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## ENTREPRENEURIAL ORIENTATION, COLLABORATIVE NETWORKS, AND NONPROFIT PERFORMANCE

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ENTREPRENEURIAL ORIENTATION, COLLABORATIVE NETWORKS, AND  
NONPROFIT PERFORMANCE

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DISSERTATION

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A dissertation submitted in partial fulfillment of the  
requirements for the degree of Doctor of Philosophy in the  
College of Business and Economics  
at the University of Kentucky

By

Brandon Ofem

Lexington, Kentucky

Co-Directors: Dr. Walter J. Ferrier, Associate Professor of Strategic Management  
and Dr. Stephen P. Borgatti, Professor of Management

Lexington, Kentucky

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## ABSTRACT OF DISSERTATION

### ENTREPRENEURIAL ORIENTATION, COLLABORATIVE NETWORKS, AND NONPROFIT PERFORMANCE

In this mixed-method study, I explore the idea that an entrepreneurial orientation serves as a key driver of nonprofit organizational performance, and that a focal nonprofit's set of collaborative ties moderates that relationship. I theorize that for nonprofits operating in an environment characterized by resource scarcity, possessing an EO is vital. More specifically, I theorize that organizations with smaller and less heterogeneous sets of collaborative ties benefit more from an EO than those with larger and more heterogeneous sets. I also explore the possibility that a focal nonprofit's pattern of collaborative ties may be a function of that nonprofit's EO. These ideas are tested using an original data set collected from a sample of the estimated 200 economic development organizations operating in eastern Kentucky. This is an area where economic growth has been particularly elusive, and where a deeper understanding of the entrepreneurial and collaborative practices of nonprofits might be especially valuable. The results reveal some significant empirical support for these ideas, and point to a promising research program aiming to uncover the interactive effects of EO, collaborative networks, and nonprofit performance across a range of organizational contexts.

KEYWORDS: Entrepreneurial Orientation, Collaborative Networks, Local Economic Development, Nonprofit Performance, Interorganizational Collaboration

\_\_\_\_\_  
Brandon Ofem

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June 13, 2014

ENTREPRENEURIAL ORIENTATION, COLLABORATIVE NETWORKS, AND  
NONPROFIT PERFORMANCE

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To my family, friends, and colleagues who made this study possible.

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## CHAPTER 1: INTRODUCTION

An entrepreneurial orientation (EO) is a construct that has received much scholarly attention within the strategic management and entrepreneurship literatures (Miller, 2011; Rauch, Wiklund, Lumpkin, & Frese, 2009; Dess, Lumpkin, & Covin, 1997). It has been defined in multiple ways by a variety of scholars, but generally seeks to capture an organizational decision-making proclivity to engage in new, innovative, and entrepreneurial activities (Covin & Wales, 2011). Such a proclivity is often beneficial for organizations operating in capital-intensive industries in the for-profit arena, where continual technological innovation is required to achieve and sustain a competitive advantage. Indeed, several studies investigating EO in a for-profit context have the explicit or implicit assumption that EO is a resource-intensive strategic posture (Rauch et al., 2009; Moreno & Casillas, 2008). The rationale is that for companies to extract greater value from their EO, they must have strategic resources to do so. They must have the financial capital, equipment, personnel, facilities, and/or social capital to harness their entrepreneurial capabilities and exploit growth opportunities (Stam & Elfring, 2008).

However, limited empirical evidence also suggests that there are certain conditions under which EO might be more beneficial for organizations with *fewer* resources. For example, although theorizing the opposite, Wiklund and Shepherd (2005) found in their study of 413 small business firms that firms with the most resource constraints actually reaped the most performance gains from an EO. They identified a stable, financially constrained environment as a critical boundary condition shaping this effect, and argued that it could be explained from the lens of market differentiation. In such a stable environment, EO is likely to be a high performance strategy because it

disrupts and shakes up the industry, giving some firms the ability to identify and exploit opportunities that differentiate them from competitors. Similarly, Covin, Slevin, and Covin (1990) found that the relationship between EO and performance was stronger for firms in low-tech industries than in high-tech industries, challenging the notion that EO as a strategic posture is more beneficial for firms competing in capital-intensive, dynamic markets.

This dissertation proposes that in a nonprofit context, organizations operating in an environment characterized by resource scarcity should be expected to benefit *more* from an EO if they have *fewer* resources at their disposal. More specifically, I focus on the direct effect of EO on nonprofit performance, and how access to social capital moderates that relationship. I view social capital from the social network perspective, a versatile and precise lens emphasizing the structure and nature of relations between a set of actors (Brass, Galaskiewicz, Greve, & Tsai, 2004). I explore the possibility that a focal organization's pattern of interorganizational collaborative ties may act to enhance or diminish the effects of EO on performance in a nonprofit context. Collaborative ties, and social ties and networks more generally, offer opportunities and constraints (Brass et al., 2004). Ties serve as conduits for the flow of resources (Borgatti & Halgin, 2011), as well as a necessary condition to cooperative action. In this study, I theorize that in a nonprofit context, collaborative interorganizational ties may substitute for the need to act entrepreneurially and possibly constrain rather than facilitate an EO. I expect organizations with smaller collaborative networks to reap higher performance gains from an EO. Furthermore, due to the searching activities of EO organizations for new opportunities and their tendency to capitalize on such opportunities, I posit that an EO is

also likely to manifest itself in the choice of collaborative ties. Hence, not only is EO likely to interact with collaborative network properties in predicting performance, but it is also likely to affect those network features directly.

In sum, I address the three following research questions: (1) How does EO affect nonprofit performance? (2) How does an organization's pattern of collaborative ties affect nonprofit performance? (3) How might an organization's pattern of collaborative ties moderate the effect of EO on performance? (4) How does EO affect an organization's pattern of collaborative ties? I test theory regarding these questions using an original data set from a sample of 98 nonprofit economic development organizations (EDOs) operating in the Appalachian region of eastern Kentucky, one of the most persistently distressed regions in the United States (Eller, 2008; Billings & Blee, 2000). Given that nonprofits survive from the opinions of their stakeholders, and that social impact can often be captured through subjective measures (Oster, 1995), I focus my theorizing and analysis on nonprofit perceptual performance (i.e. based on subjective ratings of top managers and their peer organizations).

The empirical setting provides a unique condition to study the questions of interest. Economic development is a highly competitive endeavor with entrepreneurship central to the process. The purpose of it is to strengthen the competitiveness of local businesses, cities, and regions. Nonprofit EDOs need to be entrepreneurial in facilitating and achieving that objective. In addition, collaboration is considered a best practice in economic development (Leigh & Blakely, 2013), and is especially vital for nonprofits operating in rural regions (Snaveley & Tracy, 2000). Hence, in this context, the effects of

an entrepreneurial orientation and patterns of collaboration on nonprofit performance might be especially pronounced.

Ultimately, this study provides further evidence that challenges the notion that EO must necessarily be a resource-intensive strategic posture. Such an assumption makes sense for product firms, where much capital is required to build the next wave of technology. But is this true for nonprofit firms? This study challenges this assumption using a labor-intensive sample of organizations operating in an environment where resource scarcity has been the norm. I propose that in such an environmental context, it is even *more* important for nonprofits to engage entrepreneurially in order to differentiate themselves from peer organizations and achieve superior performance. Such organizations must be especially entrepreneurial in finding new ways to achieve organizational objectives and make a positive social impact. If they have fewer resources, it should be even more important that they do so.

By focusing on social capital as the resource, this study advances recent work examining the interactions between EO, social capital, and organizational performance (Stam & Elfring, 2008). Such an examination provides further evidence of the value of taking a contingency or configurational approach to the effects of EO and social capital on firm performance (Stam & Elfring, 2008; Wiklund & Shepherd, 2005). In doing so, this work advances *social network theory*, which is concerned with the effects of different network features and characteristics on actor outcomes (Borgatti & Halgin, 2011). Unlike past work, however, this study proposes that social capital may act as substitute and/or constrainer, rather than an enhancer, of EO on performance. I identify a nonprofit context

characterized by resource scarcity as a boundary condition under which this is likely to be the case.

This study also contributes to work in *theory of social networks* (Borgatti & Halgin, 2011). Whereas social network theory examines the effects of different network features on outcomes of interest, theory of social networks is concerned with antecedents of those different network features. This study stands among the first to investigate how EO might shape a focal organization's pattern of collaborative ties. Whereas past research has largely examined how past ties and positions in networks influence future changes in the network (Gulati & Gargiulo, 1999; Gulati, 1995), this dissertation explores the possibility that EO as a behavioral pattern might also have an effect on a focal nonprofit's pattern of collaborative ties.

## **CHAPTER 2: THEORETICAL BACKGROUND**

### **Entrepreneurial Orientation**

The idea of a firm acting entrepreneurially dates back to the economist Joseph Schumpeter (1947), who proposed that superior profits are often obtained through the process of “creative destruction”, whereby established ways of doing things are challenged or replaced by better processes or technologies. He pointed out that economic change and growth usually require old economic orders and routines to be disrupted or replaced by better or more widely accepted approaches. With respect to an organization, this means that in order for a company to really gain a competitive advantage, it must disrupt the status quo of production within a market or create an entirely new market that destroys an old one. It must create something new and valuable that consumers demand more than the old products. Or, it must conduct its operations in new ways that prove to be more valuable than the old. In other words, it must act entrepreneurially.

The EO construct has generally sought to capture and measure the degree to which an organization consistently acts entrepreneurially rather than conservatively (Covin & Wales, 2011). In the management literature, definitions of an EO have evolved over time, albeit with arguably different labels for the same core construct. For example Mintzberg (1973) claimed that organizations with entrepreneurial proclivities have a strategy-making process that is “dominated by the active search for new opportunities” as well as dramatic leaps forward in the face of uncertainty” (p. 45). Mintzberg labeled this proclivity as “entrepreneurial mode” (1973). Khandwalla (1976) had a similar view; in which entrepreneurially-oriented firms could be distinguish by a decision-making style that is bold, risky, and aggressive. He labeled this construct as “entrepreneurial style”



(1976). While Mintzberg (1973) and Khandwalla (1976) focused on the decision-making of the top managers in their conceptualization, Miller (1983) broadened the conceptualization of such an orientation to the entire firm. He introduced a school of thought that conceptualized EO as a collection of organizational behaviors (Covin & Wales, 2011). He proposed that those behaviors are the simultaneous manifestation of three entrepreneurial tendencies: innovativeness, risk-taking, and proactiveness.

These ideas led the way to what has become known as the Miller/Covin and Slevin scale (Covin & Lumpkin, 2011; Brown, Davidsson, & Wiklund, 2001). Covin and Slevin acknowledged the famous Miles and Snow (1978) typology in the explanation of the EO construct, claiming that EO was roughly similar to the behavioral proclivities of the prospector type. However, this new conceptualization provided a fundamentally different way to observe and measure the tendency of organizations to engage in entrepreneurial behaviors. It provides a way to capture an organization's tendency to act entrepreneurially by combining the extent to which an organization is innovative, risk-taking, and proactive. The scale consists of nine items, with three items measuring each of those characteristics. For *innovativeness*, the emphasis in those items deals with new product development, research and technological leadership, and the frequency of new product lines. They generally seek to capture the extent to which an organization develops and commercializes new products and services. For *risk-taking*, the items focus on preferences of the top managers regarding risky projects and firm proclivity to engage in bold actions in the midst of uncertainty. They generally seek to capture the extent to which an organization is willing to commit scarce resources to uncertain outcomes. For *proactiveness*, the items emphasize the extent to which an organization takes initiative in

competitive action, is the first to introduce new products in a market, and is generally competitive (Covin & Slevin, 1989; Miller, 1983).

By combining scores from each of these characteristics, one can create a single measure of EO based on a rather abstract conceptualization of what it means for an organization to be entrepreneurial (Covin & Wales, 2011). The measure defines EO as a latent construct that manifests itself in those various characteristics, which should theoretically co-vary since they are manifestations of the same latent variable, “being entrepreneurial”. It should be noted that this conceptualization is behavioral rather than dispositional. EO is understood to consist of a set of sustained behavioral patterns reflecting the demonstration of those various dimensions (Covin & Lumpkin, 2011).

Several studies have investigated the correlates and effects of this conceptualization of EO across a wide range of organizations. For example, in the foundational piece, Miller (1983) examined the correlates between firm entrepreneurial behaviors and environmental hostility. Using data from a sample of 52 large diverse Canadian firms, the author theorized and found evidence suggesting that firms competing in more hostile environments (i.e. those with intense competition and harsh business climates) must engage in more entrepreneurial behaviors because only through such efforts would a firm be able to cope with the challenges posed by that environment.

Similarly, in the other foundational piece, Covin and Slevin (1989) utilized data from 161 small manufacturing firms and found that small firms operating in hostile environments performed better with higher levels of EO. On the flipside, they found that organizations operating in more benign (i.e. less competitive and dynamic) environments benefited more from a conservative posture.

Wiklund and Shephard (2005), using data from a sample of Swedish small and medium-sized businesses, offered and tested a configurational approach to studying the EO-performance relationship. Using the original, unidimensional conceptualization of the EO construct, the authors empirically tested critical boundary conditions (i.e. access to capital and environmental dynamism) that must be taken into account when exploring the EO-performance link. Unexpectedly, the authors found that EO was especially important for firms operating in *stable* environments with *less* access to capital.

Stam and Elfring (2008) utilized this conceptualization in exploring the interactive effects of EO and social capital on new venture performance. Using an original data set of 90 new ventures in the open source software industry, they found that firms with the most social capital tended to reap higher performance gains from an EO. Their explanation for that result was based on the assumption that EO constituted a resource-intensive strategic posture (Stam & Elfring, 2008).

The list of studies utilizing this conceptualization could go on. Indeed, in a meta-analysis exploring the magnitude of the EO-performance relationship, 37 of the 51 studies included viewed the construct as unidimensional (Rauch et al., 2009). The others studies conceptualized EO as multidimensional, and were largely influenced by the work of Lumpkin and Dess (1996). Rather than viewing EO as a unidimensional construct, they argued that it is comprised of several dimensions that might not necessarily co-vary and might be able to independently predict different outcomes. In their conceptualization, they retain innovativeness, risk-taking, and proactiveness, but add competitive aggressiveness and autonomy. They define *competitive aggressiveness* as a firm's tendency to directly challenge competitors in order to outperform them in the

marketplace, and *autonomy* as the extent to which an individual or team can act independently in bringing forth a vision or idea and see it forth to completion (Certo, Moss, & Short, 2009; Lumpkin & Dess, 1996). They make the argument that these five dimensions comprise the domain of EO, and that they independently and collectively define the EO construct (Covin & Wales, 2011).

Hence, rather than having a single unidimensional scale in which an organization can be determined more or less entrepreneurial, they claimed that that organizations can be more entrepreneurially in different ways. An organization need not necessarily be high on all the dimensions in order to be considered entrepreneurial. For example, one organization might be very innovative, while another might be less innovative, but very proactive. Another organization might be high on two of the dimensions, and low on all the others. In other words, this conceptualization allows for more precise measurement of the features that make an organization entrepreneurial. And, depending on the context and the nature of the organization under investigation, some of those features may be more or less important for organizational performance (Lumpkin & Dess, 1996).

