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How do Service Providers and Clients Perceive Interorganizational Networks?

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Abstract Interorganizational networks are important structures for both service providers, who must navigate them as part of their organizational roles, and clients, who use them for the purposes of receiving benefits. This research develops and tests a conceptual model that explains some of the differences in the ways that these two groups perceive these networks. Drawing on surveys/interviews with 200 clients and 63 service providers of agricultural development training in Burkina Faso, this research demonstrates that clients perceive interorganizational networks differently than service providers. In particular, these results demonstrate that service providers perceive more organizations in the network, more competitive and collaborative ties among those organizations, and more competitive ties per organization than clients. From these results, we draw implications for social network, development communication, and organizational fields' research.

Résumé Les réseaux interorganisationnels sont d'importantes structures tant pour les fournisseurs de services, qui doivent s'y retrouver dans le cadre de leurs rôles

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organisationnels, que les clients qui les utilisent pour recevoir des prestations. Cette recherche développe et teste un modèle conceptuel qui explique certaines différences dans la façon dont ces deux groupes perçoivent ces réseaux. S'appuyant sur des enquêtes et des entretiens menés auprès de 200 clients et 63 fournisseurs de services de formation de développement agricole au Burkina Faso, cette recherche démontre que les clients perçoivent les réseaux interorganisationnels différemment des fournisseurs de services. Ces résultats démontrent, en particulier, que les prestataires de services perçoivent plus d'organisations dans le réseau, des liens de collaboration plus compétitifs parmi ces organisations et des liens plus compétitifs par organisation que les clients. Ces résultats prévoient des répercussions pour le réseau social, la communication sur le développement et la recherche sur les domaines organisationnels.

Zusammenfassung Interorganisationale Netzwerke bilden wichtige Strukturen sowohl für Dienstleistungsanbieter, die diese im Rahmen ihrer organisationalen Rollen navigieren müssen, als auch für Kunden, die sie zum Zwecke des Leistungserhalts nutzen. Diese Studie entwickelt und testet ein Begriffsmodell, das erläutert, inwieweit die beiden Gruppen diese Netzwerke zum Teil unterschiedlich wahrnehmen. Die Studie stützt sich auf Umfragen bzw. Interviews mit 200 Kunden und 63 Dienstleistungsanbietern für Schulungen zur landwirtschaftlichen Entwicklung in Burkina Faso und zeigt, dass die Kunden die interorganisationalen Netzwerke anders wahrnehmen als die Dienstleistungsanbieter. Die Ergebnisse demonstrieren im Einzelnen, dass die Dienstleistungsanbieter mehr Organisationen im Netzwerk, mehr wettbewerbsfähige und kooperierende Verbindungen zwischen diesen Organisationen sowie mehr wettbewerbsfähige Verbindungen pro Organisation wahrnehmen als die Kunden. Beruhend auf diesen Ergebnissen ziehen wir Schlussfolgerungen für das soziale Netzwerk, die entwicklungspolitische Kommunikation und die Forschung organisationaler Bereiche.

Resumen Las redes interorganizacionales son estructuras importantes tanto para los proveedores de servicios, que deben navegar por ellas como parte de sus roles organizacionales, como para los clientes, que las utilizan con el objetivo de recibir beneficios. La presente investigación desarrolla y pone a prueba un modelo conceptual que explica algunas de las diferencias en las formas en que estos dos grupos perciben estas redes. Recurriendo a encuestas/entrevistas con 200 clientes y 63 proveedores de servicios de formación en desarrollo agrícola en Burkina Faso, la presente investigación demuestra que los clientes perciben las redes interorganizacionales de manera diferente que los proveedores de servicios. En particular, estos resultados demuestran que los proveedores de servicios perciben más organizaciones en la red, lazos más competitivos y de colaboración entre dichas organizaciones, y lazos más competitivos por organización que los clientes. A partir de estos resultados, extraemos implicaciones para la investigación sobre redes sociales, comunicación del desarrollo, y campos organizacionales.

