

## Article

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# Divergent Patterns of Nonprofit Financial Distress

**Abstract:** Human service nonprofit organizations have increasingly been called upon to produce public services as governments have sought to devolve responsibility to private organizations. Just as stress tests have used accounting indicators to determine the distress of banks, this article uses measures of financial distress (Shumway 2001; Trussel and Greenlee 2004) to understand what types of human service nonprofits are facing difficulties. Joining NCCS Core Files with spatial data from the American Community Survey, I find that there is a positive relationship between financial distress and minority population. The article enters the debate as to how cutting public funding for human services may harm vulnerable communities.

**Keywords:** financial distress, nonprofit human services

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The economic recession has garnered attention from academics and practitioners alike, with prognostication about what it means for the health of the sector far outstripping systematic analysis. Here I test whether human service nonprofits were more distressed in the years of the recession (2007–2009) as compared to the immediately preceding period of time (2004–2006). Human service nonprofits over several decades have evolved into core service producers in their communities. Place matters in the delivery of human services, so this analysis goes beyond simply assessing trends of human service distress over time, but also uses Geographic Information Systems (GIS) to investigate geographic patterns of distress. Here I argue that public leaders should be concerned about where “sick” human service nonprofits exist as this can point to whether communities can continue to rely on services that were previously produced by government.

Nonprofit human service providers have evolved to becoming core tools of government (Salamon 2002). The human service subsector is the largest by number of organizations and one of the most heterogeneous categories of organizations in the nonprofit sector (Roeger, Blackwood, and Pettijohn 2012). They produce services that either were previously in the hands of government, such as vocational training and disaster relief, or were delivered by the private-sector, such as legal services

(Smith 2012). While produced in large part by the nonprofit sector, public leaders play a lead role in provision decisions over what, how, and how much of a service should be delivered. Here I argue that the successive years of cuts in government funding for human services at the state and local levels, coupled with a contentious debate at the federal level about the place of government in financially supporting human services, has heightened the need of nonprofit scholars to identify organizations that are financially distressed and potentially unable to deliver services in the future. In particular, this article seeks to answer two questions: which types of human service nonprofits face the greatest financial distress, and more importantly, in which communities are these nonprofits located?

Here I begin with an exploration of the literature on financial vulnerability, with a specific focus on the measure of financial distress, developed by Greenlee and Trussel (2000). This measure follows the more developed for-profit literature on financial vulnerability (Gilbert, Menon, and Schwartz 1990; Shumway 2001; Jones and Hensher 2004) and considers substantial multi-year decreases in an organization's expenses; while there are a myriad of accounting ratios that indicate varying measures of distress, here I use decrease in expenses to indicate organizations that have had to rapidly scale back their financial presence. The literature on nonprofit financial distress provides the basis for an exploration of financial distress for human service nonprofits nationwide using National Center for Charitable Statistics Form 990 data.

The analysis indicates that indeed, as hypothesized, organizational distress was more widespread and profound for human service nonprofits during the recession as compared to the preceding period. Smaller organizations bore the brunt of distress, with upward of one in five organizations cutting expenses by at least 20%. Using GIS analysis, it is also clear that organizations located in communities with larger minority populations also face greater distress. The implications drawn from this study are twofold: first, the recession did not affect the human service sector uniformly, but rather predominantly impacted the smaller organizations that are prevalent in communities with higher minority representation; second, the movement toward contracting out human services raises questions about not only the geographic distribution of those services but also the financial health of the service producers.

## **The place of human service nonprofits in public provision**

Human service nonprofits occupy a primacy of place in the minds of Americans, even to the point of equating charities with human service organizations

(Grønbjerg 2001). While not wholly linear in direction, human service nonprofits have increasingly taken on the roles of producing an array of services from vocational training to daycare (Smith 2012). Governments, at all three levels in the federal system, not only provide financial support to the sector but also dictate how services are to be produced, for whom, and how much – that is, they make provision decisions. Here I review how the provision and production of human services has been separated, which in turn hampers the ability of nonprofits to react to instabilities in their environments.