Regardless of the conceptualization employed, the literature suggests that EO is especially important for the success of for-profit firms operating in highly competitive environments and that the construct itself constitutes a resource-intensive strategic posture (Stam & Elfring, 2008; Wiklund & Shepherd, 2005). In such contexts, superior performance is achieved by meeting the needs of customers better than the competitors. To do so requires innovation in processes, products, and services. It requires commercialization of new products, entry to new markets, and the exploitation of opportunities that arise from changes in the competitive environment. It requires a top

management team and a corporate culture that encourages an EO. It requires anticipation and the ability of leaders and employees to be first movers on promising new product or market opportunities. It also requires resources and capital. Firms must often have access to sophisticated technology and infrastructure to develop and distribute new products. They must also have access to new industry knowledge and trends that allow them to exploit their EO (Stam & Elfring, 2008; Lee & Sukoco, 2007). The more resources, it is thought, the more opportunities an entrepreneurial firm is likely to identify and exploit, thereby enhancing its ability to act entrepreneurially and enhancing the EO-performance relationship. Indeed, access to various forms capital, both internal and external to the firm, has been identified as a moderator strengthening the EO-performance link in the for-profit arena (e.g. Cassia & Minola, 2012; Walter, Auer, & Ritter, 2006; Wiklund & Shepherd, 2005, 2003).

But the nature of nonprofit organizations is very different. Nonprofits rely mostly on people for their operations and are much more labor-intensive than the for-profit arena (Oster, 1995). This does not mean that an EO is not an effective strategic posture for such organizations. Indeed, Morris, Webb, & Franklin (2011) write of nonprofits: “If anything, relative to for-profits, there is a need for more creativity in managing multiple stakeholders with conflicting demands; heightened imagination in finding ways to garner, combine, and deploy scarce resources; and enhanced innovation in addressing vexing social problems” (p. 950). The thesis of this study is that contrary to a number of EO studies that have been conducted in the for-profit arena, nonprofit organizations are likely to benefit even more from EO under conditions of resource scarcity, if they have access to *less* capital. Nonprofits that have fewer resources at their disposal must be especially

entrepreneurial in seeking ways to better accomplish their organizational missions. Given that nonprofits in rural contexts face substantive resource constraints, and that collaboration is especially important for them (Snavely & Tracy, 2000), I focus my theorizing and analysis on the resources available from a focal organization's portfolio of collaborative ties.

### **Social Network Perspective**

The type of capital under investigation in this study is social capital, which I view from the social network perspective (Borgatti & Foster, 2003; Adler & Kwon, 2002), which conceptualizes and models various systems as a network, defined by a set of nodes and ties. In the social sciences, the *nodes* are typically represented by people, teams, departments, or organizations. The *ties* represent the relationships that might exist between the nodes, whether they are friendships between people, competition between teams, ties of proximity between departments, or alliances between organizations. The pattern, structure, and nature of the relationships between the nodes offer opportunities and constraints that have implications for the behavior and outcomes of the nodes. Indeed, much network research in the organizational literature has established that the relationships in which social actors are embedded, not just the individual attributes of those actors, are important determinants of the actions and performance of those actors (Brass et al., 2004).

Much of the interorganizational network research has focused on social relations such as joint ventures and inter-firm alliances that facilitate the transfer of information and resources that a focal firm can use to better accomplish its goals. Such formal relationships have been found to significantly affect firm-level outcomes such as the

performance of startups and new firms, organizational learning, and innovation (Borgatti & Foster, 2003). The mechanism that has most commonly been used to explain the effect of such relationships is the additional resources that they provide. The logic is that those relations often result in flows, in which resources are actually exchanged between two organizations. Such ties can be considered relational assets that organizations can leverage to improve their performance (Gulati, 2007). This is in line with the resource-based view (RBV) of the firm (Wernerfelt, 2007, 1984), in which organizations are thought to achieve a competitive advantage through a particular bundle of resources. Those resources include assets, capabilities, organizational processes, information, knowledge, etc. controlled by a firm that enable it to conceive of and implement strategies that improve its efficiency and effectiveness. Whereas traditionally RBV has focused on internal capabilities, there is a growing recognition among organizational scholars that valuable resources also exist beyond the focal organization in its pattern of ties (Wassmer, 2010; Dyer & Singh, 1998). The right relationships can offer distinct resource advantages that allow a focal organization to outperform its rivals. In addition, this is true for organizations outside of the for-profit context. Universities, EDOs, aid and charity organizations, churches, and all other types of nonprofits also establish and maintain relationships with other organizations. The relationships that nonprofit organizations have with others can serve the same function as the ones between corporate firms. They too can serve as pipes through which information and resources flow for the benefit of organizational performance (Podolny, 2001).

In addition to the resource benefits, ties can also serve as prisms affecting how a particular organization is seen in the eyes of shareholders and stakeholders (Podolny,

2001). Even if no resources are flowing from one actor to another, the relationship itself serves as a signal indicating endorsement, status, legitimacy, or lack thereof. Hence the relationships between and among organizations not only facilitate the transfer of resources and information, but also serve as lenses through which shareholders and stakeholders view particular organizations. This effect of association is a pervasive phenomenon that affects all types of organizations. For example, young companies are more likely acquire resources necessary for funding and growth if endorsed by the right organizations (Stuart, Hoang, & Hybels, 1999). Investment banks establish relationships with other investment banks that affect their status (Podolny, 1993). Day care centers can enhance their legitimacy by forming connections with prominent actors in their communities (Baum & Oliver, 1992).

The social network paradigm offers a pretty powerful way to measure and model such pipes and prisms. Two primary strategies have been employed in capturing them: The full network approach and the ego (or personal) network approach. In the full network approach, the pattern of relationships among a given population of organizations is measured. For example, a researcher might measure the collaboration among a given set of biotechnology companies (e.g. Powell, Koput, & Smith-Doerr, 1996) or the alliances among a predetermined set of firms (e.g. Gulati, 1995). The advantage of such an approach is that it allows researchers to capture structural properties of individual actors that can then be used to make predictions about the performance or actions of any particular actor within the given population. The disadvantage of this approach is that it requires studying complete populations rather than samples, and missing data can be problematic. Furthermore, it requires that the researcher know a priori the types of social



actors that should be included in the network. In the case of EDOs that might collaborate with a wide variety of actors in their communities, such a priori bounding of the entire population of relevant actors within the network could also be problematic.

In the ego network approach, a full population is not necessary and it also makes it possible to collect richer data on the total set and portfolio of ties of a given organization or social actor (Ofem, Floyd, Borgatti, 2012). In this strategy the researcher can sample from a given population and then identify the characteristics of the direct ties of those actors. The sample chosen as study subjects or respondents are called “egos” and the nodes they have ties with are called “alters.” The set of nodes and ties associated with an ego is referred to as the ego network, which in this study I label *collaborative network*. In this study, I focus on the organization as the ego, collaborative relationships as the ties, and other organizations as the alters. A key advantage of the ego network approach is that it makes it feasible to collect richer data on the full set of relations that may exist between two nodes, which is useful in exploring the collaborative practices of a given set of organizations. Although the ego network approach does not allow for the calculation of many of the structural properties provided by the full network approach, it does offer some valuable and predictive measures of organizational outcomes. It also allows the researcher to identify organizations that might not be an EDO (or whatever other type of social actor is under investigation) but are still an important collaborative partner to a focal EDO (or whichever social actor).

For example, *size* is the overall number of relationships that an ego has. This would mean the overall number of collaborative partners or ties that a focal organization has in carrying out its objectives. One might expect the overall number of collaborative

partners to have implications for the focal organization, with those ties possibly affecting the flow of resources and stakeholder perceptions of organizational legitimacy and reputation. *Tie heterogeneity* is the variety or range of ties that an ego has. This would mean the diversity of ties that a focal organization has, controlling for size. With such diversity, one might expect that the focal organization is more likely to have access to diverse and/or complementary resources that might be able to be creatively combined and/or harnessed for the benefit of organizational performance. Such diversity of ties might also be looked upon favorably by stakeholders of organizations established to serve a broad range of clients.

Although the potential types of ties to study are numerous, in this study I bracket a set of collaborative ties (informed by ethnographic fieldwork) that matter for EDOs, and calculate ego network measures based on those ties. Since I expect that it is the direct ties that are the most consequential for the day to day operations of EDOs, I theorize about the size and heterogeneity of ties. Due to the resources that such measures capture, I seek to both explain differences in them (i.e. theory of networks) and to explain how they relate to organizational performance (i.e. network theory), taking into account differences in their entrepreneurial orientations. Hence I employ mostly “pipe” logic into my theorizing, in that these ties result in resources that can aid in the achievement of organizational goals. These different collaborative network properties can be thought of as more specific measures of the broader construct of social capital, which has been defined in multiple ways (e.g. Burt, 2005; Adler & Kwon, 2002; Coleman, 1988), but in this study refers to the resources and benefits available to a focal organization due to its pattern of collaborative ties (i.e. collaborative network). I use this language to test the

idea that that in an environmental context characterized by resource scarcity, collaborative network properties might substitute for EO (and vice versa) and/or constrain EO in explaining organizational performance.

### **EDOs and Eastern Kentucky**

Blakely and Bradshaw (2002), in one of the core books of the practice, define local economic development (LED) as the following: “Local economic development refers to the process in which local governments or community-based (neighborhood) organizations engage to stimulate or maintain business activity and/or employment. The principal goal of local economic development is to stimulate local employment opportunities in sectors that improve the community using existing human, natural, and institutional resources” (p. xvii). They note that job creation for the sake of job creation is not the optimal way to achieve that goal. Jobs must be high quality, fit the employment needs of the local population, be equitable, and also must be created in diverse areas of industry for the sake of economic stability. In accomplishing this goal, local governments, public agencies, private companies, nonprofit organizations, and local residents all usually need to participate in some way. Coordination and communication are essential to achieve substantial results at the local level.

In this study, the focus is on the nonprofit organizations that as part of their core mission seek to contribute to the local economic development progress of eastern Kentucky. Since EDOs come in many forms with many possible organizational structures (Blakely & Bradshaw, 2002), and for the sake of clarity of theorizing and analysis, I define and bound the population of EDOs in this study as the broad range of nonprofit private and/or public organizations that direct a majority of their organizational efforts to

contributing to the goal of LED as defined above. The definition and final list were also informed from “emic” perspectives of experts in the development practice within the region (Morey & Luthans, 1984).

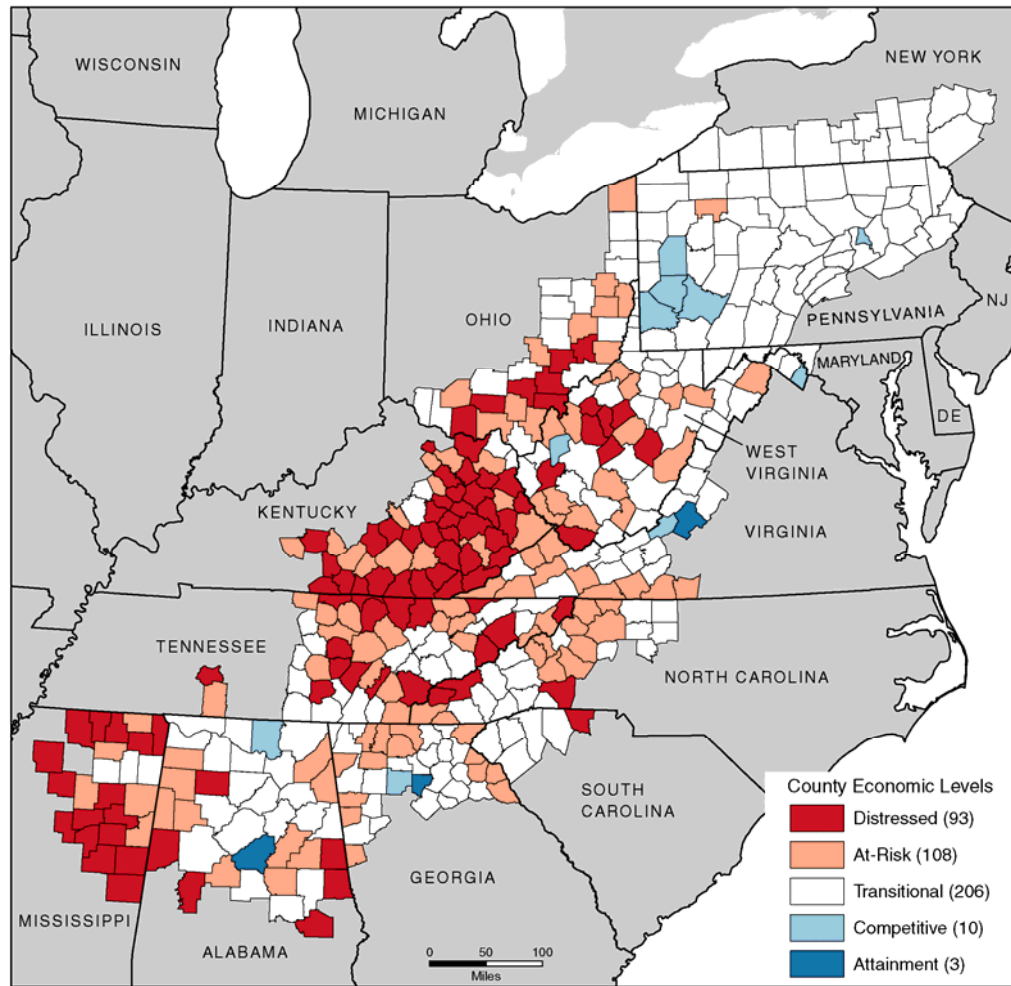
Eastern Kentucky is part of the Appalachian Region as defined by the Appalachian Regional Commission (ARC, 2009). Although the term Appalachia was originally coined by urban journalists in the years following the Civil War, the term was revived in the 1960s to describe the impoverished area surrounding the Appalachian Mountains (Eller, 2008). With the efforts of President Kennedy and the following work of President Lyndon B. Johnson with his “War on Poverty” campaign and establishment of the Appalachian Regional Commission (ARC) established by Congress in 1965, the Appalachian Region gained political and geographical boundaries with policy implications. The area now spans 13 states ranging from the southern part of New York to the northern part of Alabama. Over the years, this region has served as a testing ground for numerous economic development programs and policies focused on bringing the local residents into the growing prosperity of the rest of the nation. Billions of federal dollars have been invested into the region, new roads and infrastructure have been built, and new organizations have been created, all with the hope of strengthening the capacity of the Appalachian people to better compete and participate in the growing national and global economy. Yet, despite decades of reforms, eastern Kentucky remains an area especially beset by chronic poverty and economic distress.