Keywords Interorganizational networks · Nongovernmental organizations (NGOs) · Development communication · Organizational fields · Cognitive social structures

Introduction

In development initiatives, interorganizational networks are often created among nongovernmental organizations (NGOs) and governmental organizations with common goals or clients (Bennett 2005; O'Leary and Vij 2012). Their collaborative networks scale up the impact of their initiatives (Backer and Rogers 1993a, b; Flora et al. 1993), whereas their competitive networks compete to reach the clients as effectively as possible (Bennett 2005). Such interorganizational networks within organizational fields provide important paths for the diffusion of innovation among organizations (Kenis and Knoke 2002; Provan et al. 2013) and serve as conduits for clients that seek services from sets of organizations (Provan and Milward 1995; Cooper and Shumate 2012).

In order for interorganizational networks to benefit clients and service providers, however, the networks must be known. Individuals with different roles or affiliations likely have varied information about the extensiveness and patterns of network relationships in organizational fields. Consider, for instance, clients in Cooper and Shumate's (2012) study on gender-based violence NGOs in Lusaka, Zambia. In order for the clients to benefit from the various services offered to them, they had to be referred by the service providers who knew what other services were offered and had relationships with those organizations.

Despite the differences between service providers and clients, research has yet to develop theory or yield empirical findings that address the varied ways that these two groups perceive interorganizational networks. The purpose of this research was to examine the similar and different ways that service providers and clients, two important groups in interorganizational networks, perceive interorganizational networks. We make three contributions to current research in social networks, development communication, and organizational fields. First, we extend social network theory on cognitive social structures outside the realm of interpersonal networks to address the different perceptions of interorganizational networks in a particular domain. Second, we suggest practical implications for implementers of development initiatives. Finally, this study contributes to sparse empirical research on organizational fields of nongovernmental and governmental organizations, and offers a new theoretical perspective.

Service Providers and Clients in Interorganizational networks

Organizational fields are "sets of organizations that, in the aggregate, constitute a recognized area of institutional life" (DiMaggio and Powell 1983, p. 148). Interorganizational networks give structure to "the somewhat amorphous concept of" (p. 289) *organizational field*, detailing the various ways that organizations interact. For example, in the context of the current study, the organizational field describes nongovernmental and governmental organizations in the agricultural development field in Burkina Faso. The interorganizational network describes the specific collaborative and competitive relationships among these organizations.

Interorganizational networks offer scholars more concrete measures of organizational relationships, including measures of the number and pattern of ties.

All organizations in an interorganizational network have relations not only to each other, but also to individuals. Because research on organizational fields generally takes a macro-organizational perspective (DiMaggio and Powell 1983), not much attention has been paid to individuals' roles in organizational fields. Individuals without formal affiliations with organizations in the interorganizational network (i.e., clients) and individuals with such affiliations (i.e., service providers) have different roles in the field.

Perception of Collaborative and Competitive Relationships

The two groups' knowledge of interorganizational networks has a different utility, depending upon their role. In the current study, for example, the perception of relationships among NGOs and governmental organizations signifies different uses to clients and service providers. Specifically, this study focuses on perceived collaborative and competitive relationships among development initiatives, both of which can exist simultaneously (Bengtsson and Kock 2000).

NGOs and governmental organizations often form collaborative relationships or multi-organizational arrangements "to solve problems that cannot be solved or easily by single organization" (O'Leary and Vij 2012, p. 508). Organizations collaborate in disseminating information, diffusing resources, and changing the clients' behaviors through systemic programs and institutional support (Flora et al. 1993). Collaborative relationships by multiple organizations are necessary in order to adjust to the rapidly changing environments and practices (O'Leary and Vij 2012), to share information or technologies for better services (Saab et al. 2013), and to scale up the impact in development communication approaches that cannot be accomplished by individual effort or commitment (Backer and Rogers 1993a, b; Flora et al. 1993; Proulx et al. 2007).

Clients' perceptions of the organizations' collaborative relationships indicate where they can get similar products, information, or services from other collaborating organizations. An individual client cannot effectively locate appropriate services without adequately perceiving the interorganizational networks since services are often distributed among multiple organizations (Provan and Milward 1995; Rowley 1997). Service providers' perceptions of their own collaborative relationships signify their perception of present and future partners (Gulati 1998; Park 1996).