Over the course of 60 years, the role of government in human services has greatly expanded. Federated campaigns, such as the United Way, and private donations were the predominant mode of funding human services through the 1950s, with only a minor role left to local governments (Smith 2012). Over the course of the next several decades, the federal government became an active supporter of human services through the 1962 Social Security Amendments followed by Title XX of the Social Security Act in 1974 (Smith and Lipsky 1993; Smith 2012). A partnership model developed as nonprofit organizations had the connections with local communities and expertise to deliver increasingly technical services, while government provided a steady resource stream that could be counted upon for years (Smith 2006; deHoog 1990).

The pace of privatizing human services quickened during the Reagan Revolution of the 1980s and the New Public Management movement of the 1990s, as the rhetoric changed about government and social services. The non-public sector, meaning nonprofits and for profits, was conjectured to be better able to provide effective and efficient services to communities in need. Funding for social services did not decrease, while the demand for more accountability increased (Smith 2006, 2012). No longer were nonprofits partners, but rather contractors that were expected to comply with contracts regardless of the vicissitudes of human services. Human service nonprofits continue to rely on contracting and grants for upward of 37% of revenues (Grønbjerg 2001), with fees for services that pass through from government sources such as vouchers for daycare pushing that number above 50% (Roeger, Blackwood, and Pettijohn 2012).

Today human service nonprofits face pressures from governments and clients to cut costs and increase benefits. Human service nonprofits face late payments from state and local governments, must eat overhead costs, and worry about cancelled contracts due to uncertainty of government budgets at all levels (Boris et al. 2010). The result is a system where human service nonprofits are increasingly relied upon to produce services. The argument can be made that they are at a particularly vulnerable point, as a sector, leading to a need to understand which organizations are vulnerable and whom these organizations serve.

## The financial vulnerability construct

In the past several years, the public has become familiar with the concept of stress tests of financial institutions. While of importance today, for decades finance and accounting scholars have developed the accounting ratios necessary to predict when for-profit organizations are most likely to face bankruptcy. Beaver (1966) built on a long literature in accounting that focuses on ratios in order to predict organizational failure, with Altman (1968) augmenting the general model to include multiple variables. Researchers have built an impressive catalogue of financial ratios that have been used to determine bankruptcies in different industries (Greenlee and Tuckman 2007).

Tuckman and Chang (1991) brought the logic of organizational failure to the nonprofit sector, but rather than being able to use the concept of bankruptcy, which rarely occurs in nonprofit organizations, they had to develop an analogous concept of financial vulnerability. In fact, their construct of financial vulnerability is more concerned with resilience in the face of financial difficulty rather than organizational death, which may be due to the difficulties in measuring the demise of a nonprofit using IRS Form 990 data. Tuckman and Chang posit that vulnerability exists when an organization must cut services immediately due to a financial shock.

Trussel and Greenlee (2004) move the literature from description to prediction by considering the concept of financial distress. They use the logic of the for-profit sector in that firms is more likely to fail when their net assets are negative over a period of time (Shumway 2001; Gilbert, Menon, and Schwartz 1990). Here I argue that an organization's expenses are a more contemporaneous measure of its presence in a community; cutting expenses over a 3-year period indicates an organization with a shrinking financial presence and also is an indicator of a human service nonprofit, in particular, to continue to deliver services.

## The importance of geography in human service nonprofits

Human services are inherently place-based, meaning that the spatial distribution of organizations can be important for understanding who is able to access services and who is left out (Hillier 2007; Allard 2008; Wong 2001). Reinventing government in the United States, and the global New Public Management movement, at least partly justified the privatization of formerly public services in order to better represent the needs of local communities.

Services for disadvantaged populations, in particular, are place-based as clients are less mobile (Allard 2008) and less willing to access services in “foreign” communities (Kissane 2010). A troubling, yet real, trend in the United States is the strong negative correlation between a community’s racial/ethnic minority status and measures of economic vitality. Here it is hypothesized that organizations that choose to locate in communities with lower household incomes will have less community resources from which to draw and hence will be more distressed.

*H<sub>1</sub>*: As the median income in a community decreases, levels of organizational financial distress will increase.

*H<sub>2</sub>*: As the percentage of minority residents in a community increases, levels of organizational financial distress will increase.