Of all Kentucky counties classified as Appalachian by the ARC, 89.7 percent (of 49 counties) were considered distressed in 1960; 74.1 percent (of 54 counties) are still considered distressed today (ARC, 2009). The “distressed” label is given based on an

index created from three economic indicators: The 3 year average unemployment rate, per capita market income, and the poverty rate. The 3 year unemployment rate is calculated by dividing the three-year sum of persons unemployed by total population of the labor force within a county. It is a measure of long term structural employment. The per capita market income is total market income, less transfer payments (i.e. retirement benefits, unemployment benefit payments, disability payments, etc.), divided by the total population. The poverty rate is determined by the percentage of people living below the poverty threshold. It takes into account the size of a family unit. Together, these three indicators are summed and averaged to develop the economic index used by the ARC. The county values are then ranked nationally to identify distressed counties (ARC, 2012).

Figure 1 below is a map of the Appalachian region with the counties classified by level of economic status (ARC, 2012). The red colors denote counties classified as distressed, the peach are classified as “at-risk”, and the white colors indicated “transitional” counties. Based on the ARC economic classification system, distressed counties rank in the lowest 10 percent nationally, at-risk counties rank between the worst 25 percent and the best 25 percent, competitive counties rank between the best 10 percent and 25 percent, and attainment counties rank in the best 10 percent. As can be seen, the study region consists mostly of counties with the distressed label. Only four counties within eastern Kentucky have reached the economic threshold of being considered a “transitional” county, while absolutely none have achieved the economic status of “competitive” or “achievement” that are represented by a light blue and dark blue, respectively.

**Figure 1: Study Region**



Created by the Appalachian Regional Commission, March 2013  
Data Sources:  
Unemployment data: U.S. Bureau of Labor Statistics, LAUS, 2009–2011  
Income data: U.S. Bureau of Economic Analysis, REIS, 2010  
Poverty data: U.S. Census Bureau, American Community Survey, 2007–2011

Effective October 1, 2013  
through September 30, 2014

Multiple factors have led to this unfortunate economic condition, including a physical geography that isolated the mountainous region from other markets, political structures that concentrated power in the hands of a few, and a history of consolidation of wealth that slowed the growth of independent entrepreneurial enterprises (Eller, 2008; Billings & Blee, 2000). In addition, an overreliance on extractive industries, such as coal-mining and logging, resulted in a relatively undiversified economic base that made the

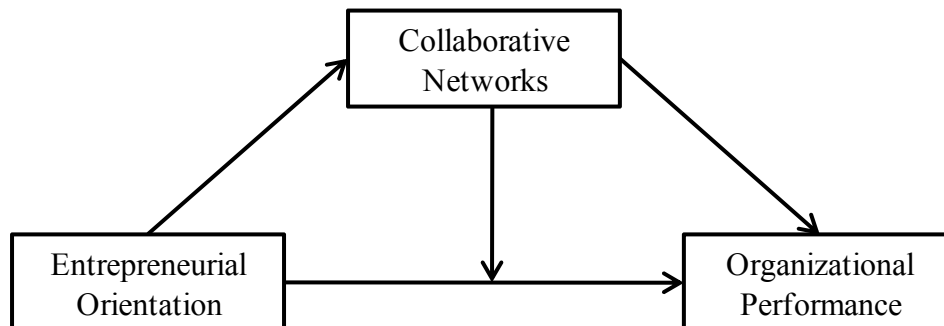
region more vulnerable to external market forces (Eller, 2008). And since the goal of LED is for local residents to gain more control over the future of their economic destiny (Blakely & Bradshaw, 2002), economic vulnerability is generally not considered the best state of affairs. Economic sustainability, not vulnerability, is the goal of the practice (Blakely & Leigh, 2009).

Hence, EDOs in this region face especially difficult challenges. They have fewer resources at their disposal, a relatively undiversified economic base, and an economic and political history that has been slow to change. The choice and nature of LED efforts is contingent on the social and economic assets of a region (Blakely & Bradshaw, 2002), so EDOs contributing to those efforts must be creative in how they leverage those assets. This is where the importance of EO comes in for these organizations. EDOs, like other nonprofit organizations more generally, must be entrepreneurial in harnessing the available assets in a manner that allows them to achieve optimal results. The guiding theses of this study is that EO, along with collaborative networks, are likely to directly and interactively affect the success of EDOs in addressing those social problems. Furthermore, I posit that an EO is likely to shape features of those collaborative networks.

### CHAPTER 3: THEORY AND HYPOTHESES

The theoretical framework summarizing the aim of this study is shown below in Figure 2. It consists of four research questions and provides the framing from which more specific hypotheses and models are derived and tested in a contextually appropriate manner. It is hoped that this same framework could be used to explore similar questions with different types of organizations operating in different types of environments. It could provide a foundation upon which future work could build. For example, maybe the same framework could be used for a study of a different type of nonprofit organization. Maybe for some types of nonprofits, EO has a stronger effect on performance than other types. Maybe in other contexts, the interaction between EO and collaborative networks might be quite different. The same sort of questions could also be asked in the for-profit context, making this a fertile framework from which to develop and explore questions along this line of thought. Indeed, few studies have investigated the interrelationships between organizational-level characteristics, collaborative relationships, and organizational outcomes (Arya & Lin, 2007; Shiplov, 2006).

**Figure 2: Theoretical Framework**





The first research question is consistent with prior studies that have explored the direct relationship between EO and performance (Rauch et al., 2009). I seek to demonstrate that EO might enhance performance for nonprofit organizations engaged in economic development work.

The second research question regards how collaborative networks might directly impact the performance of nonprofit organizations in these rural regions. Evidence suggests that collaboration is especially important for nonprofits operating in rural contexts (Snaveley & Tracy, 2000), and this dissertation tests for such effects.

The third research question is concerned with how collaborative networks might moderate the effects of EO on nonprofit performance. Different relationships provide different opportunities and constraints for organizational actions and activities, thereby possibly enhancing or constraining the effects of organizational characteristics.

The fourth research question explores the possibility that EO might also affect a focal nonprofit's collaborative network. EDOs are in the business of relationships. EDO leaders must forge relationships with local politicians, businesspeople, educators, and other stakeholders of local prosperity (Shane, 2005). They must also forge ties with people and organizations outside of their areas to both recruit new businesses and human capital, and to gain access to resources that can help their existing businesses. Characteristics of the partnerships and types of ties that a given EDO has (i.e. differences in size and tie heterogeneity) might be the result of how entrepreneurial that given EDO is. The fourth research question explores this possibility.

## **EO and Performance**

Empirical results of the relationship between EO and performance in a nonprofit context have been mixed (Morris, Webb, & Franklin, 2011). This is largely due to the differences in the fundamental nature of the for-profit and the nonprofit sectors. While in the for-profit arena firms generally seek to maximize shareholder wealth, nonprofits generally seek to achieve some sort of nonfinancial social objective. How well they accomplish that social objective, therefore, cannot be measured by the usual metrics to determine the performance of for-profit firms (e.g. stock price, ROA, profitability). This difference in the nature of the organization, and the requirement of different performance metrics means that the manifestation of EO may take a different form in nonprofit organization, and that the way to test its effects on performance may be much more complex than in the for-profit realm. This complexity probably contributes to the lack of consistency in EO-performance studies in a nonprofit context. To bring coherence to the literature, it is vital that studies exploring such relationships pay particular attention to the nonprofit setting and context to better measure, understand, and test how EO might affect important organizational outcomes.

In this study, I view EO as the simultaneous demonstration of innovativeness, proactiveness, and risk-taking. I expect that this strategic orientation is especially important for EDOs. Such organizations are in the business of creating wealth, increasing employment opportunities, and improving their local economies Entrepreneurial action is essential to this process. Although they may not gain financially by assisting a new business grow, or offering a loan to an entrepreneur, or helping build infrastructure, they

must be able to identify new opportunities arising from these actions, seize them, and innovatively act to better achieve their overarching goals.

With respect to the first facet of EO, innovativeness captures the extent to which an organization tends to do things in new ways. It is an organizational proclivity to engage in novel processes and actions to generate new solutions to problems within the organizational context. Organizations exhibiting innovativeness tend to pursue new combinations that improve operations or offer a new basis to meet customer needs (Pearce, Fritz, & Davis, 2009). Such organizations welcome experimentation, and encourage employees to try new things in the accomplishment of the organizational mission. This is contrary to organizations that lack innovativeness, that focus on established routines and norms in their operations. The nature of the environment and organization is likely to determine when innovativeness is beneficial for performance (Covin & Slevin, 1989). In the context of EDOs, which are usually focused on bringing substantive change to their communities (Blakely & Bradshaw, 2002), I theorize that EDOs exhibiting higher levels of innovativeness should be more likely to facilitate/create the type of changes that have a lasting impact. Such novelty and a tendency to experiment and act creatively should lead to more innovative solutions in solving complex social issues, accomplishing the organizational mission, and satisfying the sometimes conflicting demands of the organizational stakeholders (Morris, Webb, & Franklin, 2011). Such creative solutions in a field and context where the status quo is often not considered ideal (Blakely & Bradshaw, 2002; Eller, 2008) should lead to higher levels of organizational performance.

It is not enough, however, to have ideas alone. EDOs must also be willing to *act* on those ideas. EDOs can be thought of as the catalysts for economic development and change in their communities (Blakely & Bradshaw, 2002), and to do so they must demonstrate leadership. Action, as reflected through proactiveness, is such a demonstration. It is not enough to have ideas that allow the EDO to better achieve its objectives. It must have the proactiveness to act on those ideas without waiting for others to act first. Proactiveness enables an EDO to actually implement its innovative ideas. For example, an EDO might champion a new association to promote collaboration. Or, it might be the first to initiate a program that helps local businesses. Such first moves are likely to be perceived positively by EDO stakeholders, and in turn, positively impact organizational performance.

The other facet of EO, risk-taking, is another vital strategic proclivity. Risk-taking involves the commitment of organizational resources to uncertain outcomes. Since risk and investment are essential to the economic development process (Blakely & Bradshaw, 2002), EDOs must take calculated risks in order to effect any sort of real change in their communities. The very definition of economic development requires that changes be made in a particular locale. Whether it is projects improving infrastructure, recruiting a new business to the area, revitalizing a downtown area, or providing coaching and management consulting to new businesses, EDOs are inherently in the risk-taking business. They are involved in the investment of resources to improve the economic conditions of their communities and directly seek to change the status quo. EDOs unwilling to take such risks are less likely to experience the benefits that come to those that do. They are less likely to participate in the sort of substantive and risky projects that

really impact their communities. This limited influence is likely to be related to organizational performance, such that EDOs that carry out riskier activities are more likely to reap the rewards of success than those that do not. This is also likely to make organizational stakeholders view them more favorably.

Together, EDOs that simultaneously demonstrate innovativeness, proactiveness, and risk-taking should be more likely to act in ways that lead to superior organizational performance. Given that the process of economic development require disruption, EDOs with higher levels of EO are more likely to carry out the disruptive-type actions that differentiation them from their peers. EDOs that encourage experimentation in employees, that are willing to act quickly and lead new projects based on new ideas, and that are willing to bear risk in doing so should be more likely to reap higher performance gains in the eyes of relevant stakeholders. In a place where resources are limited, these entrepreneurial proclivities should be especially vital as EDOs attempt to generate funds and find better ways to accomplish their organizational and social objectives. They must be particularly entrepreneurial in making the most of what they have. The ones that do should reap higher performance gains than those that do not. Hence,

*Hypothesis 1. EO will be positively related to organizational performance.*

### **Collaborative Networks and Performance**

Assessments of economic development planning processes in the region suggest that building social capital is consistently a low priority for official economic development agencies (Knight, Scott, Hustedde & Lovelace, 2009; Reese & Fasenfest, 2003). If this is the case, one might expect to see more pronounced effects of collaborative networks on EDO performance. If many of the managers of these

organizations place little emphasis on relationship building, the ones that do should be expected to reap larger gains and higher performance. More ties with other organizations are likely to be related to access to more material resources, information, and cooperative actions that better serve the goals of a focal EDO. They serve as pipes through which resources flow (Podolny, 2001). More ties should also mean a focal EDO is able to coordinate more comprehensive types of projects for the benefit of organizational performance. In a context where the status quo has been difficult to change and resource scarcity is the norm, these effects should be especially true. Hence,

*Hypothesis 2. Collaborative network size will be positively related to organizational performance.*

Above and beyond size, the heterogeneity of collaborative ties should also be related to performance. If two EDOs, *A* and *B*, have collaborative networks of the same size, but *A* has a greater tie heterogeneity, then one should expect that *A* is more likely to benefit from its collaborative network. Greater tie heterogeneity makes it more likely that a focal actor will receive nonredundant information and resources (Burt, 2005). Such nonredundancy is likely to be related to strategic complementarities that better allow a focal EDO to accomplish its mission and serve its clients and stakeholders. Furthermore, if all collaborative ties offer the same resources, then there may be inefficiency in the collaborative network. If the ties are all different, each offering a particular type of resource or source of cooperative action, then a focal EDO can better adapt to the dynamic and uncertain needs of its environment. It has a more diverse set of resources to meet the needs of a complex and changing environment. It should lead to a greater strategic flexibility in carrying out organizational objectives. Such strategic flexibility has

been shown to be a vital component for an organization to achieve a core competence and attain superior performance (Hitt, Keats, & DeMarie, 1998). In sum, greater tie heterogeneity is more likely related to access to synergistic and complementary resources, contributing to organizational efficiency, and also to strategic flexibility, aiding in environmental adaptation and success. These two mechanisms, in turn, should be positively related to organizational performance. Hence,

*Hypothesis 3. Collaborative tie heterogeneity will be positively related to organizational performance.*

Finally, it is possible that the relationship between an EO and organizational performance is moderated by network size and tie heterogeneity. In the context of EDOs, larger and more heterogeneous sets of collaborative ties may substitute for the need to act entrepreneurially. EDOs that already have access to many collaborative ties and resources may not be as motivated to act as innovatively, proactively, and with greater risk as those with fewer ties and less resources. They may be more likely to already have sufficient social and human capital to successfully accomplish their organizational goals. On the other hand, organizations with fewer and less heterogeneous collaborative ties may have to be even more entrepreneurial and innovative in order to successfully accomplish their goals. The lack of resources is likely to necessitate a need to act entrepreneurially. Therefore, it is likely that organizations with smaller and less heterogeneous sets of collaborative ties will experience higher performance gains than those with larger and more heterogeneous sets. If EDOs do not have access to a sufficient collaborative network, it becomes even more important that they experiment with new ideas, that they

take risks, that they try ways to obtain funding, and/or engage in other entrepreneurial behaviors to better accomplish their goals.

