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# A Social Network Analysis Approach to Strengthening Nonprofit Collaboration

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## Executive Summary

Nonprofit incubators spend valuable resources for helping small nonprofits to build capacity for their survival. Alliances and collaborations with their peers also play an important role in nonprofit capacity building process. In this article, we examine factors determining how nonprofits build collaborative ties from incubators' perspective. We collected data from nonprofits that participated in a Strengthening Communities Funds project supported by the U.S. Department of Health and Human Services in Florida. The project provided equipment, financial, and educational support to community based small nonprofits. Findings show organizations are likely to revitalize their past collaborative ties due to a high level of trust and positive reputations. However, their past friendship relationships are almost as equally important as their past collaborative ties. We recommend both nonprofit managers and incubators spend a significant effort to maintain trust via informal relationships (i.e. social capital).

## Introduction

Building capacity and expanding services are difficult tasks for nonprofits, particularly if they are younger and smaller. The administrative and financial tasks and delivery of services can easily overwhelm administrators and volunteers. Nonprofits can be established and dissolved easily especially when they lack the human, intellectual, social, and physical capitals necessary to develop and sustain an organization. Capacity building efforts help them reach the missing components for their survival and growth; yet, most of the time they need external support for building capacity (Kapucu, 2012; Kapucu, Augustin, & Krause, 2007).

There are different capacity building opportunities for nonprofits helping for better service delivery. Federal, state, and local governments act as nonprofit incubators and provide financial and physical resources, and management consulting via various programs (Hu, Kapucu, & O'Bryne, 2014). Furthermore, nonprofits develop capacity through the collaborative ties they build with their environment. There is a rich literature on the relationship between nonprofits and their environment. Nonprofit organizations' formal and informal ties with the public organizations and other nonprofits help them gain legitimacy, access additional resources, and build capacity over time (Gazley, 2008; Guo & Acar, 2005).

Collaborative ties are not formed in a vacuum and understanding the factors influencing how nonprofits build collaborative ties can set the ground work for devising better managerial

decisions. There are studies examining the collaboration between government agencies and nonprofits (Gazley & Brudney, 2007), preferential attachments patterns of nonprofits (Guo & Acar, 2005; Harrow, 2011), and collaborative dyadic tie building patterns of nonprofits in general, or relationship between bigger nonprofits and smaller ones (Guo & Acar, 2005). In this study, we concentrate on the collaborative relationships among small nonprofits and try to explain some of the predictors of their collaborative tie building. The literature on collaborative tie building highlights two major predictors: past collaborations and friendships (Isset & Provan, 2005). Following the footsteps of the earlier studies, we examine the role of past collaborations and friendship on new collaborations for small and younger nonprofits. Specifically, in this study, we try to answer the following research question: what relative roles do informal (friendship) ties and past collaboration ties play in the formation of new ties between small nonprofits and their environment? Given the study's focus on collaborative network ties, practitioners and researchers of nonprofit managers could use the findings in understanding how to foster organizational ties with the environment and enhance organizational capacity.

We examined small nonprofit organizations in Florida that participated in Strengthening Communities Funds (SCF), a federally funded project aiming to increase the capacities of small nonprofits in economically depressed regions. The program was conducted by the Center for Public and Nonprofit Management (CPNM) at the University of Central Florida (UCF). The purpose of the program was to provide technical, managerial, and financial trainings, as well as financial support in the form of small grants ($30,000 total) to the participants. In other words, the center served as a nonprofit incubator. This research also contributes understanding of how small nonprofits build collaborative ties. Findings of the study can guide policy makers and nonprofit managers nurture their organizations, avoid their demise, and help them grow successfully.

The paper is organized as follows: section one presents the theoretical rationale behind this research and the hypotheses being tested; section two provides an overview of the Strengthening Communities Funds and context of the study; and section three provides a detailed explanation of the methodology and the statistical procedures we followed in this research. The last section discusses findings and results.

## Literature Review and the Theoretical Rationale

Recent economic crises created additional challenges for nonprofits to already existing ones. As funding opportunities shrink and the demand for nonprofit services increase, they have to be more effective and possess the capacity to operate under changing conditions. Organizational survival can be considered a function of adaptive capacity, which is highly associated with the initial design of an organization as well as the networks it is embedded in. Organizational structure and flexibility play large roles in the capacity of networks and early consideration may be a key component to success (Aldrich, 1999; Boin, Kuipers, & Steenberger, 2010; Hu, Kapucu, & O'Bryne, 2014; Kapucu, & Demiroz, 2013; Kapucu & Garayev, 2012).