*H<sub>3</sub>*: As the level of a community’s diversity increases, levels of organizational financial distress will increase.

In addition to understanding the nature of the communities in which human service organizations are located, it is also important to consider the types of organizations that are facing financial distress. Trussel and Greenlee (2004) outline the necessity to account for the size of nonprofit organizations, as larger organizations potentially have greater equity or lines of credit as compared to smaller organizations. Open-system organizational theories (Thompson 1967; Tuckman and Chang 1991) also hold that organizations with more employees are better able to buffer from shocks their environments.

*H<sub>4</sub>*: As the total revenue of an organization decreases, levels of organizational financial distress will increase.

*H<sub>5</sub>*: As the number of employees in an organization decreases, levels of organizational financial distress will increase.

Lastly, frontline organizations are those that provide necessary services of particular need during times of economic hardship: housing, employment, food and nutrition, and general human services. While there is no hypothesized direction to the relationship between financial distress and frontline status, these organizations highlighted for specific analysis due to their essential nature as service deliverers.

## Data, variables, and method

The analysis is based on the IRS Form 990 digitized data provided by the National Center for Charitable Statistics (NCCS), in particular using the core

data files for two periods: 2004–2006, as the period immediately preceding the recession, and 2007–2009, concurrent with the recession. A 3-year period allows for an understanding of organizational finances while potentially smoothing any aberrant changes in any one period (Table 1).

**Table 1:** Variables

Dependent variables	Description	Hypothesized direction
Financial distress, Model 1	A binomial indicator; an organization is distressed if it decreases expenses by at least 20% over a 3-year period.	
Financial distress, Model 2	A binomial indicator; an organization is distressed if it decreases expenses by at least 50% over a 3-year period.	
<b>Independent variables</b>		
Median income (2011)	Median household income as measured by the American Community Survey.	–
Minority population (2011)	As defined by the Census Bureau, minority is one of four different races or combinations thereof, or one ethnicity (Hispanic).	+
ESRI diversity index (2011)	A measure of the likelihood that any two people randomly selected from geography will belong to different racial/ethnic groups.	+
Total revenue (2008)	As indicated in NCCS Core Files for tax year 2008.	–
Number of employees (2008)	As indicated in NCCS Core Files for tax year 2008.	–
Frontline organizations	Organizations with NTEE codes indicating employment, housing, or general human services sub-sectors.	?

The explanatory analysis of the data considers one sector of the core files: human service organizations. Human service organizations, as defined in the National Taxonomy of Exempt Entities (NTEE), provide a wide array of different services from employment to recreation and sports. Trussel (2002) finds that major sector, of which there are five in the NTEE, is a significant control variable in the analysis of financial distress, supporting the decision to single the analysis to one. Given the large variation in human services, I have controlled for each sub-sector in that distinct institutional fields may face different financial challenges (Greenlee and Tuckman 2007; DiMaggio and Powell 1983). Total revenue and number of employees, included to control for organizational size (Trussel 2002; Trussel and Greenlee

2004), were drawn from tax year 2008; this year was chosen as the middle of the recession period and broadly indicative of size at the nadir of the financial crisis. With that said, it is important to be cognizant of the fact that they may under-represent organizational size for both periods. Lastly, a dummy variable related to frontline organizations is also included as an explanatory variable, in an effort to understand where the indicators of financial distress are different for those organizations that are most likely to provide services most needed in difficult times. Frontline organizations are operationalized as organizations in the NTEE sub-codes for employment, housing, and general human services.

The analysis only captures organizations that submitted Form 990s in the years 2005 through 2010, which in effect cover tax years 2004 through 2009 due to the 1-year lag in when organizations file tax returns. Financial distress is calculated where a distressed organization represents a large reduction in expenses over a 3-year time period. Two thresholds are used to determine whether an organization is distressed: a 20% reduction and then a 50% reduction, labeled Model 1 and Model 2 in the following analysis.