Furthermore, collaborative networks may also come with constraints. A core idea in social network research is that ties not only serve as conduits for the flow of information and resources, but also for the diffusion of ideas, beliefs, and practices. This type of work has been labeled as social contagion by network theorists and uses social relationships to explain things like similarity in attitudes, decision making, and practices (Borgatti & Foster, 2003). The idea behind such research is that the more people interact, the more similar they tend to become in their thinking and behavior. Given that collaborative ties between organizations are between people, the EDOs with larger collaborative networks might be more ingrained in established practices. Organizations with fewer collaborative ties may be more likely to deviate from established modes of operations, and in doing so carry out the more disruptive-type actions that differentiate and set them apart from other EDOs. Operational deviance might lead to differentiation. In other words collaborative ties might constrain, rather than facilitate, an entrepreneurial orientation. Taken together, EDOs with fewer and less heterogeneous collaborative ties should reap higher performance gains from an EO:

*Hypothesis 4. Network size will moderate the relationship between EO and organizational performance, such that organizations with lower network size will reap higher performance gains from an EO.*

*Hypothesis 5. Tie heterogeneity will moderate the relationship between EO and performance, such that organizations with less tie heterogeneity will reap higher performance gains from an EO.*



## **EO and Collaborative Networks**

Whereas the first three research questions of this dissertation are focused on network theory (i.e. studying the effects of different network properties on social actors), the fourth is concerned with theory of networks (i.e. explaining how those network properties come to be). In this study, I propose that a nonprofit's EO is likely to manifest itself in that nonprofit's pattern of collaborative ties.

Organizations need to obtain resources that allow them to act entrepreneurially in the first place. Without expertise, capital, referrals, and other monetary and nonmonetary resources, it would be very difficult for organizations to find the sort of new combinations that are critical for innovation and organizational performance.

This is especially true for EDOs operating in the economically distressed region of eastern Kentucky. This area, like other rural areas more generally, require nonprofit and/or social organizations to be especially dependent on one another for critical resources (Snaveley & Tracy, 2000). Such collaboration, which I define broadly as the sharing of resources or cooperative action, allows such organizations to better serve their communities, accomplish their objectives, and satisfy the demands of their stakeholders. Furthermore, an EDO's entrepreneurial proclivities and tactics are likely to influence the collaborative partnerships in which they choose to forge.

With respect to innovativeness, I expect that EDOs that exhibit higher levels should be more likely to develop collaborative networks that are larger and more heterogeneous. Innovation requires novel resources and new combinations. An EDO that encourages experimentation and the development of creative solutions and ways to better achieve the organizational mission would be more likely to develop a collaborative

network over time that is larger and more diverse. The people working for that EDO would be more likely to reach out in their community for the resources necessary to implement whatever innovative solutions or programs that they create. They are also more likely to form partnerships that are vital for the implementation of the type of comprehensive actions necessary to achieve real results in local economic development (Blakely & Bradshaw, 2002). In addition, the causal direction may also go the other way. EDOs that have larger and more heterogeneous networks may also be more likely to be exposed to heterogeneous ideas and complementary resources, thus enabling them to be more innovative.

Organizations that are more proactive excel in their identification of opportunities, generally take the initiative in seizing those opportunities, and generally tend to initiate more actions in their environment (Hughes & Morgan, 2007). In the context of EDOs, where a key component of their strategy is relationship-building with community stakeholders (Stough, 2003), more proactive EDOs are likely to have leaders and employees that are more engaged in their communities and with other organizations. They are more likely to identify possibilities for partnerships and initiate actions that actually facilitate collaboration. A greater ability and tendency to see collaborative opportunities should, over time, result in more actions seizing those opportunities. The more collaborative opportunities seized, the higher the likelihood that a focal EDO will have a larger collaborative network size and tie heterogeneity.

Risk-taking is also likely to affect collaborative network properties. EDOs with greater risk tendencies should be more likely to engage in risky projects that involve others in their communities. Risk often involves the allocation of scarce resources to

uncertain outcomes, and, in this particular context, the greatest risks are usually associated with implementing major changes or initiatives. This region has historically faced severe obstacles to change (Eller, 2008), and EDOs that demonstrate risk-taking should be more likely to disrupt that change, and, in the process, form partnerships with others in their communities before and during project implementation. In addition, it takes a certain amount of risk to trust and partner with another organization in the first place, so EDOs that have higher levels of risk-taking should have been more likely to reach out to others in their communities for help in the accomplishment of their organizational goals. Furthermore, causality may work in the other direction. It would be difficult to carry out risky actions without support from local stakeholders, so EDOs with higher levels of risk-taking should be more likely to have already developed collaborative networks that allow them to be risky. They have the support to engage in substantive and risky projects.

Taken together, organizations that simultaneously demonstrate innovativeness, proactiveness, and risk-taking should be more likely to experiment with new partnerships over time, identify and act on opportunities for new collaborative projects, and create new opportunities for future beneficial partnerships. They should be more likely to identify and seek out opportunities for collaboration and also take on the risks associated with seizing those opportunities. Over time, this tendency should lead to larger collaborative networks and more heterogeneous collaborative ties relative to less entrepreneurially-oriented EDOs. Hence,

*Hypothesis 6: EO will be positively related to collaborative network size.*

*Hypothesis 7: EO will be positively related to collaborative tie heterogeneity.*

## CHAPTER 4: METHODOLOGY

This mixed-method study spans a two year period and includes both qualitative and quantitative elements. The qualitative elements consist of ethnographic interviews with key informants at the beginning and end of the study, and the quantitative elements come from data gathered from an online survey sent to the top managers and/or key representatives of the study population of organizations.

The study population consists of the universe of nonprofit private and/or public organizations engaged in economic development activities in the 54 Kentucky counties classified as “Appalachian” by the Appalachian Regional Commission. The ARC definition is one of the most commonly used definitions of Appalachia and its use will allow the proposed research to be comparable with other research which adopts this definition across the 420-county, 13-state region. Included are key representatives of non-profit economic development agencies, formal business alliances such as chambers of commerce, area development districts, tourism commissions, community development corporations, community action agencies, and workforce training institutions. The broad definition of economic development used to identify these organizations was based on prior literature (Blakely & Bradshaw, 2002), as well as local “emic” perspectives and understandings of what type of organizations might be considered an EDO by the development practitioners and experts within the region (Morey & Luthans, 1984).

Although different EDOs might be tackling different facets of the economic development problem, they each seek to improve the livelihood of the residents in their communities. Economic development is a multifaceted and complex phenomenon that varies in different localities, and knowledge of the local economic development literature

combined with insights from insiders provided a sound way to identify the key EDOs operating within eastern Kentucky.

The initial list was compiled by the Appalachian Center at the University of Kentucky and was expanded and refined during the beginning of the study. That list included organizations that were members of the Growing Local Economies Network (GLEN), an organization created to promote and facilitate collaboration among development practitioners in eastern Kentucky. With the use of the IRS public database on nonprofits that includes activity codes (IRS, 2011), more nonprofit organizations were identified that met the criteria of promoting “social and economic wealth” for the people of eastern Kentucky.” Such codes included “community development”, “economic development”, and “workforce training”. The remaining organizations were corroborated with those of the GLEN list to ensure correct names.

The list was further refined during the first phase of the study as it was sent to experts and practitioners to see if any EDOs were missing. Organizations were added based on recommendations of the practitioners. For all the organizations on the finalized list, contact information for CEOs, presidents, and/or directors of each recorded. For those organizations that did not have contact information available online through websites or from the IRS database, phone calls were made to verify that the organization was still in operation and to obtain email addresses for the managers of the EDOs. Several organizations existed only on paper and/or had no available contact information. The final target population with contact information consisted of 203 organizations currently engaged in economic development activities in the region.

## **Data Collection**

This dissertation stems from a larger project funded by the Innovation and Organizational Sciences program of the National Science Foundation. The title of the project was the “Cognitive, relational and strategic drivers of organizational effectiveness” (Ferrier et al., 2011). It consisted of an interdisciplinary team of faculty and three graduate students. The large team was indispensable considering the plan and scope of the proposal. The data collected and analyzed in this present study comes directly from the data collected by this research team.

*Ethnographic Interviews:* The research team conducted interviews with 16 key informants knowledgeable about economic development activities within the study region. These informants were selected based on prior communication and relationships with members of the research team. Interviewees included a former governor and current university president familiar with development activities, employees of one of the largest EDOs in the region, a banker involved in small business loans with a history of development work, and CEOs and Presidents of EDOs within the study region. Each interview lasted between one to two hours and at least three members of the project team were present at each one. Interview notes were taken with particular attention to informing the following goals:

- *Finalize the list of relevant EDO's that make up the sample.* Although a list had already been compiled, there were boundary specification issues that were best resolved by talking with community members about what constitutes an economic development organization. This ensured the organizations under study actually operate with the mission of promoting economic growth in their respective

counties or regions. It also made it possible to identify other EDOs that were missing from the list, making the final list as exhaustive as possible.

- *Acquire the appropriate language for use in survey.* The primary data collection in this study is through an online survey. Through interviews it was possible to gain a greater familiarity with the language of the economic development profession that would in turn reduce ambiguity and enhance the validity of the survey items. This language was used to define collaboration in a way suited for the practitioners within eastern Kentucky. It also allowed for the development of a rather exhaustive list of the type of activities in which these organizations are involved.
- *Gain feedback with respect to the intent and overall purpose of the study.* In order for this study to be successful, leaders of the EDOs had to be willing to get involved and participate. They had to see some sort of value from participation, and the interviews offered insight into how best to do that. From the interviews we learned that the survey instrument needed to be as concise and intuitive as possible, and that feedback should be offered back to the respondents upon their completion. That feedback would hopefully be useful to the EDO leaders for their practice.

*Survey.* The online survey was developed using *SurveyGizmo* software. After the iterative fine-tuning of the survey instrument by members of the research team, the instrument was also pilot tested. Included in the pilot testing were five graduate students and three experts with several years of experience studying and working with development practitioners in the area. The purpose of the pilot testing was to ensure that

the email distribution was working as it should (i.e. a personalized email to each respondent), and that the survey was simple, clear, and intuitive. Upon feedback a few minor revisions were made. Following the principles of Dillman (2007) the distribution of the survey was designed to maximize the response rate. The president of the University of Kentucky, with the help of the public relations office, made a short 3 minute video promoting the study and encouraging the EDO leaders to participate. In addition, a project website was created that provided general information about the project and project team.

The video, project link, and online survey link were embedded in an introductory email to the final contact list of 200 EDO leaders. None of the respondents contacted through e-mail receive an e-mail that reveals either multiple recipient addresses or a listserv origin (Dillman, 2007). Each email was personalized and addressed the leader on a first name basis. For organizations without a clear contact, “Dear Sir/Madam” was used instead. Most of the leaders had titles such “President”, “CEO”, “Chair”, or “Director”. Following the logic of strategic leadership, whereby organizations are thought to be a reflection of their top managers, these leaders were chosen due to their unique vantage point in offering information regarding their organizations (Finkelstein, Hambrick & Cannella, 2009; Hambrick & Mason, 1984). In addition to the online contact, formal letters were sent via US mail on university letterhead to the organizations that had not replied to the online survey after a two week period. Both the introductory email and the letter emphasized the value of the study and the value of participation. An automatic and personalized “Thank you” email was sent upon survey completion. As a follow-up strategy, a reminder email was sent two weeks after the first contact, and a third was sent



two weeks later. Finally phone calls were made to those who had still not responded and one final reminder email was sent with a deadline for completion.

## **Measures**

*Entrepreneurial Orientation.* In this study, the Hughes and Morgan (2007) scale was adapted in a way to capture the manifestation of EO in the context of EDOs operating within eastern Kentucky. It was chosen for its fit with these organizations and its multidimensional nature. Hughes and Morgan (2007) developed the scale to measure a disaggregated (i.e. multidimensional) set of constructs comprising the EO domain, so it allows for the exploration of the independent effects of the various dimensions on organizational outcomes. In addition, it allows for the development of a formative (i.e. unidimensional) measure based on averaging scores from the risk-taking, proactiveness, and innovativeness items of the scale. Those three facets have most often been used as core to the measurement of the unidimensional measure (Covin & Wales, 2011). And since the context in this study has not been investigated in prior EO studies, how it should best be empirically investigated is an open question.

Slight revisions in the scale included changing “business” to “organization” and “employees” to “people within our organization”. For the competitive aggressiveness items, “competitors” were changed to “similar organizations”. In addition, in order to capture more variance with the scale, adjectives such as “very”, “much”, and “strong” were added to some of the items. Table 1 below shows all of the items used that make up each dimension. For the measure of overall EO, the sum of the scores from risk-taking, proactiveness, and innovativeness was calculated. This is consistent with the majority of EO studies that use these three dimensions as core to their unidimensional

conceptualization and measurement of the construct (Covin & Wales, 2011). This measure had a Cronbach's Alpha of 0.87.

**Table 1: Entrepreneurial Orientation Scale**

EO Scale Adapted from Hughes and Morgan (2007)

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**Risk-taking items**

The term 'risk taker' is considered a very positive attribute for people in our organization.  
People working for our organization are very much encouraged to take calculated risks with new ideas.  
Our organization has a strong emphasis on both exploration and experimentation for new opportunities.

**Proactiveness items**

People within our organization initiate actions to which other organizations respond.  
Our organization excels at identifying opportunities.  
People within our organization always try to take the initiative in every situation (e.g., in projects and when working with others).

**Innovativeness items**

People within our organization actively introduce improvements and innovations in our organization.  
Our organization is very creative in its methods of operation.  
Our organization continually seeks out new ways to do things.

**Competitive aggressiveness items**

In general, our organization takes a very bold or aggressive approach in accomplishing our mission.  
We try to outperform similar organizations as best we can.  
Our organization is intensely competitive.

**Autonomy items**

People within our organization are permitted to act and think without interference.  
People within our organization are given much freedom to communicate without interference.  
People within our organization perform jobs that allow us to make and instigate significant changes in the way we perform our work tasks.  
People within our organization are given much freedom and independence to decide on how to go about doing our work.  
Our organization has much authority and responsibility to act alone if we think it to be in the best interests of the organization.  
Our organization has access to all vital information.

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*Note* : All items rated on 7-point, Likert-type scales ranging from "Strongly disagree" (1) to "Strongly agree" (7).

*Collaborative Networks.* Collaboration was defined broadly, including anything from “sharing/receiving monetary and material resources, sharing information, sending/receiving referrals, and/or working on specific projects together”. A combination of the name generator and full roster method was used to identify collaborative partners. The full roster included names of 292 organizations identified as potential EDOs. This number is higher than the actual number of contacts found, but the full roster was kept in case some of the EDOs that we could not find contact info for still operated within the region. The roster was as exhaustive as possible, and was organized into two columns

with the names in alphabetical order. The list also included 10 open checkboxes so that the respondents could list any other organizations that might be considered collaborative partners. This approach was a combination of the full network and ego network approach described earlier. Given that responding to this question might be somewhat burdensome, a considerate note was given along with the question asking the respondents to bear with the question and take their time. The thought was that by showing sensitivity the respondents would be more likely to give more thought to their responses, thus enhancing measurement validity.