Simultaneously, NGOs and government organizations often have competitive relationships (Bengtsson and Kock 2000). Chen (1996) defines competitors as organizations "operating in the same industry, offering similar products, and targeting similar customers" (p. 104). Competition exists among charitable organizations offering the same type of services to the same type of clients (Bennett 2005; Walk et al. 2013). As a result, some charitable organizations adopt market orientation, specifically relational marketing strategy—building personalized and close relationships, interacting with clients, focusing on

communication with clients, and gathering feedback about clients' needs—to reach clients more effectively and survive in the competitive relationships (Bennett 2005).

If clients *perceive* organizations' competitive relationships, they can compare the organizations and utilize ones with better services. Service providers' perceptions of their own competitive relationships predict strategic behaviors of organizations (Chen 1996) such as strategic responses to institutional rules (Dimaggio and Powell 1983; Oliver 1991) or better control of resources (Oliver 1991). Effective or efficient strategies for marketing the organization, reaching the clients, pricing, or fundraising could be also based on the service providers' perception of the competitive relationships among the organizations.

Individuals' Cognitive Social Structures

In order to address the perceptional differences and similarities of interorganizational networks between the two groups, this paper turns to a network concept of Cognitive Social Structures (CSS). Traditionally, social networks describe "the set of relational statements between all pairs of actors in the system" (Krackhardt 1987, p. 113), that is, between the *sender* and the *receiver* of the relation. In contrast, cognitive social structures (CSS) consider one more actor in the relation—the *perceiver*. The CSS approach (Krackhardt 1987) regards different actors as different perceivers who *legitimately* provide different perceptions of the networks. For example, Krackhardt (1987) examined the "advice" network of employees. Instead of studying from whom each employee sought advice, his study examined each employee's perception of the entire advice network. The study demonstrates that significant differences exist between employees' perceptions of the whole network and the network of self-reported advice relations. Studies have attributed the discrepancies between people's perceptions of their own networks and the actual network to memory decay, systematic distortion of recalling or perceiving relationships (Bernard and Killworth 1977; Bernard et al. 1982, 1984; Killworth and Bernard 1976, 1980), or cognitive distortions (Lawler et al. 1968).

The current literature rarely addresses variance in perceptions of interorganizational networks. Krackhardt (2012) suggested that these perceptions are one of the great untapped areas of CSS research. Indeed, based upon theories of social cognition of social networks (see Borgatti and Foster 2003 for a review), individuals likely perceive interorganizational networks differently. However, distinct from previous CSS research, one must account for an additional factor in order to assess their importance, namely the relationship between the individual and the network. In other words, in CSS networks at the individual level, the primary explanatory variables are derived from the individuals' attributes and their relations in the network. In contrast, at the interorganizational network level, the explanation relies on the organizations' attributes and individual's relationships with organizations—namely, whether an individual is affiliated with an organization in the interorganizational network or not.

Organizational Affiliations in Perceiving Interorganizational networks

In order to address the ways in which individuals' affiliations with organizations influences their perceptions of interorganizational networks, we turn to research on organizational affiliation and perceptions. Research on in-group and out-group perceptions (Ackerman et al. 2006; Brewer 2010; Park and Hastie 1987; Park and Rothbart 1982; Park et al. 1992; Van Bavel et al. 2008) provides the building block for understanding why different groups or individuals with different affiliations may perceive interorganizational networks differently. In short, the research suggests that in-group members who are affiliated with an organization or a group have different perceptions of the homogeneity or heterogeneity of the group than out-group members (those not affiliated with the organization or the group).

In-group relative heterogeneity suggests that in-group members perceive greater variability among members of the in-group relative to the variability perceived for the out-group (Brewer 2010; Park and Rothbart 1982). In contrast, *out-group relative homogeneity* suggests that out-group members are more likely to make assumptions about individuals in a group based upon their estimate of the group's central tendency and to process the group-level abstraction (Ackerman et al. 2006; Brewer 2010; Park and Hastie 1987). Those external to the group are less likely to perceive individual differences in the group, and would regard the individuals in the group as homogeneous because of the primary abstraction of the group as a whole.