The analysis of NCCS data was also joined to data drawn from the American Community Survey (ACS), conducted annually by the Census Bureau. In particular, the join between the two datasets was conducted based on spatial characteristics of both the organizations and the communities in which they are located. ACS variables were aggregated at the census tract level, which affords several positive benefits. First, unlike zip codes, census tracts are created to follow socio-demographic and neighborhood patterns in a geographic area. Boundaries are construed in such a way to account for existing divisions between communities, such as politics (a municipal boundary), economics, or demographics. Second, census tracts vary in population, but are required to vary between 1,500 and 8,000 residents, with an optimum size of 4,000. This allows for a certain level of comparison between tracts, particularly those that occur in urban areas. Lastly, the census tract represents a sub-municipal level of geography that is able to capture the contours of a community's demographics, which is essential for the type of analysis developed here.

The initial spatial join and analysis is conducted using ESRI ArcMap 10. The addresses for human service nonprofit organizations were geocoded, meaning they were assigned latitude and longitude based on the address provided in the NCCS Core Files. The relevant financial and organizational variables were uploaded to ArcMap. The number of nonprofits per census tract was counted four different ways: the total number of human service nonprofits, the number of distressed organizations both Models 1 and 2, and the number of frontline nonprofits measured as those in the food, housing, disaster relief, or general human service sub-categories of the Human Service NTEE code. These four

counts were then joined to the American Community Survey variables that are calculated at the census tract level; the ACS data was drawn from ESRI demographic files packaged with ArcMap's Business Analyst.

The second step of the analysis involved exporting the numeric portion of the spatial data to SPSS for statistical analysis. In addition to descriptive statistics, bivariate correlations (both Pearson's  $r$  for continuous variables and Spearman's  $\rho$ ) were calculated in order to understand the relationship between organizational and spatial data. Data is compared across two periods – pre- and in-recession – and across two levels of financial distress. McNemar Chi-square tests were chosen as appropriate measures of difference between nominal-level count variables. Largely, the analysis presented here is a correlational design and does not explicitly address causation. As this analysis is identifying trends in panel-data, it was decided that correlational analysis would best be able to highlight those trends in both organizational and spatial variables. Further analysis could use methods such as spatial regression, to understand causation in the spatial analysis, or hierarchical linear models, to address the relationship of organizations to trends in demography in geographical space.

## Results

The human service sector represents a broad diversity of organizations, both in size and in institutional field. Table 2 presents descriptive statistics on the scope of financial distress in the population of human service organizations drawn from the NCCS Core Files. Distress was calculated at two levels: Model 1 (a 20% reduction in expenses) and 2 (a 50% reduction), at both pre-recession and recession time periods. A McNemar Chi-square test of significance, which is appropriate for nominal-level count data, was used to determine whether there was a significant difference between the two time periods.

Several overarching trends are striking. First, for all human service fields there was a significant ( $p = .01$ ) increase in financial distress across the two periods. The increase in percentage of all human service organizations in financial distress for Model 1 was by 6% points from 9.1% to 15.7%. Distress measured by Model 2 almost doubled from 2.4% to 4.6%. Second, fields differed quite drastically in the size of the increase. For example, food organizations had a 3.6% increase while both crime and youth development fields had over 8% increases in across the time periods. This trend is starker when considering Model 2, where distress more than doubled for youth development and general human service organizations. Some organizations, particularly in revenue environments with strong government support, such as public safety and disaster

**Table 2:** Financial distress of human service nonprofits by sub-sector before and during recession

	Charitable organizations		
	Number	%	
Human service organizations 2004–2006	117,073	100	
Data missing for 2004–2006	29,588	25	
Human service organizations 2007–2009	117,073	100	
Data missing for 2007–2009	8,825	8	
By sector	% Distressed (2004–2006)	% Distressed (2007–2009)	McNemar Chi-square test significance
Model 1 (20% reduction in expenses)			
Crime and legal related	9.4	17.8	0.000
Employment	9.2	15.6	0.000
Food, agriculture, and nutrition	7.2	10.8	0.000
Housing and shelter	7.6	11.4	0.000
Public safety and disaster relief	13.6	21.1	0.000
Recreation and sports	10.1	18.3	0.000
Youth development	9.6	18.9	0.000
Human services (General)	7.8	14.4	0.000
Total	9.1	15.7	0.000
Model 2 (50% reduction in expenses)			
Crime and legal related	2.8	4.9	0.000
Employment	2.4	4.6	0.000
Food, agriculture, and nutrition	2.0	3.2	0.001
Housing and shelter	3.1	4.6	0.000
Public safety and disaster relief	4.3	6.3	0.000
Recreation and sports	2.2	4.6	0.000
Youth development	2.5	5.8	0.000
Human services (General)	2.0	4.3	0.000
Total	2.4	4.6	0.000

relief or food and nutrition, showed a lower rate of distress as compared to employment and general human service organizations.