Collaborative network size and tie heterogeneity were calculated using the total set of collaborative ties. *Size* was calculated as a count measure of the total number of collaborative ties that a given EDO identifies. Tie *heterogeneity* was calculated using Blau's (1977) index of heterogeneity. It is calculated as  $1 - \sum P_i^2$ , where P is the proportion of ties in a category and *i* is the number of categories. The index captures the heterogeneity of the four types of collaborative ties (i.e. sharing/receiving monetary and material resources, sharing information, sending/receiving referrals, and/or working on specific projects together).

*Performance.* Organizational performance for nonprofit private and/or public organizations is a complex and multifaceted construct. This study focuses on perceptual performance, measured as a composite index of subjective and peer ratings of performance. Self-report data (i.e. subjective ratings) were appropriate in this case since EDOs often work on different pieces of the economic development problem with different organizational missions (Blakely & Bradshaw, 2002). Furthermore, most entrepreneurial research to date has relied on self-reported performance data (Pearce,

Fritz, & Davis, 2009). The other component of the performance index, peer ratings, was based on network-derived evaluations from a focal organization's collaborative partners. The peer ratings offer a somewhat more objective measure of the performance of an EDO.

The subjective performance items on the survey were based on some of the dominant models of organizational effectiveness (Cameron, 2005). The items used a seven-item scale ranging from "strongly disagree" to "strongly agree". The first item was based on the goal model (i.e. organizations are effective to the extent to which they accomplish their stated goals): "Our organization has been very effective in accomplishing our stated organizational goals over the past year" (Price, 1982; Bluedorn, 1980). The second item was based on the resource dependence model (i.e. organizations are effective to the extent to which they acquire needed resources): "Our organization has had plenty of resources in carrying out our organizational objectives over the past year" (Pfeffer & Salancik, 2003). The third item was based on the strategic constituencies model (i.e. organizations are effective to the extent to which they satisfy their dominant stakeholders): "The primary stakeholders of our organization have been very pleased with our performance over the past year" (Connolly, Conlon, & Deutsch, 1980; Tsui, 1990). A measure of overall performance based on subjective ratings was created from scores from a factor analysis on the three effectiveness items. Based on the Kaiser (1958) criterion, the measure had a one factor solution.

The peer ratings of performance were based on items that required a focal EDO to report (1) how important each of its collaborators are for the accomplishment of its organizational goals on a five-item scale: "Not important", "Somewhat important", "Important", "Very important", or "Critical"; (2) how difficult/easy it is to work with

each collaborative partner on a three-item scale: “Difficult”, “Neutral” or “Easy”; and (3) how satisfied their organizations is with working with each collaborator on a five-item scale: “Dissatisfied”, “Somewhat dissatisfied”, “Neutral”, “Satisfied”, or “Very satisfied”. For each organization, average incoming rating ties for each of those three items were calculated. Then, a factor analysis on those three measures was used to create scores for a single peer rating of performance measure. Based on the Kaiser (1958) criterion, this measure also had a one factor solution.

The final performance measure was then created as an additive index of the standardized values of the subjective and peer ratings of performance. This approach was taken to better get at the construct of “performance” in this setting, as defined by a focal organization’s ability to achieve its organizational objectives and satisfy the expectations of stakeholders and collaborators.

*Controls.* Various organizational characteristics were controlled for that might affect performance. *Collaborative network frequency* was measured as the out-degree centrality of the frequency of interaction values. That centrality is calculated as the sum of the valued ties. Frequency was measured as “1 time a year”, “2 times a year”, “4 times a year (i.e. quarterly)”, “12 times a year (i.e. monthly)”, “52 times a year (i.e. weekly)”, or “365 times a year (i.e. almost on a daily basis)”. In examining the effect of the overall collaborative network size and tie heterogeneity, this measured controlled for the possibility that some times might occur more frequently, thereby possibly offering even more resources for a focal EDO. *Organizational size* was measured as the number of full-time employees. More employees generally mean greater reach in the community and more manpower in accomplishing the organizational mission. It was measured in three

categories: “No full-time employees”, “1-5 full-time employees”, and “>5 full-time employees”. *Organizational age* was measured as the number of years since the formal founding of the organization. Older organizations have more time building relationships in their communities as well as more experience in accomplishing their missions. *Service generalism* (Arya & Lin, 2007) was measured as the total number of different types of services offered. More services might mean a greater need for collaboration for goal achievement. The list of possible activities was developed from the ethnographic interviews and knowledge of EDOs. The survey item with the list of activities was as exhaustive as possible.

*Open-ended questions.* Two open-ended questions were included at the end of the survey: “How might your organization's current portfolio of collaborations/partnerships be improved for the benefit of your organization?” and “Is there anything else that you'd like to tell us about your organization's networks and partnerships that was not covered in this survey?”. The purpose behind these two items was to elicit information that might reveal further insight into the findings from the empirical analyses. It could be that EDO practitioners and leaders see very different obstacles in their efforts to collaborate and perform effectively, and these items offer the opportunity for the respondents to voice such concerns and ideas.

## **Analysis**

The analysis began with an examination and description of the collected data. I examined descriptive statistics to get a better sense of the nature of these organizations and ensure that they do indeed meet the criteria of an EDO. I created a bar graph and a two mode network to summarize their activities and services. Before conducting any

statistical tests on the data to test the hypotheses, I looked for outliers and other observations that may have distorted the data. I tested for normality of the data and variables of interest to ensure that the traditional parametric tests of statistical analysis could be employed. I took a logarithmic transformation of two of the variables, network size and frequency, to deal with issues of skewness.

The analyses then proceeded by testing statistical models using ordinary least squared regression (OLS) in predicting performance (Model 1, Model 2), negative binomial regression in predicting network size (Model 3),<sup>1</sup> and a binomial GLM model with a logit link choice in predicting tie heterogeneity (Model 4).<sup>2</sup>

Thematic analysis (Creswell, 2009) was also used to uncover additional insight from the qualitative data. I thoroughly read the answers to the open-ended questions to see if there were any patterns with respect to the perspective(s) of the respondents. I organized their perspectives in a table with relevant quotes that speak to the phenomena of interest in the study. The hope was that this would provide more contextual detail to the story told by the statistical analyses.

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<sup>1</sup> The distribution revealed overdispersion, making this the more appropriate form of modeling the count data.

<sup>2</sup> This model was chosen since the outcome variable is a proportion between 0 and 1 (Papke & Wooldridge, 1996).

## CHAPTER 5: RESULTS

After the emails, postal letters, and phone calls, which took place over a four month period, the final number of completed surveys was 105, resulting in a response rate of 51.7%. However, a few of those respondents were different people within the same organization. Because of this, their individual responses were combined and collapsed into one response for each organization. Where there was missing data for these cases, the responses of the respondent who completed those items were used. In other cases, the judgment of the respondent with the highest formal authority and/or tenure within the organization was used. Upon aggregating the responses of these few cases, the total number of organizations in the final sample was 98 EDOs operating in the region. This number was furthered reduced to 70 to 88 due to missing data on some of the key variables (e.g. the performance measure required incoming ties of peer ratings) for a portion of the cases.<sup>3</sup>

### **Summary of Services**

At the outset of the study a challenge of bounding the population of EDOs in the study region was defining an EDO. Since local economic development comes in many forms and fashions (Blakely & Bradshaw, 2002), the research team chose to define EDOs by the nature of their activities. This was done through the use of activity codes developed by the IRS and corroborated with local development experts familiar with the development practice in the region in the ethnographic interview phase at the beginning of the study. Consistent with the expectation that EDOs are in the business of job and wealth creation, the collected data of the responding EDOs indicate activities that are in line with that objective. Figure 3 below summarizes the number of responding

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<sup>3</sup> The sample size ranged depending on the model specification.



organizations that offer or are engaged in each development activity. As can be seen, business networking, business retention/growth, job creation, and business recruitment are at the top of the list. These findings are consistent of what one would expect of such organizations.

**Figure 3: EDO Services and Activities**

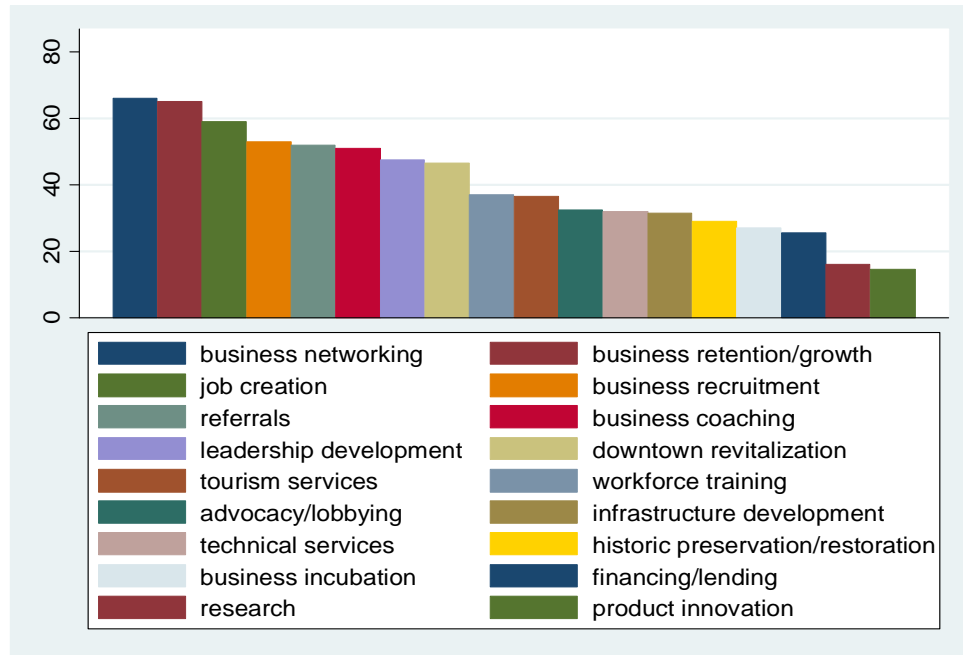
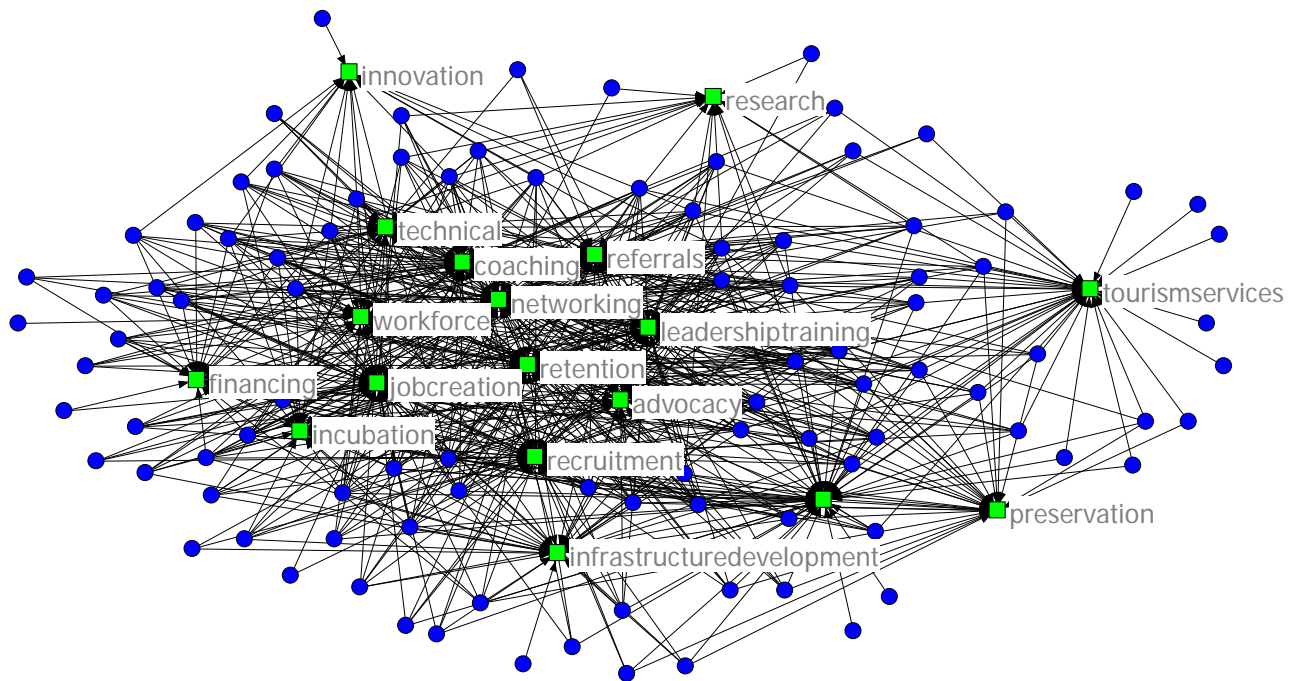


Figure 4 below also summarizes the EDO activity and service data. It is a two-mode network, in which the blue circles are the EDOs, the green squares are the activities, and the lines mean that an EDO offers or engages in a particular service or activity. The activities located near the center of the diagram, such as job creation, networking, recruitment, etc. are the activities shared by the largest number of EDOs. This two-mode network provides another way to visualize, summarize, and think about the nature of activities of the responding EDOs operating in the study region. It was created with NetDraw, the network visualization tool in UCINET (Borgatti, Everett, & Freeman, 2002). This figure adds to the one above by showing that some organizations

specialize in certain EDO activities (e.g. tourism services), while others offer a range of services. Together these two figures offer a better sense of the nature and scope of the activities of the EDOs under investigation.

**Figure 4: Two-mode Network of EDO Services and Activities**



### Summary Statistics and Correlations

With respect to the predictor and outcome variables of interest, Table 2 below reports the means, standard deviations, minima, and maxima values of all the variables used in the analyses. Although the EDOs in the sample are engaged in similar services, they come in a variety of forms with an even wider variety of organizational characteristics. The organizations range in age from 2 to 91 years, with a mean of 29.84 and standard deviation of 19.63. With respect to the number of employees, the EDOs range from 0 to 2, with 0 representing no employees, 1 representing 1 to 5 employees, and 2 representing greater than 5 employees. The mean of that measure is 0.99 with a

standard deviation of 0.73, indicating that the majority of organizations have 1 to 5 employees. The number of services offered range from 0 to 17, with a mean of 7.29 and standard deviation of 4.2. Collaborative network size has a rather large dispersion, ranging from 0 to 337 ties, with a mean of 33.86 and a standard deviation of 48.87.<sup>4</sup> Collaborative network heterogeneity ranges from 0 to 0.75, with a mean of 0.61 and a standard deviation of 0.16. The aggregate measure of EO (i.e. the sum of proactiveness, risk-taking, innovativeness) ranged from -9 to 18, with a mean of 7.85 and a standard deviation of 6. Table 1 also reports the summary statistics for the individual facets of EO. Together, these descriptive statistics summarize the range of organizational characteristics, entrepreneurial orientations, and network properties of EDOs operating in eastern Kentucky.

