofit organizations are said to positively benefit communities in a number of ways. Indeed, as providers of services, nonprofits supply many types of social and community programs. As local support systems, nonprofits empower citizens to engage in collective action. As community advocates, nonprofits defend the rights of those in the minority and those who are less fortunate. And as promoters of democracy and civic virtues, nonprofits create opportunities for community involvement. As a result of these positive benefits, it is generally believed that nonprofit organizations are deeply embedded within the fabric of our everyday lives.

Not surprisingly, then, in recent years public officials have often turned to nonprofits, particularly to human services nonprofits, in order to address issues of poverty and other forms of social inequality. With the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, for instance, government agencies devolved much of the responsibility for social programming and the implementation and administration of welfare benefits to nonprofit human services agencies (Allard, 2009). Indeed, since these organizations are generally considered to be "well known, trusted, and connected" to the needs of communities, policymakers argued that individuals—particularly poor individuals—were likely to "appreciate and benefit from the more humane, compassionate, and holistic service approach" that nonprofit human services organizations were believed to offer (Kissane, 2010, p. 633). Ultimately, this has meant that nonprofit organizations in the human services sub-sector are now responsible for meeting many of society's most critical needs. In fact, government funding for social service programs has grown to exceed welfare cash assistance by nearly twenty-fold (Allard, 2009).

Despite the increased role that nonprofit human services agencies now occupy within communities, studies have consistently shown that both the quantity and quality of these organizations often vary considerably across localities. Some studies, for instance, have shown that affluent communities often have significant human services resources (Bielefeld, 2000; Wolch & Geiger, 1983), while low-income communities often lack the same variety of human services resources found within these wealthier areas (Allard, 2009; Grønbjerg & Paarlberg, 2001; Joassart-Marcelli & Wolch, 2003). Thus, it is possible that the positive benefits thought to be associated with nonprofit organizations—and with human services nonprofits in particular—may not always be actualized, or even attainable, in all areas.

Some communities have been found to have a highly dense nonprofit sector with significant voluntary resources, while other communities have been found to have just the opposite. For instance, in examining public access to social service providers, Allard (2009) found that high poverty neighborhoods in Chicago, Los Angeles, and Washington DC had fewer (by nearly half as many)

social service providers than low poverty areas. Similarly, Grønbjerg and Paarlberg (2001), in their study of community variations in the size and scope dimensions of the nonprofit sector across Indiana counties, found that fewer nonprofits were located in low-income areas of the state. Furthermore, in examining the nonprofit sectors of several US metropolitan areas, Bielefeld (2000) found that not only did areas with higher poverty rates have lower quantities of human service nonprofits, but that these areas were also home to nonprofit sectors that consisted of far less resource-rich nonprofits in general.

Community variations in the quality of nonprofit resources have been shown to exist across communities as well. Unfortunately, however, there are no agreed upon indicators regarding what does, or should, constitute nonprofit quality. Therefore, researchers have typically relied on simple financial metrics as crude approximations for quality (Joassart-Marcelli & Wolch, 2003; Lee, Wolch, & Walsh, 1999; Peck, 2008). Joassart-Marcelli and Wolch (2003), for instance, examined the amount of nonprofit expenditures for anti-poverty nonprofit organizations across southern California cities and found that even though some poor communities in these cities had a high number of nonprofits per capita, the degree of social distress in many of these areas often resulted in lower amounts of nonprofit expenditures being spent per poor person. Similarly, in an earlier analysis, Lee, Wolch, and Walsh (1999) found that even though low-income communities in southern California had more social service programs per capita, the extensive poverty in many of these areas often meant that they were far less service-rich than their more affluent neighbors.

Given these differences in the quantity and quality of nonprofits, in recent years there has been an increased focus on the geographies of nonprofit activity, particularly in the area of social and human services. This increased focus has largely been stimulated by the onset of government restructuring due to policies of privatization and devolution, where the role of the nonprofit sector in the delivery of services has dramatically expanded (Allard, 2009). In fact, in many instances nonprofits now serve as an alternative to public service delivery (Wolch, 1999). With the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, in particular, the administration of welfare benefits shifted from primarily monetary assistance in the form of cash (i.e., a government welfare check) to primarily non-monetary assistance in the form of services provided by nonprofits (Allard, 2009).