The data was also geocoded for the ensuing spatial analysis. Over 40% of organizations list a PO Box or undefined address on the 990 Form. Geocoding PO Boxes would mark an organization's location as a post office, while undefined addresses would be represented as the central point of a municipality. An independent samples *t*-test was conducted on the geocoded versus non-geocoded organizations' net expenses for both time periods. Geocoded organizations did have a significantly lower change in net expenses in the pre-recession period, while there was not a significant difference in the recession period. It is important to recognize that the pre-recession population will not include organizations that potentially had higher decreases in net expenses, although it is rather unclear as to whether this distorts the findings.

The size of organizations, measured as total revenue for 2008, reflects the liability of smallness argument in organizational ecology (Freeman, Carroll, and Hannan 1983; Hannan and Freeman 1984; Hager et al. 1996; Trussel 2002; Trussel and Greenlee 2004). As Table 3 indicates, there is a significant difference between the two periods for all sizes of organizations. The smallest human nonprofits, with revenues less than \$100,001, are tremendously volatile given the effect of even a small change in a revenue stream. Perhaps more striking is the fact that organizations with up to \$1 million in revenue face twice as much distress as measured by Model 1. Astonishingly, not one large nonprofit in the

**Table 3:** Financial distress of human service nonprofits by size

By size	% Distressed (2004–2006)	% Distressed (2007–2009)	McNemar Chi-square test significance
Model 1: 20% reduction			
\$0–\$100,000	13.1	19.2	0.000
\$100,001–\$500,000	8.4	19.0	0.000
\$500,001–\$1,000,000	6.0	15.5	0.000
\$1,000,001–\$5,000,000	4.9	12.6	0.000
\$5,000,000 and above	3.0	7.2	0.000
Total	9.0	17.0	0.000
Model 2: 50% reduction			
\$0–\$100,000	4.1	5.2	0.000
\$100,001–\$500,000	2.3	5.9	0.000
\$500,001–\$1,000,000	1.5	4.9	0.000
\$1,000,001–\$5,000,000	1.1	3.8	0.000
\$5,000,000 and above	0.0	2.3	0.000
Total	2.6	5.0	0.000

pre-recession period fit into the Model 2 specifications, while only 2.3% did so during the recession. Clearly smaller organizations have larger percentage changes in expenses. It is also important to note that the breadth and depth of financial distress increased during the recession period.

Human services are largely space-based; for example, children attend after-school services at a local civic center or library as opposed to receiving the services at home on the Internet. It matters that the civic center or library is conveniently located to the school or the home. With this logic, the data associated with the financial distress analysis was then linked to the location of the organization in a process called spatial joining. Figure 1 shows the spatial