The differences in the levels of differentiation between in-group and out-group members are based upon familiarity (Linville et al. 1989) and affiliation (Rubin and Badea 2012) with the in-group. This familiarity leads individuals to attend to in-group members' individual attributes rather than abstract group attributes and out-group members' group/categorical attributes rather than individual variability (Hugenberg et al. 2007, 2010; Michel et al. 2007).

The notion of attributes can be applied to interorganizational networks in this study. From this perspective, the number of organizations within the field and the number of relationships among these organizations represent attributes of the interorganizational networks. If individuals are not affiliated with any organization in the field, they are more likely to perceive the interorganizational network as a homogenous or undifferentiated group. Thus, these individuals would see fewer distinctions among the organizations in the interorganizational network (i.e., all of the organizations within the field appear as one actor without distinctions) and may not even be able to recognize many of them. Additionally, they would perceive fewer relationships among the organizations.

As a result, we argue that individuals' affiliation with organizations in an interorganizational network (or lack thereof) affects their perceptions of that interorganizational network. In other words, in-group members who are affiliated with organizations in the interorganizational network—in our case the *service providers*—are more likely to perceive interorganizational networks as having greater nuance than individuals without any organizational affiliations in the interorganizational network—the *clients*. The *clients*, out-group members, who are not affiliated with organizations in the interorganizational network are more likely to have a general or cursory view about the organizational field and less likely to

pay attention to differences among the organizations in the interorganizational network and the relationships among them.

In order to test these propositions, this study examines three nuances in interorganizational networks: the number of organizations in the field, the number of ties among these organizations, and the average number of ties per organizations (average degree). The number of organizations in the field describes the number of named organizations in the interorganizational network. Number of ties describes the number of network relations among the organizations mentioned. Average degree describes the number of ties per organization mentioned. Each of these measures captures a portion of the variance possible in each cognitive social structure, and in combination, they suggest either a more nuanced or less nuanced perception of the interorganizational network on the part of members of each group. The greater the number of organizations perceived, the greater the number of ties, or the greater the average degree, the more nuanced the perceiver's view of the network. Therefore, we hypothesize:

H1 Service providers will perceive a greater number of organizations in the interorganizational network than clients.

H2 Service providers will perceive more (a) collaborative and (b) competitive relationships between organizations in the interorganizational network than clients.

H3 Service providers will perceive more (a) collaborative and (b) competitive relationships per organization in the interorganizational network than clients.

Method

Case Background

This study was conducted among clients and service providers of a government and NGO-based agricultural development field in Burkina Faso. Extension agents serve as service providers to their clients, the farmers, in this organizational field. Burkina Faso is a country situated in Western Africa with an estimated population of about 17 million (CIA 2012). Its high population density and limited natural resources result in poor economic prospects for the majority of its citizens. The country's GDP per capita (UNDP 2013) is $1,149 as of 2011, compared to the world average of $10,103 and the African average of $2,094 per capita. Almost half of the population (44.6 %) in Burkina Faso is living below the international poverty line of $1.25 a day, in purchasing power parity terms.

In Burkina Faso, 33 % of the economy is composed of agriculture, 22.2 % of industry, and 44.9 % of services. The country is much more dependent on the agriculture sector compared to the composition of the world—5.9 % for agriculture, 30.7 % for industry, and 63.4 % for services, respectively (CIA 2012). Historically, agriculture has been an important sector of African countries, often led and managed by the governments until the 1980s (Kaminski et al. 2011). Because of the failure of the government intervention in the late 1980s, however, the commodity

market reforms took place in 1990s to increase agricultural profitability. The government strategically sidestepped from its leading role and started supporting national unions, funding research, grading quality of crops, and providing extension services instead (Kaminski 2011). By the success of the reforms, farming in Burkina Faso has become an even more important sector of the country, as a leading contributor to its economic growth (Kaminski and Thomas 2011). Since the reform, the role of nongovernmental or governmental organizations, with which the service providers are affiliated, has been regarded as critical resources for the sustainable development of the sector (Kaminski 2011). The country's economic dependency on and recent success in the agricultural sector strengthen the importance of the organizations as well as the service providers in that sector.