One of the primary objectives of this shift was to create a governing system that was more efficient and better positioned to accommodate local preferences. Indeed, since it has often been thought that nonprofit organizations are in tune with the needs of local communities (Wolpert, 1993), nonprofits were expected to be better able than government, in particular, to cater to the demands of community residents. Thus, proponents of welfare reform argued that nonprofit organizations had both "the organizational capacity and connections to local communities" that [were] needed in order to "deliver responsive and effective social services in a cost-efficient way" (Trudeau, 2008, p. 2806).

Despite these claims, differences in the quantity and quality of nonprofit organizations have been shown to pose a number of implications for the accessibility and utilization of nonprofit services. Several researchers, for instance, have found that social service organizations are not always located in areas where needs are often greatest (Allard, 2009; Allard, Tolman, & Rosen, 2003; Grønbjerg & Paarlberg, 2001)—thus, preventing many poor individuals from utilizing social services (Allard, 2009; Allard, Tolman, & Rosen, 2003; Bielefeld, Murdoch, & Waddell, 1997). Therefore, several scholars have begun to suggest that the varied landscape of nonprofit activity may be preventing nonprofit organizations from effectively aiding in the relief of social distress (Allard, 2009; Wolch, 1999). Mohan, Twig, Jones, and Barnard (2006), for instance, pointed out that "the safety net represented by the voluntary sector has a 'mesh of varying size,' so that the probability of slipping through it varie[s], depending on location" (p. 267).

Nonprofit finance and measures of health

Perhaps due to data availability and consistency, efforts to document nonprofit activity and health have often focused on financial measures (Salamon, 2003; Anheier, 2005). Advances in nonprofit theory have provided a foundation to understand how, as "multiproduct" firms, nonprofits can be financed, how outputs relate to various revenue streams, and how revenue streams interact (Young, 2007). Specifically, Tuckman and Chang (1991) offered a methodology to assess financial vulnerability that revolves around four criteria or measures: (1) equity balances or lack thereof; (2) revenue concentration; (3) administrative costs; and (4) operating margins. In addition, more conventional measures include a battery of financial ratios that, taken together, provides a snap shot of financial health (Bowman, 2011; Anthony & Young, 2003). The approach taken in this study is related to Tuckman & Chang's (1991) equity balance criteria and also draws from financial ratios between assets and expenses. The measure used in this study is necessarily exploratory and is by no means comprehensive, but it offers an alternative lens by which to view nonprofit financial health and vulnerability. In addition, as far as the authors are aware, no study has applied this specific measure of financial health in a systematic way.

Measures

The primary dependent variable used for this study is "months of unrestricted liquid net assets" (MULNA). The formula used to calculate "months of unrestricted liquid net assets" MULNA is a two step process and utilizes three related financial metrics. The underlying metric used to calculate MULNA is "unrestricted liquid net assets" (ULNA) and is defined as "net assets minus positive equity in property and equipment." Positive equity is calculated by taking the sum of "land, building, and equipment" (LBE) and "investment in land, building, and equipment" (Invest_LBE) and subtracting property and equipment related debt (e.g., the sum of mortgage, loans, and

tax exempt bonds). The result is total property & equipment equity. Property & equipment equity, however, may take on negative values, as the sum of related debt may be greater then the value of land building and equipment. Thus, in calculating unrestricted liquid net assets, only values greater then zero is considered. Subtracting negative property & equipment equity will result in erroneously overstating unrestricted liquid net assets, thus P&E equity will only take on values of zero or greater. P&E equity is then subtracted from unrestricted net assets to arrive at unrestricted liquid net assets (ULNA). Once ULNA is calculated, determining MULNA is a simple procedure. ULNA is divided by pre-depreciation expenses (functional expenses minus annual depreciation) and multiplied by 12 (see Appendix for detailed explanation and formula notation)[3].

Data, Geographic Scope, and Analysis Procedure

The data used for this paper is drawn from the National Center for Charitable Statistics (NCCS) 2005 Digitized Data file which contains 501c(3) public charities that filed a Form 990 or 990-EZ from 1998-2003. The Digitized Data files contain variables from every line of the pre-2008 Form 990. For demonstration purposes, this paper will only examine a cross section of this data, using 2003, the most recent year in the dataset.

The geographic scope for analysis will be San Diego County, California. Specifically, the geographic unit of analysis will be zip codes. Zip codes were chosen over other administrative boundaries such as city or census tracts because zip codes provided a sufficient amount of variation in the outcome measure (i.e., MULNA). City boundaries, particularly in large urban areas such as San Diego County capture too much variation and census tracts are too small to detect variation as there are at most only two-three centers per tract and usually fewer.