The level of adaptive capacity of a nonprofit determines how they can handle change in their environment. Staber and Sydow (2002) clearly differentiate between organizational adaptation and adaptive capacity. Adaptation is a relatively predictable move aiming to create the best fit to the conditions for maximum exploitation. On the other hand, adaptive capacity occurs "when learning takes place at a rate faster than the rate of change in the conditions that require dismantling old routines and creating new ones" (Staber & Sydow, 2002, p. 410-411).

Strichman, Bickel, and Marshood (2008) conceptualize adaptive capacity for nonprofits in a more comprehensive way. They identify vision, inquisitiveness/openness, evaluative thinking/system thinking, social capital, and external focus/network connectedness as necessary attributes. Each of these attributes relates to a wide range of theories and can be the focus of separate studies. We specifically examined the external focus/network connectedness aspects of adaptive capacity. External focus/network connectedness refers to an "awareness of interdependence with the surrounding environment" and the "understanding of potential to create systematic change through strategic alliances and joint efforts with other organizations, construction of partnerships or affiliations with other organizations and colleagues and understanding the needs of clients or other organizational stakeholders" (Strichman et al., 2008, p. 226). External focus implies formal and informal ties and social capital among organizations.[1]

Interorganizational ties cover a wide range of relation types. Organizations can be connected via informal ties, like friendship and boundary spanning agents, or formal ties, such as contracts and collaboration. Formal relationships (i.e. collaboration) create greater outcomes than the informal ones since formal ties are goal based and help organizations accomplish tasks that cannot be accomplished otherwise. On the other hand, informal ties may generate intangible outcomes such as trust; however, these outcomes are usually intermediary for reaching organizational goals. The literature on the impacts of network ties on nonprofit organizations shows positive outcomes.

The type and structure of interorganizational relationships impact the capacity of organizations, communities, and the capacity of service delivery networks. For example, Galaskiewicz, Bielefeld, and Dowell (2006) found nonprofit organizations' network ties led to a faster growth rate of donative nonprofits. They compare donative (relying on donations and gifts) and commercial (relying on fees and/or sales) nonprofits with regard to the impact of network ties on organizational growth. Their results show donative nonprofits, with ties to urban elites, higher status, and more central positions in their network, have a faster growth rate. Commercial nonprofits with greater interorganizational connectedness, on the other hand, do not have a similar pattern of organizational growth. In short, their results show interorganizational social capital can help organizations which rely on donations and gifts[2]. In another study, Paarlberg and Varda (2009) found that interorganizational networks might expand a community's carrying capacity (scope of resources to feed organizations) and allow a greater number of organizations to function within a community. Interorganizational networks catalyze the flow of information, development of confidence, and publicity for smaller organizations, which helps them survive and gain resource flexibility.

Several other studies emphasize social capital's role in building organizational capacity, reducing transaction costs, strengthening connectedness of actors in a network, and building adaptive capacity (Kapucu, & Demiroz, 2013; Pelling & High, 2005; Backer, Bleeg, & Groves, 2004). For example, Backer et al. (2004) identify nonprofit organizations' peer network as a tool for organizational capacity building. In another study, Kraatz (1998) examined 230 private colleges over 16 years to see how their ties impact their adaptation to turbulent environments. His findings indicated organizations learned through their social ties. Also, smaller, more homogeneous, and older networks promote high capacity information links between participating organizations and social learning occurs as a way of intra-network imitation. Studies conducted by Larson (1992), Lazerson (1995), Uzzi (1997), and Isset and Provan (2005) show similar results. Strengthening ties between members of a network increases trust, interaction, communication, information sharing, and diffusion of innovative ideas, which translates into increased adaptive capacity (Bouty, 2000; Tsai & Ghoshal 1998).

The interorganizational ties discussed in this article are twofold. One is informal relationships (i.e., social capital) and the other is formal relationships (formal collaborative ties). According to the aforementioned literature, both relationship types lead to positive outcomes and even overlap to a certain extent. In this study, we aim to explore the extent one is influencing the other (i.e. past ties predict future ties).