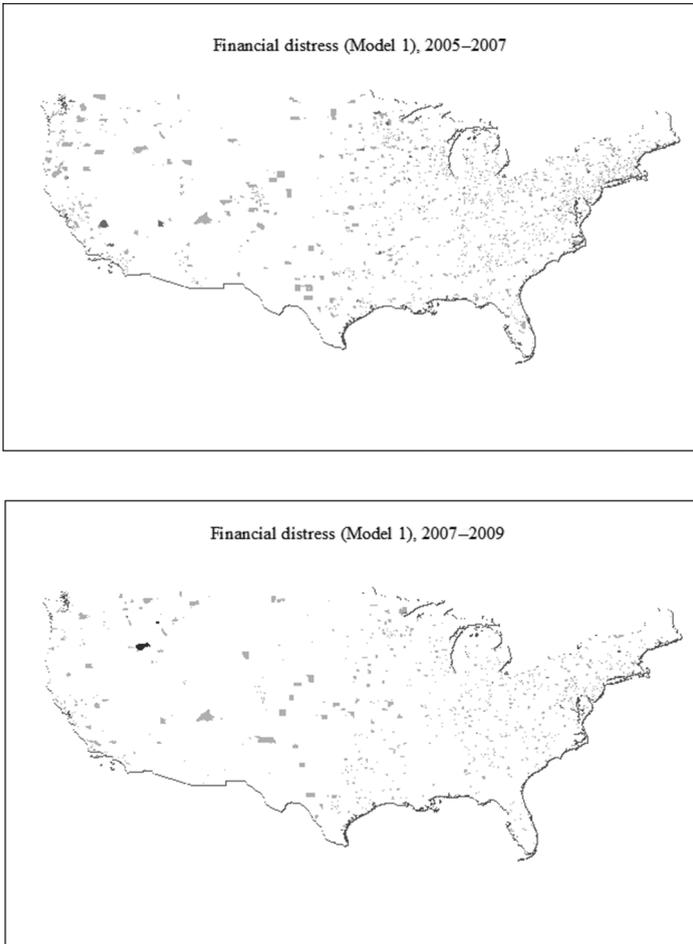
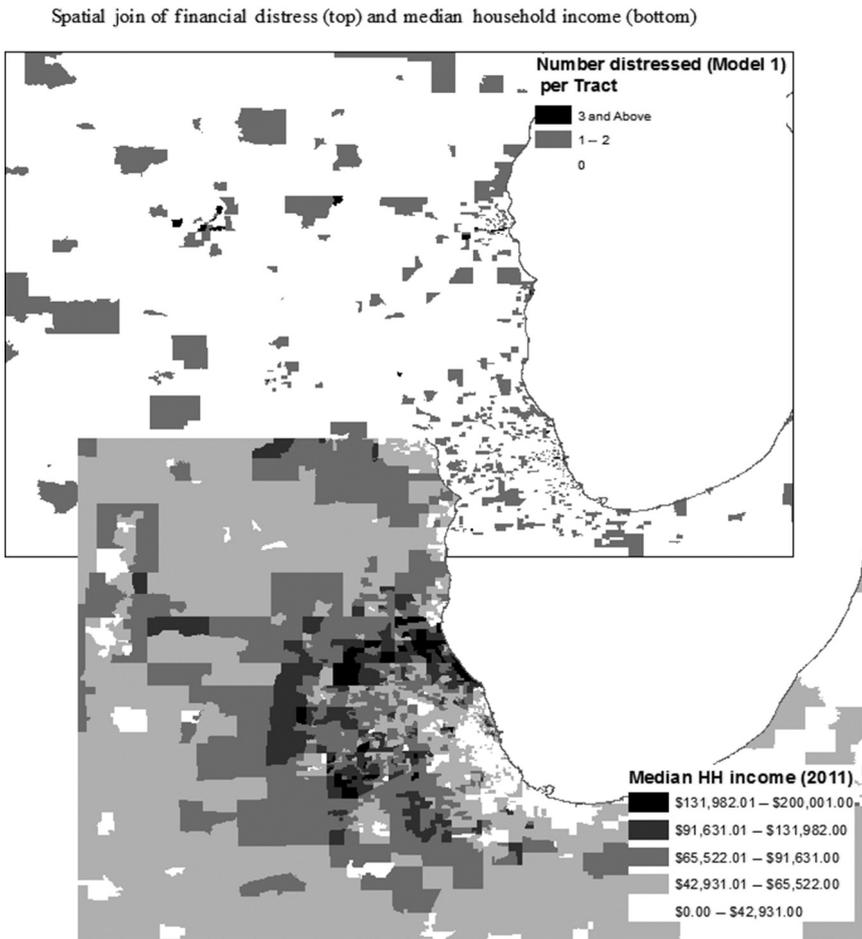


Figure 1: Spatial distribution of financial distress (Model 1) before and during recession

distribution nationwide of financial distress (Models 1 and 2) with darker shades representing census tracts with more distressed organizations. The maps indicate that the distribution of distress appears to correlate with population density, as urban areas have more distressed nonprofits. This is unsurprising given that the national distribution of human service organizations exhibits a similar spatial distribution.