The relationship between the dependent variable (MULNA) and organizational level covariates and the variation across zip codes will be estimated using a multilevel random intercepts model. We fit a series of logistic random effects models with no predictors and all combinations of exactly two random effects from among Census block, Census tract, city, zip code and county to identify the best model for the nesting structure. We settled on a model with organizations nested within zip codes as the best fitting model with respect to the random effects estimates. That is, the average cluster at both the census block and tract level resulted in very little significant variation given the small cluster sizes. Zip codes represented an appropriate cluster size with an average of 13 organizations per zip code and thus contained adequate "within" group variation.

[3] We would like to thank Garret Brinkerhoff from the Nonprofit Finance Fund (NFF) for sharing this formula with us and Karla Salazar, director of the Los Angeles program of the NFF for introducing me to Garret.

Results

Descriptive Statistics

To illustrate the distribution of the number of organizations and the dependent variable across the geographic unit of analysis (i.e. zip codes) across San Diego County, Maps 1 & 2 show the density of and average MULNA for human service organizations by zip codes. The Maps show obvious variation in both the density and the average MULNA, the significance of this variation will be tested in the multilevel model. Higher density of organizations and greater average months of unrestricted liquid net assets are represented by the darker shades and suggests that both zip codes with a greater number of and less vulnerable human service organizations are located within the city of San Diego (i.e., urbanized areas) and lower density of organizations with higher financial vulnerability (i.e., lower average MULNA) are located in around the periphery of the city.

Tables 1-7 shows the summary statistics of the dependent and control variables for all organizations and by major subfields. Across the entire sample, average organizational age as of 2003, was 18 years and ranged from organizations as young as a few months old (0.8 years) to one organization 93 years old (a human service organization providing assistance to the elderly). There are also wide ranges for both ULNA and MULNA with averages of $903,000 and four months respectively.

By subfield, there is also variation across the dependent and control variables. Not surprisingly, hospitals and higher education institutions represent the largest, on average, as measured by ULNA and MULNA. There are also obvious outliers that will be excluded form the final model. In terms of revenue sources, measured as a percentage of total revenue, income from government grants represent the smallest percentage on average across all subfields. Income from direct public contribution (i.e., individual and foundation donations) and from program service revenue (i.e., earned income and fees for service) represent, on average equal percentages of total revenue at 26-27% or slightly over one quarter of total revenue. These three revenue sources were chosen simply as measures of the major revenue sources and for the purposes of this analysis, other revenue sources such as indirect contributions from campaigns from third party fund raisers, member dues, rental and invest income, or other commercial income, were not considered.

Multivariate Analysis

Table 8 presents the results of the multilevel random intercept model. As suggested in Tables 2-6, there are outliers that may bias the estimates, thus the final model captures only organizations with greater or less then 36 months (e.g, three years) or MULNA. This is of course a subjective range, however, anecdotal evidence suggests that operating reserves of at least three years is more than sufficient to sustain an organization through any sudden financial shocks. At the other end, there is of course, no established threshold for determining when an organization is in financial trouble given a sudden loss of

revenue via a financial shock. It can be argued that even less then one month of unrestricted liquid net assets is sufficient to close down an organization. Thus, for substantive purposes, there is not much difference between an organization having less then one month of unrestricted liquid net assets versus an organization having ULNA that cannot cover more than a month; for balance, this model used as a cutoff 36 months on either extremes. Models were also tested for 12 and 24 months at both ends and did not result in changes in the fixed effect estimates (e.g., coefficient estimates for the covariates).

Controlling for organizational age and revenue source, and excluding outliers, the final model estimates that compared to human service organizations, education, higher education, and public and societal benefit organizations have greater months of liquid net assets compared to human service organizations. No significant effects were found with the age variable. In terms of relationship to the major revenue sources, percentages of direct support in the form of donations were positively related to MULNA controlling for subfield, organizational age, and the other revenue sources. Finally, the random effects estimates (e.g., variation in the dependent variable after controlling for organizational level covariates) suggest that residual variation remain unaccounted for in the model across zip codes.