The roles of the service providers and the clients are mutually interdependent but exclusive. Service providers unilaterally assist the clients. The clients depend upon the agents for advice and assistance. As a result, in Burkina Faso, the service providers are formally affiliated with organizations in the interorganizational network as in-group members and the clients remain as out-group members without formal affiliations with agricultural service organizations. Even though the two groups are closely related, their completely discrete roles categorize them into two separate groups.

Participants

The sample for this study was obtained from interviews with 200 clients and 63 service providers, conducted from June to July of 2011 in Burkina Faso. Ten surveys completed by service providers were omitted because of missing data. The sample was predominantly male across the two subgroups (clients: $n = 119$, 59.5 %; service providers: $n = 49$, 77.8 %). Clients were slightly older than service providers (clients = 45.71, $n = 199$, $SD = 12.16$; service providers = 36.49, $n = 49$, $SD = 10.40$, $t\ (246) = 4.88$, $p < .0001$). Service providers were more educated than clients, $\chi^2\ (5, n = 260) = 214.16$, $p < .001$. Clients generally had no education (73.87 %) or primary education (21.61 %). In contrast, service providers were more likely to have secondary (60.66 %) or vocational or technical education (24.59 %). Some of them also had college (8.20 %) or doctoral (4.91 %) level of education.

Procedures

One of the authors involved in this research went to Burkina Faso and trained three local agents for a week in June 2011. Local agents were preferable for collecting data in this study because the local clients were more willing to disclose their personal information to local people than to foreigners. The interviews were conducted wherever the participants felt comfortable, including their homes, offices, or a cafeteria. Service providers were administered a survey to be completed on their own and clients were interviewed using the same survey as protocol. Because of the clients' low literacy rate, as compared to the service providers, each group had different procedures. Each interview or survey took approximately 40 min. The

interviews with the famers were conducted in local languages, mostly Mòoré and Dioula, and service provider surveys were in French, the official language of Burkina Faso.

Measures

Organizations in the Interorganizational Network

Both service providers and clients were asked questions to solicit as many names as possible of organizations that work in the same organizational field. In particular, service providers were asked (1) if they knew any government agencies that work directly with local clients (2) if they knew of any NGOs that work directly with local clients, and (3) if they knew any other local groups (i.e., cooperatives, religious organizations) that work directly with local clients. If they said yes to any of these questions, they were immediately asked to list all that they could think of under that category. Similarly, clients were asked (1) "Do you belong to any formal or informal groups that offer advice about growing crops?" and (2) "Are you aware of any NGO or government programs in your community that offer advice about growing crops?" If the client responded affirmatively to either question, they were asked to name all of the organizations that they could think of. One outlier from the service providers' group and two outliers from clients' group who were not within the range of three standard deviations were excluded in the analysis. The clients and the service providers mentioned 2.40 organizations on average ($n = 250$, $SD = 2.55$).

Collaborative Relationships

Clients and service providers were asked about collaborative relationships among the organizations they named. For collaborative relationships, clients were asked: "Now I am going to ask you about whether each of the groups that you mentioned work together. Groups work together when they offer joint programs or they seem to share information or resources. Does ⟨Organization A⟩ work with ⟨Organization B⟩?" Similarly, service providers were asked to indicate on a table in the survey instrument if any of the named organizations "worked together." Because the relationship was non-directional, every tie mentioned by the participants was symmetricized. For example, there were some participants who mentioned that Organization A collaborates with Organization B in the Organization A column of the matrix, but did not mention that Organization B collaborates with Organization A in the next column for Organization B. These cases were seen specifically often when the participants mentioned many organizations. The number of collaborative relationships among organizations mentioned from both the clients and the service providers was 2.36 on the average ($n = 248$, $SD = 5.84$), when one outlier from service provider's group and four outliers from client's group were excluded.