The design of this study goes as follows: building new collaborative ties are considered as the dependent variable since they create the tangible positive outcomes (i.e. help them adaptive capacity) for organizations. The study identifies social capital as the first independent variable that predicts collaborative ties. Preexisting friendship ties are used as an indicator of the existence of social capital. We assume organizations identify others as a friend if a certain level of social capital exists between them and we admit this approach is somewhat simplistic for assessing social capital among organizations; however, it is practical in the context of this study. Moreover, the literature, cited earlier, is consistent with this perspective. Pre-established friendships are considered indicators of trust and respect, which strengthens overtime. With regard to these arguments, we state the two following hypotheses:

*Hypothesis 1: Friendship ties between organizations lead to collaborative relationships.*

*Hypothesis 2: Past collaboration between organizations leads to collaborative relationships in the future.*

Connectedness in interorganizational networks and the social capital among institutions play important roles in the distribution of information and establishment of a cognitive structure. This statement implies a causal relationship between social capital and learning at the organizational and network levels. Furthermore, interorganizational social capital and network learning encourage organizations to increase their connectedness with each other and create a denser network. They help organizations build adaptive capacity via operating on a common ground and share resources (e.g., physical, human, and knowledge).

Although developing adaptive capacity is critical for organizations, collaborative ties are not necessarily built solely for it. This means organizations develop adaptive capacity alongside other relationships and it is nurtured through tacit knowledge and naturally developed network ties. Therefore, it is recommended to examine the factors motivating organizations to build collaborative ties.

In addition to abovementioned variables, we consider homophily as an important factor in developing relationships between organizations. The fundamental idea of homophily, as Gulati (1995) explains, is familiarity breeds trust. Different types are mentioned in the literature, particularly for individuals, such as age, gender, ethnicity etc. (see McPherson, Smith-Lovin, & Cook, 2001 for a thorough overview of homophily). Our idea is organizations providing similar services are more likely to be engaged in collaboration with each other than the organizations providing different services. These two organizational attributes might have a confounding effect. In other words, alongside past friendship and collaboration, organizational similarities might have a lurking effect on collaborative tie building among nonprofits.

We use convergence of services and motives for collaboration as sources of homophily. The logic behind this proposition is the organizations providing common services are more likely to meet the needs of each other than the ones with no common services. The second aspect of homophily mentioned is the motives for collaboration. We propose organizations having similar needs (i.e. motives for collaboration) are likely to engage in collaborative relationships. The motives for collaboration considered are: economic recovery, common missions, financial development, service / program compatibility, writing joint grant proposals, and searching for advice. We hypothesized the following propositions:

*Hypothesis 3: Organizations that provide common services will establish collaborative relationships with each other.*

*Hypothesis 4: Organizations that have a common motive for collaboration will establish collaborative relationships with each other.*

Hypotheses three and four serve as control variables in the study. They can be influential on nonprofits' decision making on tie building, particularly at a nascent stage. Therefore, while examining the association between collaborative tie building patterns (dependent variable) and past collaborative ties and friendship ties (independent variables), we would like to control the impact of homophily variables.

## Context of the Study

The data for this research was collected through the Strengthening Communities Funds program.[3] The SCF program was funded by the U.S. Department of Health and Human Services Agency (HSS). The aim of the program was to assist nonprofit organizations in increasing sustainability and effectiveness, enhancing their ability to provide economic recovery social services, and creating collaborative service delivery mechanisms to better serve those most in need. The program aimed to assist nonprofits in improving their performance in critical areas

including organizational development, community engagement, and evaluation of success. It was carried out by CPNM at UCF, which is in the same region with the program participants. The SCF offers a set of organizational capacity building trainings and technical assistance to participating nonprofits. Unemployment and poverty rates in the service area of the participating organizations are the prominent aspects of the distressed communities.

Through a structured, but customized program, faculty members and graduate assistants at CPNM at UCF, along with expert practitioners in the community, provided over 30 hours of capacity building training to a total of 40 organizations. The organizations that were selected by the CPNM and two leading funding nonprofit organizations in the region received the funding. The documented needs for improving nonprofit organization performance are in the critical areas of: organization development, collaboration and community engagement, and evaluation of success. Unemployment and poverty rates in the service area are two aspects of the distressed communities.