Discussion

This preliminary analysis did not reveal any surprising findings but is an important first step in applying this financial metric and also in assessing variations across communities in San Diego County. Perhaps the one interesting, however not surprising, finding is that the majority of nonprofits would not be able to withstand a financial shock that disrupt revenue streams for any length of time. Nearly 62% of all organizations have MULNA of zero or less, that is, organizations that do not have enough assets to cover a single month worth of operating expenses given a financial shock. Only 15% of organizations have MULNA of six months or more and only 9% for one year or more. This also varies across zip codes in San Diego County with the least vulnerable organizations located in urbanized areas where needs maybe the greatest.

Given that unrestricted liquid net assets stem from either unrestricted donations or earned income, we would expect that organizations with higher percentages of either of these two sources would have both higher unrestricted liquid net assets and months of liquid net (with the caveat that functional expenses are not disproportionate to assets or revenue of course). That educational institutions, including higher education institutions, have a greater MULNA compared to human service nonprofits is not surprising if we consider that they traditionally have higher amounts of earned income in the form of tuition. Earned income, as most scholars point out, are unrestricted and allow organizations to use these funds at their discretion (Weisbrod, 1998; Young, 2007; Tuckman & Chang, 2006). Similarly, public and societal benefits may

also have higher percentage of earned income or even donative income from individuals in the form of membership dues (i.e., Rotary clubs along with many fraternal organizations are categories as public and societal benefit organizations). Human service organizations, in contrast, may offer a broader range of services and thus a serve a broader range of clientele. Human service organizations may also rely, to a larger extent on government and foundation grants and thus restricted revenue devoted to programs rather than any type of expenses (i.e., salary or administrative costs).

The relationship between organizational age and MULNA is somewhat surprising, as older organizations are expected to be more stable and thus have more reserves, assets, and thus potentially greater MULNA. This simple age variable, however, may mask differences between thresholds of ages. For example, like many new corporations and businesses, nonprofits may experience greater instability during its first few years of operation and then see steady growth and then plateau as it gets older, the field becomes more mature, or the organization reaches a maximum growth point. The exact thresholds of organizational age in which these changes occur, however, is not known. Thus, in order to more accurately capture the age effects, splines would have be created at different points, such as five years, 10 years, or 15 years. This may provide a more accurate estimate of the effect of organizational age.

Finally, the effects of the three revenue sources were expected and unexpected. It was expected that government grants will not contribute to increased MULNA as government grants are often program specific and restricted. Direct public support in the form of individual donations is positively and significantly related to the dependent variable, and this finding was expected. While individual donative revenue maybe intended for specific purpose by the donor, this often cannot be enforced and the individual donor has no way of monitoring how funds will be used, thus it can be considered unrestricted revenue. Program service revenue or earned income was not significant and this was unexpected as this is also a form of unrestricted revenue and can be used for any purpose as in forprofit organizations. As a percentage of total revenue, program service revenue represents nearly one quarter, on average, of total revenue, thus it was surprising that this did not result any significant correlation. One possible explanation is that program service revenue is often taxable if it is not generated from activities related to the organization's social mission, thus there may be incentives for organizations to mis-represent actual amounts of program service revenue, by under reporting the actual amount of earned income.

Limitations

As an exploratory analysis and a first step in applying this metric, the study has limitations. First, at the organizational level, this model only examined a limited set of organizational covariates and did not consider interaction effects. It is well documented, for example, that health

organizations have a higher percentage of earned income versus government grants or direct public support. Thus interacting the subfield categories with both the age and revenue variables would paint a more nuanced and detailed picture of the dependent variable. Additionally, other covariates to consider may be financial ratios (not used to calculate MULNA) or Tuckman and Change (1991) measures of financial vulnerability such as revenue concentration or administrative costs.

At the zip code level, the multilevel model did not consider zip code level covariates at this time. Zip code level covariates such as median household income, measures of poverty, demographic measures of age and ethnicity, which may serve as a proxy for demand of specific services, may decrease the residual variance in MULNA across zip codes. A next logical step in model building will thus incorporate zip code level covariates. Next, given that the model did not consider zip code level covariate, it also could not examine cross level interactions. Cross level interactions may examine zip code level covariates effect on the relationship between specific organizational level predictors and the dependent variable. For example, organizations located in zip codes with higher concentrations of poverty may rely less on earned income and more on government grants and subsidies and this may explain lower levels of MULNA in impoverished areas.