Figure 2 represents the process for the spatial join between a layer of data representing organizational information such as level of distress and a layer



**Figure 2:** Illustration of a spatial join between distress (Model 1) and median household income in greater Chicago

with American Community Survey data aggregated at the census tract level. Organizations were counted in every census tract along six dimensions: all human service organizations, distressed organizations on both Models 1 and 2 for the pre-recession and recession periods, and frontline organizations. A spatial join then layers the organizational information on top of the ACS data allowing for correlations between variables in either layer.

Spearman's *rho*, a non-parametric statistic, was selected as the appropriate correlation method given the non-normal distribution of financial distress; Figure 1 illustrates well that most census tracts did not have a distressed organization, with very few tracts representing the majority of distressed non-profits. The correlation analysis is presented in two panels (Table 4), with Panel A showing the relationship between variables about the community and the number of distressed organizations in each census tract, while Panel B considers the relationship between organizational data and levels of distress.

**Table 4:** Correlations with models of financial distress

<b>Panel A</b>	<b>Median income (2011)</b>	<b>Minority population (2011)</b>	<b>ESRI diversity index (2011)</b>	<b>Number of frontline</b>
Model A (2004–2006)	–0.002	0.030***	0.027***	0.323***
Model B (2004–2006)	0.000	0.015***	0.014***	0.189***
Model A (2007–2009)	0.020***	0.039***	0.025***	0.408***
Model B (2007–2009)	0.004	0.029***	0.026***	0.254***
<b>Panel B</b>	<b>Total revenue (2008)</b>	<b>Number of employees (2008)</b>		
Model A (2004–2006)	–0.120***	–0.092***		
Model B (2004–2006)	–0.085***	–0.072***		
Model A (2007–2009)	–0.088***	–0.105***		
Model B (2007–2009)	–0.044***	–0.066***		

Several patterns emerge from the correlations: first, the size of the relationship is relatively small, although highly significant. There are a myriad of reasons as to why any particular organization would be facing financial distress; Tuckman and Chang (1991) focus on organizational-level variables such as revenue diversification and administrative overhead. In addition, there are a host of ecological variables concerning the saturation of a niche and the level of resources available. Here we merely look at the relationship of community-level variables in isolation, representing only a small piece of a complex, multi-leveled interaction.

Median income of a census tract is not significantly correlated with financial distress, except for Model 1 during the recession period where there is a small positive correlation with financial distress.  $H_1$  is not supported, and the one significant finding is confounding. Perhaps Model 1 during the recession is picking up the fact that human service nonprofits tend to locate in communities of higher median income but in fact deliver services in communities with lower income.

Both minority population and the diversity index are positively correlated with both levels of financial distress and in both time periods. The correlation strengthened during the recession for minority population highlighting that the recession adversely affected organizations in these communities more than others.  $H_2$  and  $H_3$  are supported. Lastly, frontline organizations are strongly positively correlated with distress for both periods, with the trend becoming more pronounced during the recession. The strength of the correlation is particularly notable, with a strong positive trend between tracts hosting more front-line organizations and financial distress.

Panel B indicates that there is a negative relationship between organizational size on one hand and number of employees on the other, and financial distress. Both  $H_4$  and  $H_5$  are confirmed. Interestingly, the correlation between revenue and distress weakens in the recessionary period. One explanation might be the relationship of revenue to expenses, particularly during difficult times; one can say that expenses, upon which financial distress is calculated, decrease at a different rate than revenue. With that said, the direction of the correlation for both revenue and employees all confirm the liability of smallness.

## Discussion and implications

The spatial dimension of human services is too often left unexamined in nonprofit studies. GIS is a powerful tool to layer spatial data on existing datasets such as NCCS Form 990 data. There continue to be challenges in understanding where services actually are delivered and to whom, particularly on a large scale. The analysis developed in this article is merely an initial attempt at disentangling the complex relationship of space and organizational distress.