## Methodology

The data for this study comes from the 19 organizations that participated in the SCF program. The center announced the program to nonprofits in the region and received their applications. A total of 40 applications were admitted to the program. Apparently, there is no random sampling in choosing program participants; instead, the method for choosing the participants can be considered convenience sampling.

SCF project participants were surveyed before and after the program. 39 organizations responded to the pre-program survey (March 2010) and a total of 25 responses were collected for the post program survey (October 2010). Due to some organizations dropping out of the program and others joining the trainings after the program had started, there were an end total of 19 organizations that participated in both the pre and post program surveys. Participants were asked questions pertaining to their organizational demographics, homophily variables, and past and current interorganizational ties (i.e. friendship and collaboration). For the dependent variable, we asked participants to identify the organizations they recently collaborated with (post-program collaboration). With regard to friendship and past collaborative ties (independent variables), participants were asked to identify the organizations they were friends with and collaborated with in the pre-program survey. For common services provided (first homophily variable)[4], participants were asked to choose the types of services provided from a given seven-item list. For the common motives for collaboration (second homophily variable), participants were asked to select the reasons why they collaborated with other organizations from a given eight-item list[5].

The respondents from participating organizations were the highest-level officials in agencies (executive directors or chairperson of the board of directors). We obtained organizational demographics data in order to identify any significant outlier organization in terms of size and capacity among the program participants, as such an outlier can result in preferential attachment (i.e. smaller organizations may prefer to connect to bigger organizations

in order to gain legitimacy and access additional resources). More than half of the organizations (10 organizations) in the program had an annual budget of less than $100,000 and nearly 84.2% (16 organizations) had a budget of less than $300,000 (see Table 1). Only three organizations had annual budgets of more than $500,000.

Table 1. Budget size and executive director tenure of the participating organizations

| **Budget Size*** | Freq. | % | Cum. % | **Exec. Director Tenure** | Freq. | % | Cum. % |
|---|---|---|---|---|---|---|---|
| $0-$100,000 | 10 | 52.6 | 52.6 | 0-3 years | 9 | 47.4 | 47.4 |
| $100,001-$300,000 | 5 | 16.3 | 78.9 | 4-6 years | 5 | 26.3 | 73.7 |
| $300,001-$500,000 | 1 | 5.3 | 84.2 | 7-10 years | 4 | 21.1 | 94.7 |
| $500,000+ | 3 | 15.8 | 100 | 10+ years | 1 | 5.3 | 100.0 |
| Total | 19 | 100.0 | | Total | 19 | 100.0 | |

(* 2010-2011 Fiscal Year)

The participating organizations, mostly, have less than 10 staff (paid and unpaid combined). Figure 1 shows boxplot results for the distribution of staff size of the organizations. There are three organizations representing extreme values (16, 27, and 48). We did not exclude organizations with extreme values from our analyses in order to preserve the number of observations in the dataset. Both the budgetary and staff size statistics show the organizations in this study are fairly small. Results for executive director tenure in Table 1 show nearly half of the participants have executive directors with three or less years of tenure and almost three quarters of all the participants have worked in their organizations six or less years. Five executive directors have been working in their organizations for seven or more years and only one executive director has tenure more than 10 years. These figures coincide with the fact that most of these nonprofits are at the early stages of their existence. This means these executive directors are also the founders of these organizations.

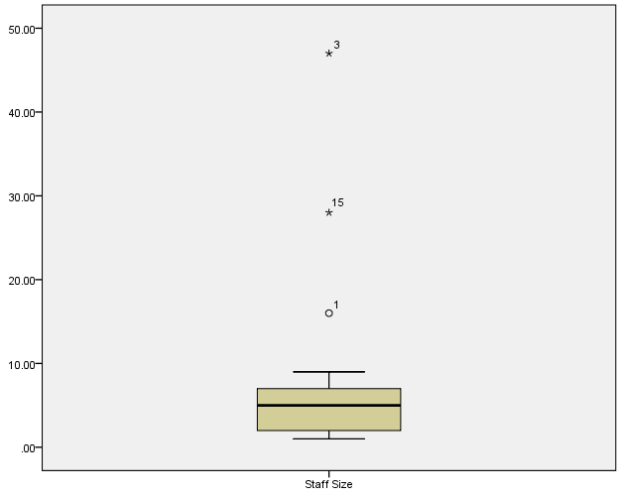


Figure 1. Descriptive Statistics for Staff Size of Survey Participants

In the SCF program, participants utilized joint trainings and opportunities for socializing and networking (e.g. coffee and social in the morning, session breaks used for informal discussions). Nonetheless, SCF administrators spent limited effort on socialization of the program participants and there was no direct intervention for making formal collaborative agreements in the program. When organizations built collaborative relationships, the process was based on their own needs rather than a third party (i.e. SCF administrators) forcing them to do so. When organizations were given opportunities to interact and build collaborative ties, they used traces of past collaborative relationships. Social capital also played a supportive, but important, role for building collaborative ties in the absence of past ties.