Finally as with all cross section analysis studies, we are limited with respect to the conclusions we can draw about changes in the dependent variable. The limiting assumption that we make is that organizations do not react to decreases in unrestricted net assets by changing the other sources of revenue (either increasing or decreasing it). For example an organization may devote more time to fundraising if it views a decreasing trend in unrestricted liquid net assets, thereby temporarily increasing its functional expenses and thus also temporarily decreasing its MULNA. It is thus not possible to consider these scenarios with cross sectional data and a future analysis will model the full longitudinal dataset.

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Table 1. Summary Statistics of Variables of Nonprofit Organizations, San Diego County, CA, 2003

	Obs	Mean	Std. Dev.	Min	Max
organizational age (years)(a)	2170	17.62	16.11	0.08	92.98
Unrestricted liquid net assets (ULNA) (in millions)	2170	0.9	13.8	-253	352
Months of unrestricted liquid net assets (MULNA)(b)	2158	3.86	79.89	-518.58	2257.99
Percent direct support(c)	2163	0.27	0.6	-8.83	19.22
Percent government grants(c)	2163	0.09	0.26	-4.73	1.04
Percent program service revenue(c)	2163	0.26	0.4	-4.39	4.22

Source: NCCS Digitized Data Files 2005
(a) Calculated as the number of days between receiving 501c(3) status (e.g., rule date) and Dec 31, 2003 divided by 365
(b) Dependent Variable
(c) As a percentage of total revenue

Table 2. Summary statistics of unrestricted liquid net assets by subfield, San Diego County, 2003 (in millions)

	Obs	Mean	SD	Min	Max
Arts, culture, and humanities	264	0.37	2.98	-7.12	41.9
Education, higher	12	25.5	60.2	-1.05	211
Education	434	0.12	2.67	-41.8	30.6
Hospitals	10	67.5	163	-253	352
Environment	86	0.28	4.07	-13.4	26.5
Health	245	1.12	9.4	-8.56	143
Human services	687	0.22	2.52	-31.5	33.5
International	63	0	0.67	-4.65	1.65
Mutual benefit	2	0.01	0.01	0	0.02
Public and societal benefit	243	1.55	14.6	-8.66	200
Religion	124	0	0.56	-4	3.14

Table 3. Summary statistics of months of unrestricted liquid net assets by subfield, San Diego County, 2003

	Obs	Mean	SD	Min	Max
Arts, culture, and humanities	262	3.14	26.2	-144.13	227.99
Education, higher	12	9	15.87	-2.41	53.31
Education	433	4.28	29.23	-47.15	541.6
Hospitals	10	8.57	20.42	-5.2	65.65
Environment	85	-18.16	75.95	-518.58	98.79
Health	244	2.84	38.89	-456.49	199.35
Human services	684	0.28	48.87	-375.63	630.15
International	63	-1.26	13.26	-69.48	31.05
Mutual benefit	2	6.87	9.72	0	13.74
Public and societal benefit	240	17.5	157.44	-488.57	2257.99
Religion	123	16.16	195.83	-235.91	2146.06

Table 4. Summary statistics of organizational age by subfield, San Diego County, 2003

	Obs	Mean	SD	Min	Max
Arts, culture, and humanities	264	12.6	14.04	0	74.05
Education, higher	12	26.14	22.92	2	61.79
Education	434	19.84	20.88	0	55.29
Hospitals	10	30.16	19.42	1.5	54.71
Environment	86	10.78	13.93	0	60.71
Health	245	13.08	13.36	0	62.46
Human services	687	11.55	13.38	0	87.98
International	63	9.34	9.71	0	35.19
Mutual benefit	2	14.47	16.45	2.84	26.1
Public and societal benefit	243	8.77	12.69	0	60.21
Religion	124	9.66	11.81	0	52.87

Table 5. Summary statistics of percent direct public support by subfield, San Diego County, 2003

	Obs	Mean	SD	Min	Max
Arts, culture, and humanities	263	0.24	0.74	-8.83	5.34
Education, higher	12	0.22	0.3	0	0.76
Education	433	0.2	0.33	0	1.19
Hospitals	10	0.06	0.17	0	0.54
Environment	85	0.35	0.38	0	1
Health	245	0.27	0.38	-2.06	1.08
Human services	685	0.21	0.33	0	1.37
International	63	0.59	0.47	0	1.74
Mutual benefit	2	1.28	1.81	0	2.55
Public and societal benefit	241	0.41	1.3	-2.4	19.22
Religion	124	0.45	0.44	0	1.08