Competitive Relationships

In order to measure the perceived competitive relationships among these organizations, clients were presented with the following question: "You mentioned ⟨Organization A⟩ as a group that offers advice. Do the same or different farmers that go to ⟨Organization A⟩ also go to other groups you mentioned too? What about ⟨Organization B⟩?" Service providers were asked to identify in a table each of the organizations that "serve/support the same farmers." These relations were also symmetricized. The number of competitive relationships among organizations mentioned from both the farmers and the extension agents was 3.63 on the average ($n = 248$, $SD = 12.07$) excluding one outlier from extension agent's group and four outliers from the farmer's group.

Analysis

To test hypothesis 1, we counted the number of organizations named by each group and compared them using an independent sample t test. In order to examine hypothesis 2, we used Univariate Stats function in UCINET (Borgatti et al. 2002) to count the number of ties reported by each group. After we acquired the number of ties mentioned by each group, we calculated the number by an independent sample t test.

For hypothesis 3, the average number of ties per organization was calculated for each relationship. This measure is also called *Average Degree Centrality per Perceiver*. The measure was the result of the aforementioned *Number of Ties Mentioned*, divided by the *Number of Organizations Mentioned*. The average numbers mentioned by each group were compared by an independent sample t-test. The average number of ties per organization for competitive relationship was measured ($n = 248$, $M = 0.72$, $SD = 1.15$) excluding one outlier from service provider's group and four outliers from client's group. In addition, the average number of ties per organization was measured for collaborative relationship ($n = 249$, $M = 0.56$, $SD = 0.81$) excluding two outliers from each group.

Results

This study examined whether service providers and clients have different perceptions of interorganizational networks in the agricultural development field in Burkina Faso. Although 180 out of 200 clients and 48 out of 53 service providers mentioned organizations, less than half of the total sample—98 out of 200 clients and 21 out of 53 service providers—perceived any relationship between the organizations in the survey. No distinctive characteristics were found between those who mentioned any organization and those who did not mention any at all in terms of gender, date of birth, years of working as clients or service providers, level of education, or location of residence. Out of 55 organizations and 67 organizations whose relationships were perceived by the clients and service providers, respectively, 15 organizations were named by both parties.

Hypothesis 1 examined whether service providers would mention more organizations than clients. Significant differences were observed between two groups, t (248) = 10.48, $p < .0001$. Clients perceived fewer organizations ($n = 198$, $M = 1.68$, $SD = 1.14$) than service providers ($n = 52$, $M = 5.15$, $SD = 4.13$). Therefore, hypothesis 1 was supported.

Hypothesis 2 predicted that service providers would mention more ties than clients. The service providers mentioned significantly more (H2a) collaborative ties ($n = 52$, $M = 5.12$, $SD = 11.37$) than clients ($n = 196$, $M = 1.63$, $SD = 2.61$), t (246) = 3.94, $p < .0001$). For (H2b) competitive ties, the service providers also mentioned significantly more relationships ($n = 52$, $M = 10.81$, $SD = 24.76$) compared to the clients ($n = 196$, $M = 1.72$, $SD = 2.62$), t (246) = 5.06, $p < .0001$. Thus, Hypotheses 2a and b were supported.

Hypothesis 3 anticipated that service providers would mention more ties per organization than clients. For (H3a) collaborative relationships, there was no significant difference, t (247) = 0.88, $p > .05$ (clients: $n = 198$, $M = 0.59$, $SD = 0.76$; service providers: $n = 51$, $M = 0.48$, $SD = 1.00$). However, there was a significant difference for (H3b) competitive relationships, t (246) = 2.90, $p < .05$. Clients reported fewer ties per organization ($n = 196$, $M = 0.61$, $SD = 0.74$) than service providers ($n = 52$, $M = 1.13$, $SD = 2.02$). Therefore, hypothesis 3a was not supported but H3b was supported.

To further investigate this distinction, we compared the number of collaborative and competitive per organization reported by clients and service providers, respectively. There were no significant differences existed between the number of ties per organization for competitive relationship and collaborative relationship reported by clients (t (392) = 0.35, $p > .05$). However, there was a significant difference between the number of ties per organization identified by service providers across the two relations (t (101) = 2.06, $p < .05$). That is, service providers were more likely to perceive more competitive ties ($n = 52$, $M = 1.13$, $SD = 2.02$) than collaborative ties per organization ($n = 51$, $M = 0.48$, $SD = 1.00$).