In addition, the correlation matrix presented in Table 3 identifies several statistically significant correlations. The most notable of which are those relating to the performance measures (i.e. subjective and peer ratings) and network properties. It is also worth noting that the two variables used to create the performance measure, peer ratings and self-report effectiveness, are also significantly correlated at  $p < .05$ . Furthermore, the aggregate measure of EO also has a statistically significant correlation with performance. However, these correlations do take into account the relevant controls in explaining these variables. The results of the OLS, negative binomial, and binomial logit regression models offer more insight into these correlations.

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<sup>4</sup> The log transformation of this variable ranged from 1.10 to 5.82 with a mean of 3.03 and a standard deviation of 1.08.

**Table 2: Summary Statistics**

|                       | Mean    | S.D.    | Min    | Max   |
|-----------------------|---------|---------|--------|-------|
| Effectiveness         | 0       | 0.811   | -2.157 | 1.271 |
| Peer ratings          | 0       | 0.883   | -1.644 | 1.727 |
| Performance           | -0.028  | 1.629   | -4.205 | 2.972 |
| Service generalism    | 7.286   | 4.196   | 0      | 17    |
| Organizational size   | 0.99    | 0.725   | 0      | 2     |
| Organizational age    | 29.84   | 19.632  | 2      | 91    |
| EO                    | 7.854   | 6.003   | -9     | 18    |
| Innovativeness        | 3.041   | 2.371   | -4     | 6     |
| Risk-taking           | 1.896   | 2.351   | -4     | 6     |
| Proactiveness         | 2.907   | 1.985   | -2     | 6     |
| Autonomy              | 6.074   | 3.517   | -5     | 12    |
| Aggressiveness        | 1.713   | 2.443   | -5     | 6     |
| Tie heterogeneity     | 0.611   | 0.162   | 0      | 0.75  |
| Network size          | 33.857  | 48.972  | 0      | 337   |
| Network strength      | 275.478 | 384.458 | 0      | 1983  |
| log(network size)     | 0       | 1       | -1.788 | 2.593 |
| log(network strength) | 0       | 1       | -2.923 | 1.704 |

**Table 3: Correlation Matrix**

|                          | 1    | 2     | 3    | 4    | 5    | 6     | 7    | 8    | 9    | 10   | 11   | 12    | 13   | 14   | 15   | 16   | 17 |
|--------------------------|------|-------|------|------|------|-------|------|------|------|------|------|-------|------|------|------|------|----|
| 1 Effectiveness          | 1    |       |      |      |      |       |      |      |      |      |      |       |      |      |      |      |    |
| 2 Peer ratings           | 0.31 | 1     |      |      |      |       |      |      |      |      |      |       |      |      |      |      |    |
| 3 Performance            | 0.81 | 0.81  | 1    |      |      |       |      |      |      |      |      |       |      |      |      |      |    |
| 4 Service generalism     | 0.29 | -0.05 | 0.15 | 1    |      |       |      |      |      |      |      |       |      |      |      |      |    |
| 5 Organizational size    | 0.43 | 0.1   | 0.35 | 0.27 | 1    |       |      |      |      |      |      |       |      |      |      |      |    |
| 6 Organizational age     | 0.13 | 0.12  | 0.18 | 0.19 | 0.21 | 1     |      |      |      |      |      |       |      |      |      |      |    |
| 7 EO                     | 0.5  | 0.23  | 0.44 | 0.47 | 0.3  | -0.07 | 1    |      |      |      |      |       |      |      |      |      |    |
| 8 Innovativeness         | 0.43 | 0.24  | 0.39 | 0.39 | 0.28 | -0.02 | 0.93 | 1    |      |      |      |       |      |      |      |      |    |
| 9 Risk-taking            | 0.33 | 0.13  | 0.29 | 0.46 | 0.25 | -0.09 | 0.88 | 0.73 | 1    |      |      |       |      |      |      |      |    |
| 10 Proactiveness         | 0.59 | 0.26  | 0.5  | 0.39 | 0.27 | -0.08 | 0.86 | 0.75 | 0.59 | 1    |      |       |      |      |      |      |    |
| 11 Autonomy              | 0.57 | 0.34  | 0.54 | 0.36 | 0.28 | -0.02 | 0.71 | 0.67 | 0.63 | 0.61 | 1    |       |      |      |      |      |    |
| 12 Aggressiveness        | 0.36 | 0.12  | 0.27 | 0.43 | 0.24 | 0.09  | 0.65 | 0.7  | 0.54 | 0.5  | 0.52 | 1     |      |      |      |      |    |
| 13 Tie heterogeneity     | 0.33 | 0.09  | 0.27 | 0.02 | 0.13 | -0.06 | 0.16 | 0.18 | 0.04 | 0.21 | 0.21 | 0.16  | 1    |      |      |      |    |
| 14 Network size          | 0.32 | -0.12 | 0.15 | 0.18 | 0.38 | 0.17  | 0.11 | 0.02 | 0.09 | 0.2  | 0.08 | -0.01 | 0.21 | 1    |      |      |    |
| 15 Network strength      | 0.28 | 0.05  | 0.23 | 0.36 | 0.34 | 0.14  | 0.11 | 0.11 | 0.06 | 0.14 | 0.13 | 0.17  | 0.13 | 0.37 | 1    |      |    |
| 16 log(network size)     | 0.42 | -0.1  | 0.21 | 0.36 | 0.44 | 0.16  | 0.25 | 0.19 | 0.2  | 0.3  | 0.19 | 0.23  | 0.39 | 0.8  | 0.44 | 1    |    |
| 17 log(network strength) | 0.42 | 0.27  | 0.41 | 0.45 | 0.41 | 0.17  | 0.23 | 0.27 | 0.08 | 0.28 | 0.24 | 0.3   | 0.23 | 0.4  | 0.78 | 0.59 | 1  |

*Correlations > .2 are significant at  $p < .05$*

## Regression Models

In regard to the first five hypotheses, Table 4 below shows the standardized coefficients of Model 1 and Model 2. Model 1 includes an interaction term for EO and network size. Model 2 includes an interaction term for EO and tie heterogeneity. The results show support for H1, H3, and H4, and H5. According to Model 1 and 2, EO predicts performance at  $p < .01$  ( $b = .451$ ) and  $p < .01$  ( $b = .504$ ). In Model 1, tie heterogeneity predicts performance at  $p < .05$  ( $b = .226$ ). Model 1 and 2 reveal significant interactions between EO and network size and tie heterogeneity on performance, respectively, at  $p < .05$ . Unexpectedly, network size is negatively related to performance at  $p < .05$  ( $b = -.301$  and  $b = -.283$ ).

To better interpret the significant interactions, I used the procedures of Dawson (2013) and Aiken and West (1991) to plot the interaction. Figure 6 shows the interaction between EO and network size in explaining performance. The plot seems to indicate that while all organizations benefited from an EO, EDOs with less collaborative ties tend to have benefited more. As hypothesized, it seems that an EO is more important for organizations with fewer collaborative ties. Figure 7 shows the interaction between EO and tie heterogeneity. As hypothesized, it seems that EO is more important for organizations with less tie heterogeneity.

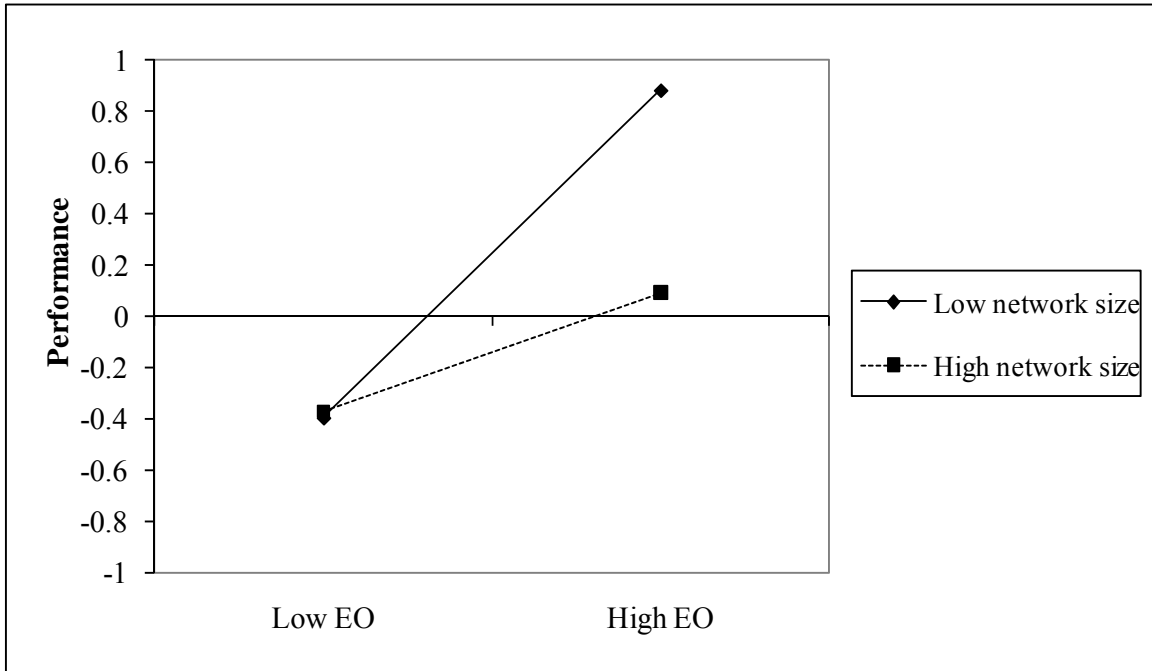
**Table 4: Predicting Performance**

|                        | Performance        |                    |
|------------------------|--------------------|--------------------|
|                        | Model 1            | Model 2            |
| Service generalism     | -0.169<br>(0.117)  | -0.214+<br>(0.118) |
| Organizational size    | 0.258*<br>(0.111)  | 0.205+<br>(0.111)  |
| Organizational age     | 0.237*<br>(0.093)  | 0.223*<br>(0.092)  |
| Network frequency      | 0.330**<br>(0.119) | 0.361**<br>(0.120) |
| Network size           | -0.301*<br>(0.139) | -0.283*<br>(0.137) |
| Tie heterogeneity      | 0.226*<br>(0.100)  | 0.159<br>(0.106)   |
| EO                     | 0.451**<br>(0.099) | 0.504**<br>(0.099) |
| EO X network size      | -0.206*<br>(0.089) |                    |
| EO X tie heterogeneity |                    | -0.229*<br>(0.107) |
| Observations           | 71                 | 71                 |
| R-squared              | 0.470              | 0.472              |
| Adj. R-squared         | 0.401              | 0.404              |

*Standard errors in parentheses*

**\*\***  $p < 0.01$ , **\***  $p < 0.05$ , **+**  $p < 0.1$

**Figure 5: Interaction between EO and Network Size**



**Figure 6: Interaction between EO and Tie Heterogeneity**

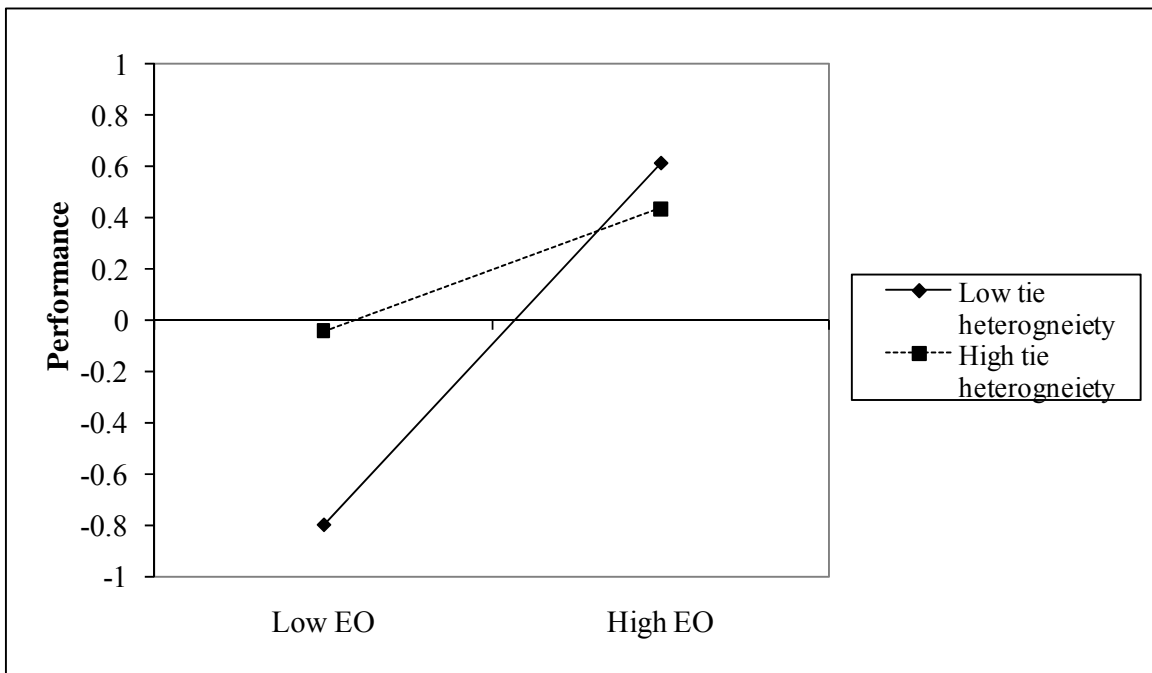




Table 5 reports the standardized coefficients from Model 3 and Model 4. Model 3 uses a negative binomial regression in predicting network size, and Model 4 uses a binomial logit regression in predicting tie heterogeneity. The results do not show support for EO impacting network size and heterogeneity. Organizational size, however, predicts network size at  $p < .05$

**Table 5: Predicting Network Size and Tie Heterogeneity**

|                     | Network size       | Tie heterogeneity |
|---------------------|--------------------|-------------------|
|                     | Model 3            | Model 4           |
| Service generalism  | 0.067<br>(0.142)   | -0.060<br>(0.076) |
| Organizational size | 0.819**<br>(0.182) | 0.132<br>(0.146)  |
| Organizational age  | 0.004<br>(0.005)   | -0.002<br>(0.004) |
| EO                  | -0.099<br>(0.123)  | 0.102<br>(0.065)  |
| Constant            | 2.439<br>(0.253)   | 0.362<br>(0.197)  |
| Observations        | 92                 | 71                |

*Standard errors in parentheses*

In summary, it appears that hypotheses 1, 3, 4, and 5 received the strongest empirical support. Table 5 summarizes the hypotheses and whether or not they were empirically supported.