Table 6. Summary statistics of percent government grants by subfield, San Diego County, 2003

	Obs	Mean	SD	Min	Max
Arts, culture, and humanities	263	0.08	0.21	-2.05	1
Education, higher	12	0.1	0.24	0	0.8
Education	433	0.05	0.18	0	1
Hospitals	10	0	0	0	0.01
Environment	85	0.13	0.29	0	1
Health	245	0.16	0.3	0	0.99
Human services	685	0.12	0.27	0	1.04
International	63	0.03	0.13	0	0.74
Mutual benefit	2	0	0	0	0
Public and societal benefit	241	0.07	0.39	-4.73	1
Religion	124	0.01	0.08	0	0.89

Table 7. Summary statistics of percent program service revenue by subfield, San Diego County, 2003

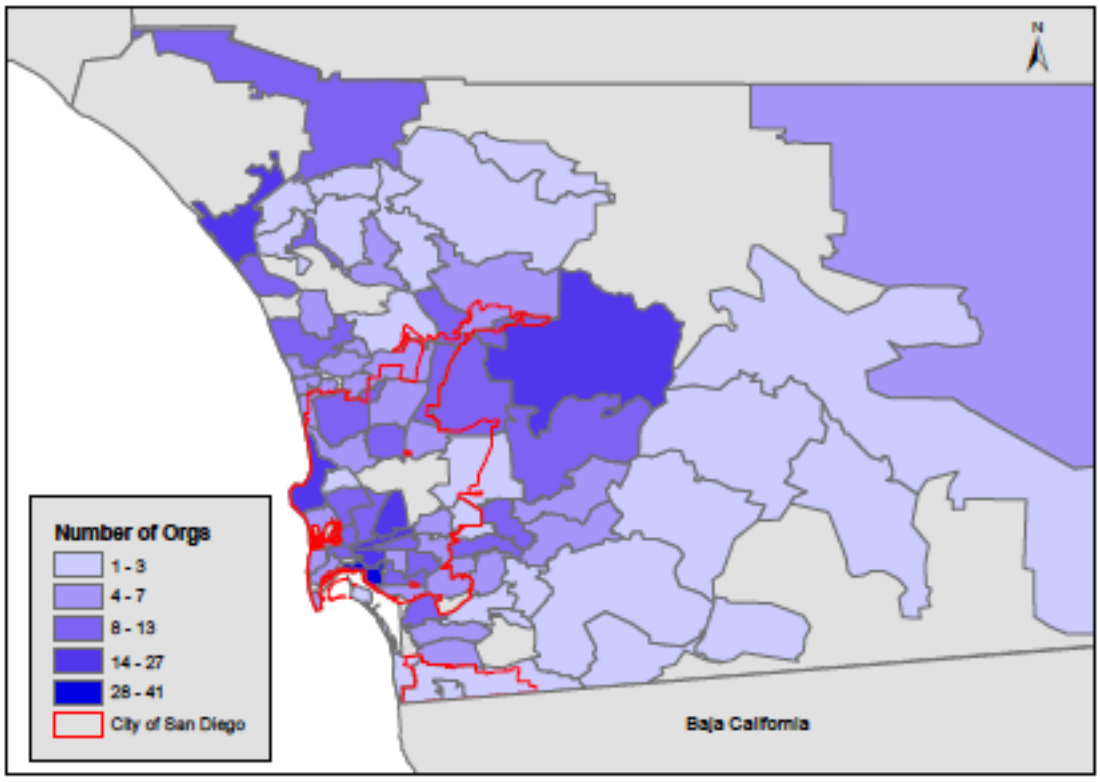
	Obs	Mean	SD	Min	Max
Arts, culture, and humanities	263	0.25	0.51	-4.39	1
Education, higher	12	0.66	0.38	0	1.01
Education	433	0.23	0.41	-0.18	4.22
Hospitals	10	0.83	0.33	0	1
Environment	85	0.16	0.26	0	1
Health	245	0.27	0.37	0	1.02
Human services	685	0.33	0.4	-0.06	1.09
International	63	0.12	0.27	0	0.99
Mutual benefit	2	0	0	0	0
Public and societal benefit	241	0.17	0.36	-0.44	2.83
Religion	124	0.13	0.28	0	1

Table 8. Multilevel random intercept model estimating "months of unrestricted liquid net assets" (base and exapnded model), San Diego County, CA, 2003