Measuring financial distress is by no means straight-forward, as any indicator can only measure a facet of an organization's health or sickness. Here I use

expenses as a proxy for health in human service nonprofits due to two factors: first, human service organizations exist to deliver services, which in turn require resources to be expended; second, expenses have the potential of not lagging. Trussel and Greenlee (2004) use change in net assets, or equity, to indicate distress, although fixed assets such as buildings or property can give an incorrect picture that an organization has access to capital. This is particularly difficult during the recent recession as capital was very difficult to secure and property was very challenging to liquidate. With that said, net expenses do not capture revenue meaning that an organization may be cutting expenses but also gaining in revenue, resulting in a healthier financial picture.

Without question financial distress was greater during the years of the recession than the preceding period. In all sub-sectors and at all organizational sizes, the breadth and depth of distress increased. Organizations that expend less are less likely to continue to deliver the same quantity of service. Lowered expenses can mean anything from less spending on staff salaries and benefits to lower spending on programming. Those two types of cuts, one a cut in capacity and the other a cut in delivery, have divergent effects on future periods as cutting capacity in the present can decrease delivery in the future. A fruitful area of study will be on the resiliency of human service nonprofits following the cuts during the recession: who is resilient and who do they serve?

This article uses geography as a core explanatory variable, with minority status and diversity being positively correlated with distress. This is troubling given a long history of higher need in communities with greater proportions of minority residents. The implication is that human service organizations that are located in minority communities are less healthy and less likely to be able to deliver human services. An important caveat to this study is that the geographical analysis is based on the address provided on the Form 990, which may or may not be where services are actually delivered. I have been careful not to state that minorities themselves are facing less human services as it is unclear as to the location of program delivery points; human service nonprofits have long used many different delivery points that are not tied to their headquarters address. One can say that organizations in communities with higher minority representation have more distress.

The concept of financial distress is still evolving. By contrast, the use of GIS in the field of nonprofit studies is in its very infancy. Because human service nonprofits by their nature deliver services, as opposed to widgets through the mail, place absolutely matters. This study is only a start in the analysis of space and nonprofit organizations.

## Conclusion

The levels of financial distress in this article lead to important questions of public policy. The strength of human service devolution over the course of several decades has been that the heterogeneity of providers could produce creativity and innovation, as well as produce services that are closer to recipients. At the same time, one must consider whether this decentralized system is at risk during periods of resource contraction. More particularly, who is being served by the vulnerable organizations and are certain populations systematically at risk as opposed to others.

The research to this point on financial vulnerability has concentrated on the translation of for-profit indicators of financial health to the particular context of nonprofit organizations. The ultimate goal, tested by Greenlee and Trussel (2000) and Trussel and Greenlee (2004), has been to predict organizational distress in future time periods based on indicators from previous periods. At the organizational level of analysis, this type of modeling could provide important insights into whether particular organizations are at the risk of failure (Trussel and Greenlee 2004). At the level of sectors and sub-sectors, at which this particular analysis was conducted, it could be possible to understand whether populations of organizations are at risk and the implications for service recipients. Unfortunately access to systematic data is often limited to IRS Form 990 returns, with their inherent lag time meaning that the canary in the mine, so to speak, might have chimed several years before researchers could dissect when and how the distress happened.

The analysis presented here uses descriptive statistics and correlation, so it does not address causation or the interaction of variables on financial distress. Trussel and Greenlee (2004) move the analysis of financial distress forward to predicting patterns of distress; Bowman (2011) constructs a series of measures that consider the current, short-term, and long-term prognosis for organizations. There remains the question of how organizational-level indicators are caused by environmental-level variables, necessitating an analysis able to accommodate multiple levels of interaction.

The potential for a fundamental re-ordering of how governments interact with human service nonprofits is high in the near future. The sector as a whole has been able to adapt to fairly drastic changes in the past, but the question remains as to what types of organizations are more likely to survive. This area of research is relevant to the greater discussion about who should receive publicly provided human services, and who should be delivering those services. Does government have an interest in protecting the health of the sector, as partners,

or does it have an interest in creating a market where “good” organizations thrive and “bad” organizations die? Which service recipients would be helped by this market, and who would be hurt? The richness of the research questions and availability of data augurs well for this type of research in the future.

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