**Table 6: Summary of Supported Hypotheses**

| <b>Model</b> | <b>Hypothesis</b>  | <b>Support</b>   | <b>Test statistic</b> | <b>p-value</b>  |
|--------------|--|------------------|-----------------------|-----------------|
| <b>1</b>     | 1: EO will be positively related to organizational performance.                                | <b>Supported</b> | <b>4.25</b>           | <b>&lt;.001</b> |
|              | 2: Collaborative network size will be positively related to organizational performance.        | Not supported    | -2.26                 | .027            |
|              | 3: Collaborative tie heterogeneity will be positively related to organizational performance.   | <b>Supported</b> | <b>2.05</b>           | <b>.044</b>     |
|              | 4: Network size will moderate the relationship between EO and organizational performance.      | <b>Supported</b> | <b>-2.10</b>          | <b>.040</b>     |
| <b>2</b>     | 5: Tie heterogeneity will moderate the relationship between EO and organizational performance. | <b>Supported</b> | <b>-2.17</b>          | <b>.034</b>     |
| <b>3</b>     | 6: EO will be positively related to collaborative network size.                                | Not supported    | -.810                 | .419            |
| <b>4</b>     | 7: EO will be positively related to collaborative tie heterogeneity.                           | Not supported    | 1.58                  | 0.114           |

## **Thematic Analysis**

With respect to the thematic analysis, the responses to the open response questions seemed to be organized around three themes: 1) the importance of collaboration, 2) limited resources, and 3) ways to improve collaboration. Table 7 provides a list of the quotations organized by the theme. In regard to the first two themes, the quotations suggest that EDO managers generally recognize that collaboration is important for their field and that limited resources pose a significant challenge for their operations. Some notable insights that they offer regarding ways to improve collaborations are the following: 1) Reduce competitiveness and increase collaboration, 2) increase regional awareness of the activities and services of other EDOs in the region, and 3) increase proactiveness in reaching out to other organizations with similar missions and goals.

**Table 7: Thematic Analysis**

| <b>Theme</b>  | <b>Quotation</b>  | <b>Position of respondent</b> |
|---|---|-------------------------------|
| <b>Importance of collaboration</b>  | "We have worked hard the past few years to bring other organizations to the table as we create our work plan. Though it is difficult at times, creatively developing partnerships is the only way a community can truly succeed."                   | Executive Director            |
|   | "I think our region is exemplary in its efforts to collaborate."  | President                     |
|   | "Additional networking is needed."  | Development Associate         |
|   | "I think anytime you can collaborate with other organizations and bounce ideas off of each other is always a benefit to everyone concerned."  | Manager                       |
|   | "Our partnerships are vital to our success."  | Executive Director            |
| <b>Limited resources</b>  | "We are always looking for new organizations to partner with to improve our service offerings."   | Executive Director            |
|   | "We only have an annual budget of \$8000 a year total. We actually do alot with little resources."  | Chairperson                   |
|   | "Local capacity continues to be a bottleneck at facilitating partnerships. As a small staff there is only so much we can do on any given day."  | President                     |
|   | "Don't need improvement. At capacity with our collaborations at current."   | Coordinator                   |
|   | "Need more resources and staff."  | Executive Director            |
| <b>Improving collaboration</b>  | "Need to secure funds for operating expenses."  | President                     |
|   | "Travel is generally involved when we speak of collaborations. It seems that due to our curves and narrow roads no one likes to come to us. With limited time and travel funds it is difficult for us to build the necessary partnerships."         | Director                      |
|   | "Need more consistency in agreeing to and keeping commitments. Reduce competitiveness and increase collaboration."  | Director                      |
|   | "Considering how work intersects outside of funding opportunities, grant programs, and training programs. Identifying areas of mutual benefit where assistance and knowledge may be shared and put to strategic use in organizational development." | Director                      |
|   | "Would like to know more about some of the other organizations, what they offer, and how best to collaborate/partner with them."  | President                     |
|   | "Increased regional awareness of other organizations and how they can help each other. Sharing ideas and solutions."  | President                     |
|   | "More coordination of services to entrepreneurs and joint marketing efforts."   | President                     |
|   | "More meaningful partnerships with other orgs similar to ours instead of mostly top-down type relationships."   | Chairperson                   |
|   | "More openness, willingness of organizations to collaborate on projects and programs - Get out of the SILO mentality!"  | Executive Director            |
| "Need to be more proactive and reach out to other area organizations with similar missions and goals."  | President   |                               |
| "Remove the barriers caused by competition that leads to fragmentation of efforts and wasting resources. Collaboration and cooperation needs to replace competition." | Director  |                               |

## CHAPTER 6: POST HOC THEORY AND ANALYSIS

I conducted a supplemental analysis that is divided into three parts. In the first, I tested for interactions between EO and collaborative networks on peer ratings of performance. I focused on peer ratings because unlike the self-report measure of effectiveness it is a bit more removed from the respondents, making it less likely to be biased or inflated. I also examined a possible interaction between EO and network frequency, since the frequency of collaboration might also be considered a form of social capital.<sup>5</sup> Table 8 below reports the standardized coefficients of these OLS regression models. The results indicate a consistent and strong effect of EO on peer ratings of performance across all models. Post hoc Model 4 indicates a significant interaction between EO and tie heterogeneity, while Model 6 indicates a significant interaction between EO and network size. Figure 7 and Figure 8 illustrate those interactions. The interactions reveal a substitution effect between social capital and EO, such that EDOs with smaller and less heterogeneous sets of collaborative ties benefit more from an EO than those with larger and more heterogeneous sets.

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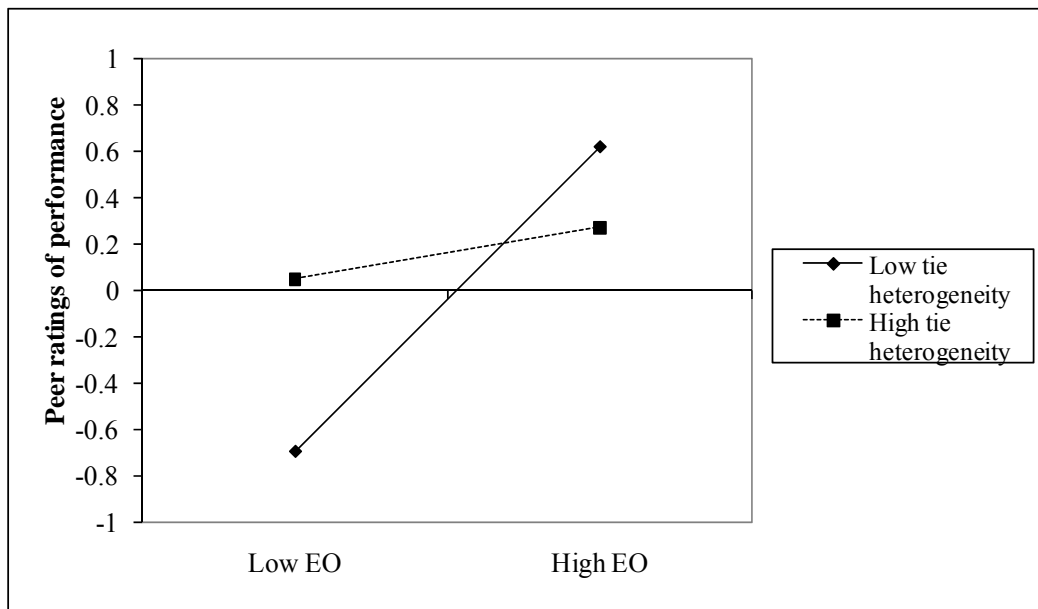
<sup>5</sup> The results of the main analysis provide evidence for considering network frequency a form of social capital.

**Table 8: EO, Collaborative Networks, and Peer Ratings**

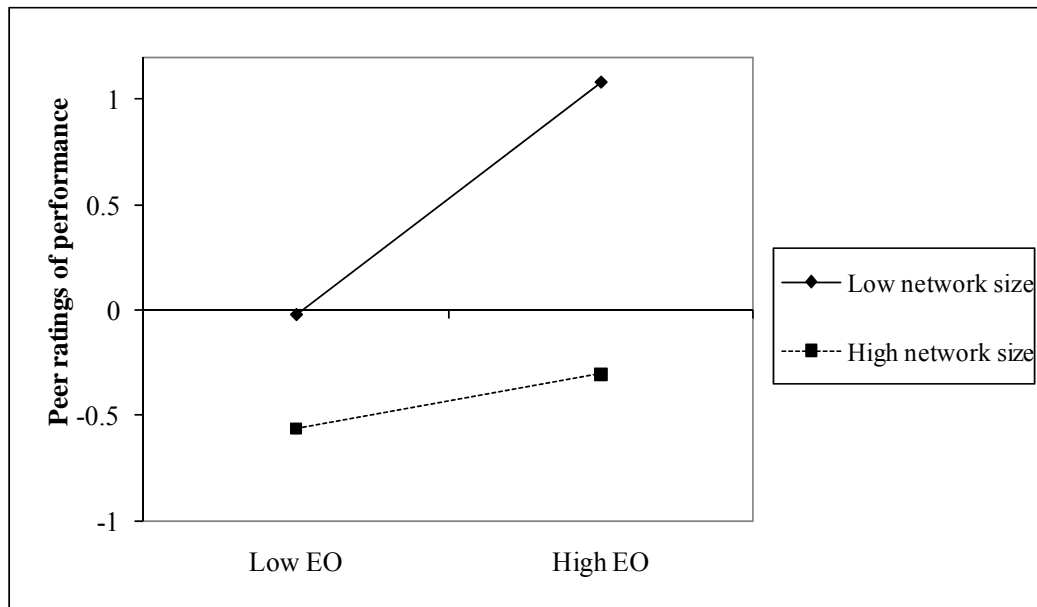
|                   |                        | Peer ratings of performance |                    |                    |                     |                     |                     |
|-------------------|------------------------|-----------------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
|                   |                        | 1                           | 2                  | 3                  | 4                   | 5                   | 6                   |
| Controls          | Service generalism     | -0.248+<br>(0.127)          | -0.244<br>(0.132)  | -0.181<br>(0.126)  | -0.224+<br>(0.123)  | -0.167<br>(0.125)   | -0.175<br>(0.124)   |
|                   | Organizational size    | -0.009<br>(0.124)           | 0.010<br>(0.126)   | 0.146<br>(0.131)   | 0.097<br>(0.119)    | 0.112<br>(0.121)    | 0.155<br>(0.121)    |
|                   | Organizational age     | 0.201+<br>(0.108)           | 0.206+<br>(0.109)  | 0.233*<br>(0.108)  | 0.255*<br>(0.100)   | 0.236*<br>(0.101)   | 0.268*<br>(0.101)   |
| Network variables | Tie heterogeneity      | -0.030<br>(0.115)           |                    |                    | 0.109<br>(0.114)    | 0.210+<br>(0.109)   | 0.188<br>(0.671)    |
|                   | Network frequency      |                             | 0.222+<br>(0.125)  |                    | 0.427**<br>(0.125)  | 0.380**<br>(0.126)  | 0.393**<br>(0.125)  |
|                   | Network size           |                             |                    | -0.292*<br>(0.127) | -0.553**<br>(0.146) | -0.519**<br>(0.148) | -0.569**<br>(0.149) |
| Unidimensional EO | EO                     | 0.360**<br>(0.121)          | 0.341**<br>(0.116) | 0.340**<br>(0.117) | 0.410**<br>(0.107)  | 0.357**<br>(0.108)  | 0.351**<br>(0.108)  |
| Interactions      | EO X tie heterogeneity | -0.213+<br>(0.128)          |                    |                    | -0.267*<br>(0.115)  |                     |                     |
|                   | EO X network frequency |                             | -0.183+<br>(0.125) |                    |                     | -0.187+<br>(0.115)  |                     |
|                   | EO X network size      |                             |                    | -0.142<br>(0.096)  |                     |                     | -0.217*<br>(0.096)  |
| Observations      |                        | 79                          | 73                 | 79                 |                     | 73                  | 73                  |
| R-squared         |                        | 0.148                       | 0.211              | 0.178              | 0.366               | 0.345               | 0.352               |
| Adj. R-squared    |                        | 0.076                       | 0.139              | 0.11               | 0.286               | 0.263               | 0.272               |

Standard errors in parentheses  
 \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$

**Figure 7: EO, Tie Heterogeneity, and Peer Ratings**



**Figure 8: EO, Network Size, and Peer Ratings**



In the second part of the supplemental analysis, I tested for the effects of individual facets of EO on peer ratings of performance. As, mentioned earlier, it is possible that the dimensions of EO may have independent effects on organizational outcomes, depending on the context. Due to high correlations between the individual facets, I only included one facet in each model. In addition to the facets of innovativeness, proactiveness, and risk-taking that I already theorized about, I also tested for the effects of autonomy and competitive aggressiveness. Autonomous organizations have access to all vital information relevant for their operations, and have employees that are able to act independently if they think doing so is in the best interest of the organization. This autonomy makes the organization more flexible and adaptable to its environment. As employees of an organization identify new problems facing the organization, their autonomy allows them to act without constraint. It creates nimbleness that allows the organization to better fit with its environment. Better fit usually means better organizational performance.

Competitive aggressiveness captures the extent to which organizations deliberately seek to outperform their competitors (Hughes & Morgan, 2007; Lumpkin & Dess, 1996). Competitive firms constantly seek to outdo, outperform, and outmaneuver their rivals. This aspect of EO may be valuable in hypercompetitive markets, where a fierce and competitive posture is a requirement for firm performance (D'Aveni, 1994). However, in the context of EDOs, such competitive aggressiveness may impede the sort of collaboration necessary to achieve substantive results/changes in their local communities.

Table 9 below reports the standardized coefficients of five OLS regression models testing for the effects of innovativeness, risk-taking, proactiveness, autonomy, and competitive aggressiveness. The results indicate a strong positive effect of all those dimensions, except for competitive aggressiveness. Hence, aggressiveness as a facet does not seem to be particularly beneficial for EDOs.



**Table 9: EO Facets and Peer Ratings**

|                   |                     | Peer ratings of performance |                     |                     |                     |                     |
|-------------------|---------------------|-----------------------------|---------------------|---------------------|---------------------|---------------------|
|                   |                     | 1                           | 2                   | 3                   | 4                   | 5                   |
| Controls          | Service generalism  | -0.135<br>(0.126)           | -0.176<br>(0.134)   | -0.140<br>(0.119)   | -0.112<br>(0.125)   | -0.027<br>(0.139)   |
|                   | Organizational size | 0.150<br>(0.123)            | 0.130<br>(0.126)    | 0.155<br>(0.118)    | 0.012<br>(0.126)    | 0.163<br>(0.134)    |
|                   | Organizational age  | 0.209*<br>(0.103)           | 0.229*<br>(0.106)   | 0.266*<br>(0.101)   | 0.234*<br>(0.099)   | 0.167<br>(0.110)    |
| Network variables | Tie heterogeneity   | 0.189<br>(0.702)            | 0.246+<br>(0.701)   | 0.204+<br>(0.672)   | 0.158<br>(0.677)    | 0.235+<br>(0.752)   |
|                   | Network frequency   | 0.339*<br>(0.131)           | 0.439**<br>(0.134)  | 0.352**<br>(0.126)  | 0.359**<br>(0.129)  | 0.346*<br>(0.143)   |
|                   | Network size        | -0.462**<br>(0.154)         | -0.540**<br>(0.156) | -0.542**<br>(0.149) | -0.403**<br>(0.149) | -0.488**<br>(0.165) |
| EO facets         | Innovativeness      | 0.292*<br>(0.106)           |                     |                     |                     |                     |
|                   | Risk-taking         |                             | 0.302*<br>(0.050)   |                     |                     |                     |
|                   | Proactiveness       |                             |                     | 0.387**<br>(0.054)  |                     |                     |
|                   | Autonomy            |                             |                     |                     | 0.401**<br>(0.031)  |                     |
|                   | Aggressiveness      |                             |                     |                     |                     | 0.036<br>(0.049)    |
| Observations      |                     | 74                          | 73                  | 74                  | 71                  | 72                  |
| R-squared         |                     | 0.255                       | 0.272               | 0.331               | 0.335               | 0.200               |
| Adj. R-squared    |                     | 0.1881                      | 0.19                | 0.26                | 0.261               | 0.113               |

*Standard errors in parentheses*

*\*\* p<0.01, \* p<0.05, + p<0.1*

To take the supplemental analysis one step further, I also tested a series of models exploring the possible interactions between individual facets of EO and network size, network frequency, and tie heterogeneity. This was the third and final part of the supplemental analysis.