Discussion

This study examined whether service providers perceive a more diverse and densely connected interorganizational networks than clients. The results suggest that service providers perceive more organizations and more ties per organization than clients, as hypothesized (H1 and H2). This suggests that organizational affiliations in the field influence perceptions. Because service providers are affiliated with formal organizations, they might have more knowledge of and interaction with other organizations than clients. Whereas clients might not distinguish between organizations who offer them the same or complementary services, service providers are more conscious of differences and similarities between organizations in order to either differentiate their services from others or collaborate with others. In addition, only about a fourth of the organizations were named by both parties, suggesting that

the two groups' knowledge, contacts, and perceptions of organizations differ significantly.

Service providers reported a higher average degree centrality (i.e., the number of ties per organization in the field) for competitive relationships than clients, but not for collaborative relationships, only supporting hypothesis 3b. Service providers perceived a lower average degree centrality for collaborative relationships than for competitive relationships. There was no difference for clients. One explanation for this difference is the primary role of service providers in their organizations. Service providers' primary responsibilities are to interact with clients and enact programs, in comparison to others who may have a more strategic purview (e.g., high-level staff, board members, etc.) (Van Puyvelde et al. 2012). In essence, perhaps the work of delivering programs and services made competition in delivering the same programs and services more salient than collaborative relationships. Thus, organizational role may make some types of interorganizational networks more salient to service providers than others.

Alternatively, despite the common attention to collaborative relationships in the NGO and governmental field (Kania and Kramer 2011; McGuire 2006; O'Leary and Vij 2012; Pilny and Shumate 2012), this result may suggest these organizations compete more than they cooperate in the organizational field. First, nongovernmental and governmental organizations might be more concerned about their competitors than collaborators and adopt market-oriented approaches to reach clients for survival in the market (Bennett 2005). Second, because the organizations' roles, technologies, and resources might be so similar to each other, they might not perceive other organizations as potential collaborators, since collaboration among organizations with different resources, knowledge, and responsibilities are both more common and effective (Kania and Kramer 2011; Keast et al. 2004).

Combined the result suggests that service providers perceive more diverse and densely connected interorganizational networks than clients. These results are consistent with the argument from social psychology that a person will perceive more variability when they are part of the in-group and less variability when they are part of the out-group (Kenny 1994; Linville et al. 1989; Ostrom et al. 1993; Park and Hastie 1987; Park and Rothbart 1982; Rubin and Badea 2012).

CSS scholars have identified the study of the perceptions of interorganizational networks as important gap in the current research (e.g., Krackhardt 2012). Because previous CSS research has focused on perceptional variance at the individual level, individual relations *in* the network as well as their attributes were crucial factors for explaining the variance. In contrast, the current study's organizational focus sheds light on individuals' relationship *with* organizations in the network. The shift from individual to organizational networks changes not only the level of analysis, but also the position of perceivers as either affiliated with organizations or not in the network. Organizational affiliations are not nominal indicators, but empirically significant classifiers for different perceptions. Thus, this study extends CSS research, using organizational affiliations, to identify how their perceptions might vary.

The discrepancy between the clients and service providers' perception in this context is crucial because clients are the beneficiaries. Except for the average degree

of collaborative ties, clients perceived a less diverse and densely connected field of service providers. Perceiving fewer organizations, network ties, and relationships per organization indicates that clients are not as aware of organizations providing similar services as service providers. Such differences may suggest that they lack knowledge to strategically navigate the interorganizational networks. In the context of this study, this discrepancy has implications for, at the micro-level, clients' ability to grow crops to sustain their families and, at the macro-level, the core economic sector in the country.

The results of this study do not necessarily suggest that clients need to improve their perceptions or that these impressions must be made to align with the service providers. This study rather suggests service providers may beneficially recognize that their knowledge of interorganizational ties within the field is not held by clients. As such, their programs might make resources that their organization does not offer, but are available from other organizations, visible to clients. Further, they might choose not to reveal information about competitors in the field in order to maintain market share.