Data pertaining to interorganizational networks were put into square matrices. The relationships between organizations were coded as either absent or present (i.e. 0 for absence, 1 for presence), because the data lacks details for the number of collaborations. A value of 1 was given to the appropriate cell if an organization had identified others -from a given roster- as a friend, past collaborator, and current collaborator. For the number of common services provided and common motives for collaboration, we created valued matrices. For the common services variable, if two organizations provided a certain number of services in common, we put that value in the appropriate cell. For example, if the organizations i and j stated they both provide services A, B, and C, then we put 3 in their corresponding cell. We repeated the same procedure for the common motives of collaboration. If organizations i and j stated they have the same motives for collaboration (e.g. seeking advice, submitting a joint grant proposal), then we put the numerical value (in this case 2) of the common motives in the appropriate cell.

We used the quadratic assignment procedure (QAP) for analyzing the data collected. QAP analyzes the level of association among different matrices of the same actors by randomly permuting each matrix and calculating standard errors for testing significance (Hanneman & Riddle, 2005). Unlike conventional statistical estimation methods such as OLS, QAP accepts dependence of observations and analyzes the association according to this assumption making it an appropriate tool for analyzing network data. We used UCINET, a widely used social network

analysis software developed by Borgatti, Everett, and Freeman (2002), for analyzing the data. UCINET is capable of providing visual and numerical representations of network relationships including descriptive statistics, such as cliques and subgroups, and network centrality measures, like degree and betweenness, and inferential statistics, such as QAP. We implemented multiple regression with QAP (MRQAP) procedures, which enabled us to test the level of association between the dependent variable (formulated as collaborative dyadic ties in the analyses) and independent variables (formulated as past collaborations, preexisting friendship, common motives, and common services) (Krackhardt, 1988; Prell, 2012; van Duijn & Huisman, 2011). In order to avoid autocorrelation and collinearity problems in our analysis, we used the Double Dekker Semi-Partialing method (Dekker, Krackhardt, & Snijders, 2003, 2007).

## Results

The results for MRQAP are presented in Table 2. The dependent variable in this statistical procedure is the collaborative ties organizations created by the end of the SCF program. The independent variables are pre-existing friendship and collaborative ties. We used common services and motives for collaboration (i.e. indicators of homophily) as control variables. First, we entered the main predictive variables to the model (model 1) and then entered all variables to the model (model 2). The first model shows both *preexisting friendship* and *past collaboration* has statistically significant association to the dependent variable with standardized regression coefficients of .328 and .377 respectively. For this model, $R^2$ and adjusted $R^2$ are .399 and .395 respectively (p=.001).

Table 2. MRQAP Results

| | Model 1 | | | | Model 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | Un-Stdized | Stdized Coef | P-value | Std Err | Un-Stdized | Stdized Coef | P-value | Std Err |
| Preexisting friendship | 0.3199 | 0.3281 | **0.0005*** | 0.0562 | 0.3028 | 0.3106 | **0.0005*** | 0.0525 |
| Past collaboration | 0.5342 | 0.3770 | **0.0005*** | 0.0858 | 0.5424 | 0.3828 | **0.0005*** | 0.0851 |
| Common motives | | | | | 0.0468 | 0.1495 | **0.003*** | 0.0176 |
| Common services | | | | | 0.0044 | 0.0149 | 0.3638 | 0.0137 |
| Intercept | .0407 | | | | -.0045 | | | |
| Model | $R^2$/Adj $R^2$ | | P-value | | $R^2$/Adj $R^2$ | | P-value | |
| | 0.399/0.395 | | 0.001 | | 0.420/0.413 | | 0.001 | |

In the second model we added the control variables in addition to model 1.The results show all variables, but *common services* have statistically significant results at p=.01 level. *Common services* have a p value beyond the conventional acceptable level (.363). The regression coefficients and p values for the main variables have not changed substantially in the second model. The regression coefficient for *preexisting friendship* has a slight drop to .310 (5.6%

decrease). The regression coefficient for *past collaboration* has a slight increase to .382 (1.7%). *Common motives* has a smaller standardized coefficient (.149). $R^2$ and adjusted $R^2$ for the second model are .420 and .413, respectively (p=.001).