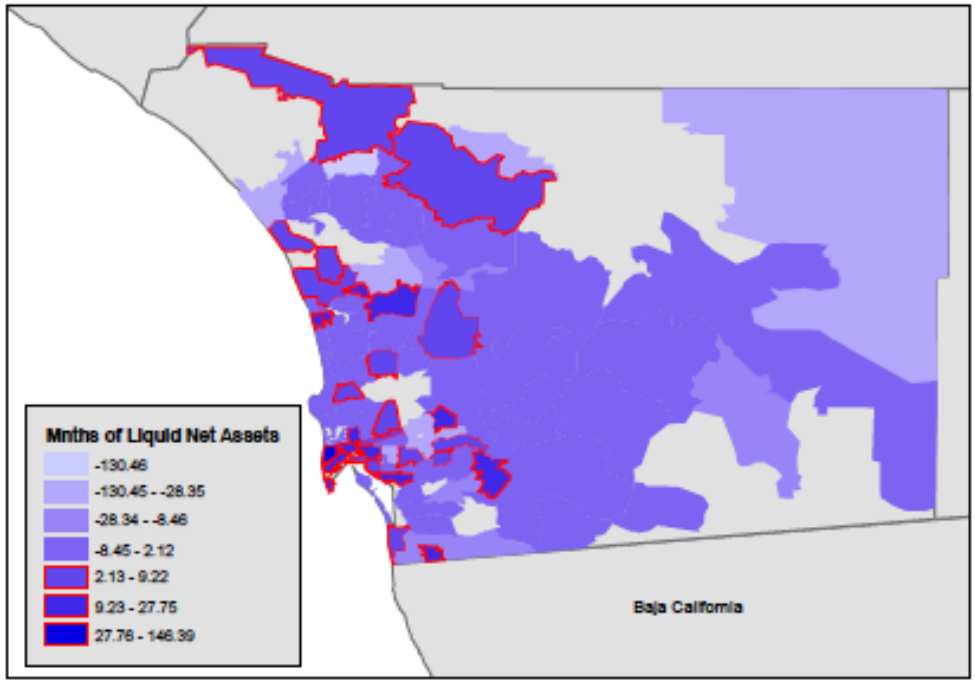
	coefficient	se	p
Organizational Level Predictors			
Ref: Human Service			
Arts, culture, and humanities	-0.18	0.48	0.7
Education, higher	***4.32***	***1.92***	***0.03***
Education	***1.1***	***0.41***	***0.01***
Hospitals	1.67	2.15	0.44
Environment	0.18	0.78	0.82
Health	0.79	0.49	0.11
International	-0.14	0.85	0.87
Mutual benefit	5.29	4.46	0.24
Public and societal benefit	***1.28***	***0.5***	***0.01***
Religion	-0.48	0.64	0.46
age in years(a)	0	0.01	0.72
percentage government grants(a)	0.07	0.58	0.91
percentage direct support(a)	***1.33***	***0.4***	***0***
percentage program service revenue(a)	0.03	0.41	0.93
Constant	0.47	0.28	0.09
Random effects parameters			
zip code (residuals)	6.22	0.1	

N=2,019
Number of groups = 156
Average clustering per group =13
range of clusters per group (min, max) = (1, 117)
Note: Organizations with greater or less than 36 months of MULNA excluded from analysis.
(a) group mean centered

Map 1. Distribution of Human Service Nonprofit by Zip Codes, San Diego County, 2003



Map 2. Average Months of Liquid Net Assets, Human Service Nonprofit by Zip Codes, San Diego County, 2003



Soure: NCCS Digitized Data File, 2005

Appendix

Unrestricted Liquid Net Assets (end of year values):

ULNA = a – (max(b+c-d-e-f,0))

Where:

a=unrestricted assets (Part IV – Line 67b)
b=investments in land, building, equipment (Part IV – Line 55b)
c=land, building, equipment (Part IV – Line 57b)
d=Loans from officers, directors, trustees, and key employees (Part IV – Line 63)
e=Tax-exempt bond liabilities – (Part IV – Line 64a)
f=Mortgages and other notes payable – (Part IV – Line 64b)

Months of Unrestricted Liquid Net Assets:

MULNA = (g/(h-i))*12

Where:

g = unrestricted liquid net assets
h = Total expenses – (Part I – Line 17)
I = Depreciation, depletion, etc. (Part II – Line 42)

Note: Variables refer to pre-2008 Form 990