In addition, this study contributes to the sparse number of empirical studies on organizational fields of nongovernmental or governmental organizations. By examining the role of clients and service providers, it provides insight into individual relationships that are unique to these sectors. Whereas corporate fields have clients, relationships with these clients are based upon direct transactions with the clients themselves. In contrast, nongovernmental and governmental organizations provide services to clients in order to fulfill their mission and at the behest of either taxpayers or donors. This study articulates each relationship among these organizations as collaborative and competitive and notes differences in the ways that clients and service providers perceive these relationships.

Limitations and Future Research

Admittedly, this paper only takes account of one type of clients and organizational service provider. Extension agents are only one group of service providers affiliated with nongovernmental and governmental organizations. Service providers that have a different status in the organization or different degree of interaction with other organizations might perceive the network differently. Farmers also represent only one group out of many clients in organizational fields. Other individuals who are not direct beneficiaries of the service providers might have different perceptions of the network. Although clients are important for the existence of nongovernmental and governmental organizations, other individuals' perceptions can reveal other perspectives of the organizational field. Since clients also interact with each other (Rowley 1997), future work might productively investigate how such interaction networks influence perceptions of the interorganizational networks.

Moreover, clients and service providers in this study had a significant difference in education level. Due to collinearity between the two group and education level ($r = .87$), it was not possible to control for this explanation. Therefore, there is a

possibility that education might have influenced the two groups' perceptions of the network.

Finally, characteristics other than affiliation with a formal organization might influence their perceptions. For example, identification with organization, communication between two groups, or media access might influence their perceptions of interorganizational networks. Such research would further the study of CSS.

Conclusion

The purpose of this research was to develop and examine a conceptual model that explains perceptional variance of interorganizational networks. The results of the current study suggest that service providers perceive a more diverse and densely connected organizational field than clients. Specifically, clients identified fewer organizations in the field and fewer connections among those organizations than service providers.

We make three contributions to current research in social networks, development communication, and organizational fields. First, we extend social network theory on cognitive social structures outside of the interpersonal networks domain to address the different perception of interorganizational networks. The previous literature on social network theory on CSS has predominantly addressed perceptional variance in interpersonal networks. The current study touches on the perceptional variance of interorganizational networks, one of the great untapped areas of CSS research (Krackhardt 2012), by addressing individuals' different affiliations with an organization.

Second, we examine the organizational roles in perceiving interorganizational networks and suggest practical implications for organizational practitioners in development initiatives. Noting the variance in perceptions and identification of organizations, practitioners might focus their efforts on information asymmetry in the markets. Practitioners may take advantage of their better network views to examine perceived structural holes (Burt 1992) and focus their efforts on those opportunities for fruitful collaborations or marketing their services in competitive situations. The current study addresses the practical significance of how mapping and understanding two groups' perceptional variance can help both implement and navigate appropriate services more effectively and practically.

Finally, this study contributes to the lack of empirical studies on organizational field with nongovernmental or governmental organizations and offers theoretically different level of perspectives to the organizational research. Empirical studies are rare in the research on organizational field of nongovernmental and governmental organizations (notable exceptions include D'aunno et al. 2000; Frumkin and Galaskiewicz 2004), but the current study provides an empirical study to the literature. Moreover, most of the studies focus on the institutional mechanism of the organizational field at a macro-level (D'aunno et al. 2000; Frumkin and Galaskiewicz 2004). This study examines the field at the meso-level and articulates the collaborative and competitive relationships among the organizations. Further, to

our knowledge, no empirical study to date has examined the varied perceptions individuals have of the field.

Interorganizational networks are one crucial structuring mechanism for coordinated organizational behaviors (Kenis and Knoke 2002). The results from this study suggest that perception of such networks might be different among individuals depending on their relationship with organizations in the networks. That is, although interorganizational networks might have a critical impact on organizational behaviors on the organizational level, individuals' perceptions might also play an important role for both the behavior of service providers and the receptiveness of clients. The results point to the significance of considering perceptional variances for providing and receiving effective services for service providers as well as clients in development initiatives.

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