The impact of the homophily variables on the dependent variable is considerably limited given *common motives* has a relatively small standardized regression coefficient and *common services* has a considerably high p value. Also, the results have not found a confounding effect of homophily variables in this study. When model 1 and 2 are compared, their impacts on the main predictive variables are unremarkable.

## Discussion

The results show that past collaborative ties have the highest predictive power for program participants' current collaborative dyadic ties. Preexisting friendship ties are a slightly weaker predictor of collaborative dyadic ties. Finding statistically significant relationships between past collaboration ties and preexisting friendship ties, as well as collaborative dyadic ties, is not surprising (confirming hypotheses 1 and 2). However, what is interesting is the relative importance of the independent variables, both friendship ties and collaborative ties, for predicting the dependent variable. Pre-existing friendship and past-collaborative ties have very close regression coefficients. The primary reason for this result can be the age of the organizations or the network ties. A majority of the organizations are fairly young (three organizations were established before 2000 – 1971, 1977, 1996-, five of them were established between 2001- 2004, and ten of them were established in 2005 or later)[6] therefore, they had a very limited experience in building collaborative ties when the first survey was conducted. When these factors are taken into consideration, it is understandable that informal ties had a nearly equal importance in building collaborative ties.

The results of the MRQAP confirmed what Isset and Provan (2005) found for publicly funded nonprofits. In their study, Isset and Provan examined the nature of the relationships between nonprofits and their public funders. If trust and a positive reputation are developed throughout a contractual relationship, it reinforces the continuation of these ties and increases multiplexity in their relationships. A similar situation is observed in our case as program participants preferred to revitalize their past collaborative ties. However, we do not have data to confirm whether multiplexity has increased between these organizations. Secondly, preexisting friendship ties are also a statistically significant predictor of collaborative dyadic ties and its relative importance is close to that of past collaborative ties. Friendship ties enable organizations to build trust, share knowledge and develop collaborative ties (Larson, 1992; Lazerson, 1995). Nonetheless, one could argue friendship ties do not necessarily generate a positive reputation; thus, cultivating collaboration from friendship ties is more costly and risky than reactivating a past collaboration tie. Findings of this study show friendship ties and past collaborative ties were almost equally influential (collaborative ties hold slightly more weight) in building collaborative ties, particularly when organizations are in their early ages.

Among the two homophily variables we used in our model, only common motives had a statistically significant regression coefficient of .149. They do not have a confounding effect. Furthermore, *common motives* and *common services* have a small prediction on the dependent variable. This is an interesting finding, because two homophily variables do not influence an organizations' decisions in collaborative tie building[7]. In other words, similarity in motives and services do not provide as much trust as past friendship and collaboration.

This research provides useful information about adaptive capacity attributes of small nonprofit organizations. Social capital and interorganizational collaborative networks are the two aspects of adaptive capacity we used in this study. Developing interorganizational social capital and collaborative ties with organizations in their environment help nonprofits accomplish their goals and overcome the challenges they encounter. Social capital has significant importance, particularly during the early years of organizations since their relationships with the environment are not well established. Social capital can also help organizations eliminate duplication of services. For example, two SCF program participants were located in the same community, providing very similar services to similar clientele without knowing about each other. This inevitably creates duplication services and waste of resources.

One important outcome of collaborative tie building is it helps propel the organizational survival of small nonprofits. Bielefeld (1994) mentions youth and size are liabilities for a nonprofit. Younger and smaller organizations are more susceptible to the influence of external forces particularly when resources are scarce. Collaboration might help organizations to reach additional resources through applying for joint funding projects. Also, building ties (be it formal or informal) with other organizations may help partners to eliminate duplication of services. Nonprofit managers and decision makers might consider the findings useful for devising better tools for avoiding the demise of their organizations.

This study provides important insights for organizations serving as the broker or administrator in nonprofit networks. For example, in this study, the research team at UCF served as the broker between program participants. Different organizations may carry out the same role in different settings. In these networks, brokers may consider conducting policies for eliminating network closure in order to foster social capital among nonprofits. Strichman et al.'s (2008) findings show organizations may experience fatigue in managing their external ties. In order to eliminate such negative developments, network brokers and administrative organizations may carry out programs along with incentives to foster social capitals.

## Conclusion and Recommendations

Our starting point in this study was to examine the factors influencing collaborative dyadic ties between nonprofits. The main argument was developing collaborative network relationships among local nonprofits enable organizations to build adaptive capacity, which, in turn, enhances community capacity particularly for dealing with economic hardships. We take the interorganizational social capital dimension of nonprofit adaptive capacity as the theoretical

rationale for our study. In our analysis, we only used friendship ties as an indicator of social capital and excluded the other dimensions of adaptive capacity Strichman et al. (2008) conceptualized. Although our measure for social capital seems simplified, it is consistent with the literature surveyed.

We found participants of the SCF program are likely to revitalize their past collaborative ties. The primary reason for this situation is the positive reputation and trust between dyadic partners. Preexisting friendship ties are also helpful in establishing collaborative ties since they contain trust to a certain level. Interestingly, the relative importance of preexisting relationships is almost as equally important as the past collaborative ties in predicting collaborative dyadic ties. This is a somewhat unexpected finding of this study. This result shows informal ties are quite important for forming collaborative ties, particularly in the early times of nonprofits (i.e. when they are small). Having common motives for collaboration and providing similar services does not considerably effect whom an organization chooses to collaborate with. Also we could not find any results showing a confounding effect of homophily variables.

We believe this research provides a unique angle to study nonprofit collaboration with a network approach when focusing on small nonprofit organizations. We recommend nonprofit incubators encourage their clients to build formal and informal ties with their peers. Social capital and trust play a significant role in building especially informal ties; nonetheless, informal ties can disappear if they are not institutionalized overtime. Despite the challenges facing small nonprofits on a daily basis, nonprofits need to manage their relationships with stakeholders and explore collaborative opportunities (i.e. formal ties).

Acknowledgement: We are grateful for the representatives of the nonprofit organizations who participated in this research.

## Endnotes

[1] The social capital that is implied by the external focus/network connectedness aspect is different than social capital aspect of adaptive capacity. The former refers to interorganizational social capital while latter is about intra-organizational social capital.

[2] In this study, all the organizations we surveyed were also donative nonprofits.

[3] In 2010 and 2011, the University of Central Florida's Center for Public and Nonprofit Management strengthened communities and changed lives by providing a no-cost program of training, technical assistance, and funding for nonprofit capacity building. Eight-two nonprofits serving Orange, Lake, and Sumter Counties participated in the program. Grant support totaling $1.25 million funded monthly training workshops, weekly one-on-one assistance, and purchases of services and supplies to help nonprofits build their capacity ($1 million was granted to UCF by the U.S. Department of Health and Human Services, and the university matched the award with another $250,000).

Eight-two organizations can now better address the broad economic recovery issues present in their communities. They are helping low-income individuals secure and retain employment, earn higher wages, obtain better-quality jobs, and gain greater access to state and federal benefits. The program was led by project director Dr. Naim Kapucu.

[4] These items are economic recovery, economic development, educational, health and rehabilitation, religious, cultural, and other

[5] These items are economic recovery programs, common mission, finance, service/program compatibility, statutory, grant proposal, advice (help), and others

[6] Bielefeld's (1994) study on the demise of nonprofits show that majority of the nonprofits that couldn't survive were less than ten years old. Following Bielefeld's findings, we classified the nonprofits in three age categories: ones older than ten years old (established before 2000), between five and ten years old (established between 2001 and 2004), and less than five years old (established 2005 or later)

[7] One can argue that common services provided can be a source of competition rather than a similarity, nonetheless program participants were asked if they compete with other organizations for any reason such as volunteers, funding, visibility etc. Most of the program participants (17 out of 19) said they do not compete with others for any reason. Responses to this question might be biased since competition may have negative connotations for nonprofits; therefore participants might avoid identifying themselves as competitors. On the other hand, if common services provided was a source of competition we would expect to see a negative regression coefficient.

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