Table 10 below reports the standardized regression coefficients of three models that test for interactions between innovativeness and the three collaborative network characteristics in impacting peer ratings of performance. Innovativeness as a main effect is significant across all models at  $p<.05$ . Network size and network frequency are negatively and positively related to peer ratings of performance,

respectively, at  $p < .05$  across all the models. The interaction between innovativeness and network size is also significant at  $p < .05$ . Figure 9 illustrates the interaction, and suggests that EDOs with smaller collaborative networks benefit more acting innovatively.

**Table 10: Innovativeness, Collaborative Networks, and Peer Ratings**

|                   |                                    | Peer ratings of performance |                     |                     |
|-------------------|------------------------------------|-----------------------------|---------------------|---------------------|
|                   |                                    | 1                           | 2                   | 3                   |
| Controls          | Service generalism                 | -0.157<br>(0.124)           | -0.114<br>(0.125)   | -0.102<br>(0.124)   |
|                   | Organizational size                | 0.121<br>(0.122)            | 0.143<br>(0.122)    | 0.183<br>(0.121)    |
|                   | Organizational age                 | 0.207+<br>(0.101)           | 0.208+<br>(0.102)   | 0.237*<br>(0.101)   |
| Network variables | Tie heterogeneity                  | 0.064<br>(0.779)            | 0.190<br>(0.694)    | 0.167<br>(0.112)    |
|                   | Network frequency                  | 0.359**<br>(0.129)          | 0.339*<br>(0.130)   | 0.333*<br>(0.128)   |
|                   | Network size                       | -0.472**<br>(0.151)         | -0.491**<br>(0.154) | -0.539**<br>(0.155) |
| EO facet          | Innovativeness                     | 0.317**<br>(0.104)          | 0.274*<br>(0.105)   | 0.264*<br>(0.104)   |
| Interactions      | Innovativeness X tie heterogeneity | -0.237+<br>(0.107)          |                     |                     |
|                   | Innovativeness X network frequency | -0.165<br>(0.117)           |                     |                     |
|                   | Innovativeness X network size      | -0.230*<br>(0.098)          |                     |                     |
| Observations      |                                    | 74                          | 74                  | 74                  |
| R-squared         |                                    | 0.319                       | 0.306               | 0.324               |
| Adj. R-squared    |                                    | 0.235                       | 0.22                | 0.24                |

*Standard errors in parentheses*

\*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$

**Figure 9: Innovativeness, Network Size, and Peer Ratings**

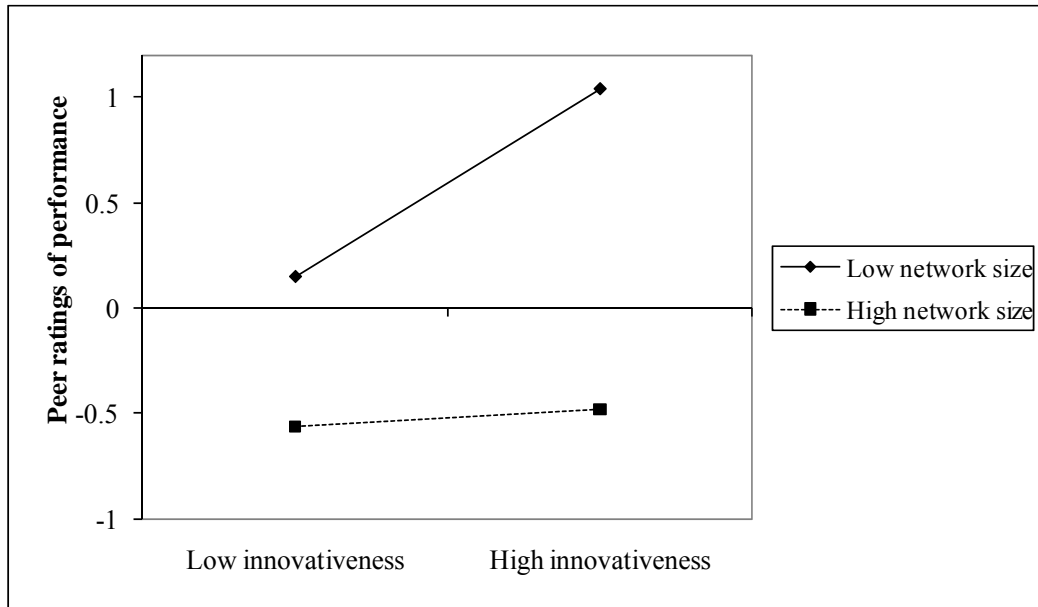


Table 11 below reports the standardized regression coefficients of three models that test for interactions between risk-taking and the three collaborative network characteristics in impacting peer ratings of performance. Risk-taking as a main effect is significant across all models at  $p < .05$ . Network size and network frequency are negatively and positively related to peer ratings of performance, respectively, at  $p < .05$  across all the models. Tie heterogeneity was positively, albeit marginally, related to peer ratings across the models. The interaction between risk-taking and tie heterogeneity, on the other hand, is significant at  $p < .05$ . Figure 10 illustrates the interaction, and suggests that EDOs with less heterogeneous collaborative ties benefit more from acting with higher levels of risk.

**Table 11: Risk-taking, Collaborative Networks, and Peer Ratings**

|                   |                                 | Peer ratings of performance |                     |                     |
|-------------------|---------------------------------|-----------------------------|---------------------|---------------------|
|                   |                                 | 1                           | 2                   | 3                   |
| Controls          | Service generalism              | -0.239+<br>(0.131)          | -0.173<br>(0.132)   | -0.185<br>(0.132)   |
|                   | Organizational size             | 0.137<br>(0.121)            | 0.140<br>(0.124)    | 0.159<br>(0.125)    |
|                   | Organizational age              | 0.243*<br>(0.102)           | 0.219*<br>(0.105)   | 0.246*<br>(0.105)   |
| Network variables | Tie heterogeneity               | 0.226+<br>(0.674)           | 0.233+<br>(0.112)   | 0.233+<br>(0.112)   |
|                   | Network frequency               | 0.496**<br>(0.130)          | 0.428**<br>(0.132)  | 0.464**<br>(0.132)  |
|                   | Network size                    | -0.619**<br>(0.152)         | -0.520**<br>(0.154) | -0.584**<br>(0.155) |
| EO facet          | Risk-taking                     | 0.371**<br>(0.115)          | 0.297*<br>(0.115)   | 0.295**<br>(0.115)  |
| Interactions      | Risk-taking X tie heterogeneity | -0.280*<br>(0.127)          |                     |                     |
|                   | Risk-taking X network frequency | -0.183+<br>(0.116)          |                     |                     |
|                   | Risk-taking X network size      | -0.196+<br>(0.096)          |                     |                     |
| Observations      |                                 | 73                          | 73                  | 73                  |
| R-squared         |                                 | 0.341                       | 0.305               | 0.308               |
| Adj. R-squared    |                                 | 0.259                       | 0.218               | 0.221               |

*Standard errors in parentheses*

\*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$

**Figure 10: Risk-taking, Tie Heterogeneity, and Peer Ratings**

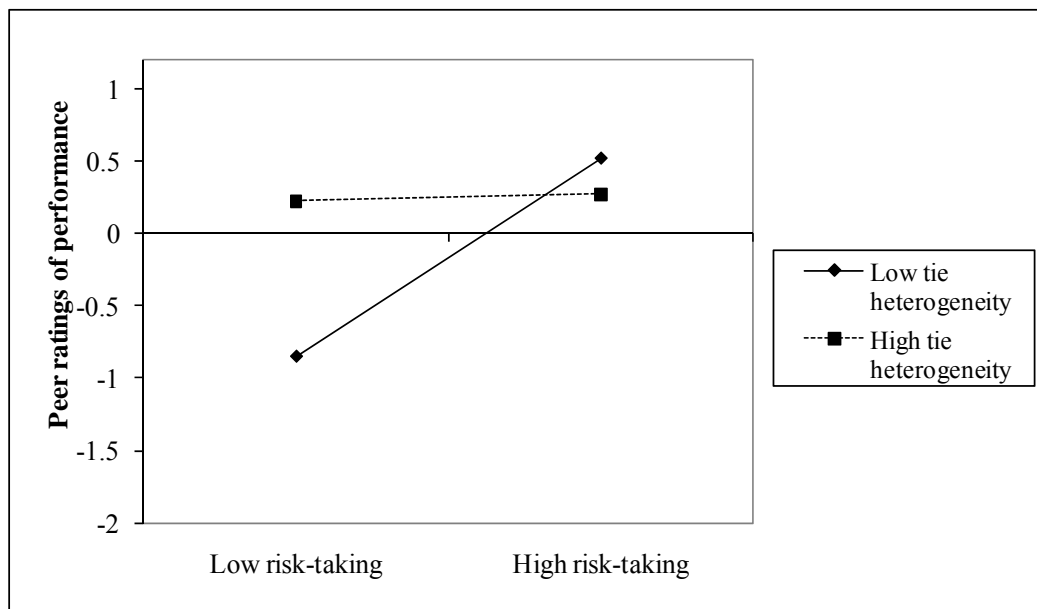


Table 12 below reports the standardized regression coefficients of three models that test for interactions between proactiveness and the three collaborative network characteristics in impacting peer ratings of performance. Proactiveness as a main effect is significant across all models at  $p < .05$ . Network size and network frequency are negatively and positively related to peer ratings of performance, respectively, at  $p < .01$  across all the models. Tie heterogeneity is significant at  $p < .01$  in the second model. There are no significant interactions between proactiveness and the network variables.

**Table 12: Proactiveness, Collaborative Networks, and Peer Ratings**

|                   |                                   | Peer ratings of performance |                     |                     |
|-------------------|-----------------------------------|-----------------------------|---------------------|---------------------|
|                   |                                   | 1                           | 2                   | 3                   |
| Controls          | Service generalism                | -0.146<br>(0.119)           | -0.127<br>(0.120)   | -0.136<br>(0.119)   |
|                   | Organizational size               | 0.139<br>(0.119)            | 0.135<br>(0.120)    | 0.166<br>(0.118)    |
|                   | Organizational age                | 0.277*<br>(0.102)           | 0.266*<br>(0.101)   | 0.280*<br>(0.102)   |
| Network variables | Tie heterogeneity                 | 0.170<br>(0.114)            | 0.211**<br>(0.109)  | 0.192<br>(0.109)    |
|                   | Network frequency                 | 0.370**<br>(0.127)          | 0.354**<br>(0.126)  | 0.354**<br>(0.126)  |
|                   | Network size                      | -0.550**<br>(0.149)         | -0.540**<br>(0.149) | -0.549**<br>(0.149) |
| EO facet          | Proactiveness                     | 0.385**<br>(0.108)          | 0.371**<br>(0.109)  | 0.361**<br>(0.110)  |
| Interactions      | Proactiveness X tie heterogeneity | -0.108<br>(0.111)           |                     |                     |
|                   | Proactiveness X network frequency |                             | -0.111<br>(0.114)   |                     |
|                   | Proactiveness X network size      |                             |                     | -0.119<br>(0.104)   |
| Observations      |                                   | 74                          | 74                  | 74                  |
| R-squared         |                                   | 0.341                       | 0.343               | 0.344               |
| Adj. R-squared    |                                   | 0.259                       | 0.262               | 0.263               |

*Standard errors in parentheses*

\*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$

Table 13 below reports the standardized regression coefficients of three models that test for interactions between autonomy and the three collaborative network characteristics in impacting peer ratings of performance. Autonomy as a main effect is significant across all models at  $p < .01$ . Network size and network frequency are negatively and positively related to peer ratings of performance, respectively, at  $p < .05$  across all the models. The interaction between autonomy and network frequency is significant at  $p < .05$ . Figure 11 illustrates the interaction, and suggests that EDOs operating with less frequency of collaboration benefit more from acting autonomously.

**Table 13: Autonomy, Collaborative Networks, and Peer Ratings**

|                   |                              | Peer ratings of performance |                     |                     |
|-------------------|------------------------------|-----------------------------|---------------------|---------------------|
|                   |                              | 1                           | 2                   | 3                   |
| Controls          | Service generalism           | -0.150<br>(0.126)           | -0.092<br>(0.120)   | -0.117<br>(0.126)   |
|                   | Organizational size          | -0.037<br>(0.128)           | -0.041<br>(0.123)   | -0.004<br>(0.128)   |
|                   | Organizational age           | 0.220*<br>(0.098)           | 0.225*<br>(0.095)   | 0.238*<br>(0.100)   |
| Network variables | Tie heterogeneity            | 0.015<br>(0.132)            | 0.160<br>(0.105)    | 0.135<br>(0.113)    |
|                   | Network frequency            | 0.396**<br>(0.129)          | 0.306*<br>(0.125)   | 0.360**<br>(0.129)  |
|                   | Network size                 | -0.391**<br>(0.147)         | -0.385**<br>(0.143) | -0.398**<br>(0.149) |
| EO facet          | Autonomy                     | 0.432**<br>(0.109)          | 0.370**<br>(0.105)  | 0.399**<br>(0.109)  |
| Interactions      | Autonomy X tie heterogeneity | -0.222+<br>(0.153)          |                     |                     |
|                   | Autonomy X network frequency |                             | -0.265*<br>(0.121)  |                     |
|                   | Autonomy X network size      |                             |                     | -0.091<br>(0.128)   |
| Observations      |                              | 71                          | 71                  | 71                  |
| R-squared         |                              | 0.364                       | 0.398               | 0.343               |
| Adj. R-squared    |                              | 0.282                       | 0.32                |                     |

*Standard errors in parentheses*

**\*\***  $p < 0.01$ , **\***  $p < 0.05$ , **+**  $p < 0.1$

**Figure 11: Autonomy, Network Frequency, and Peer Ratings**

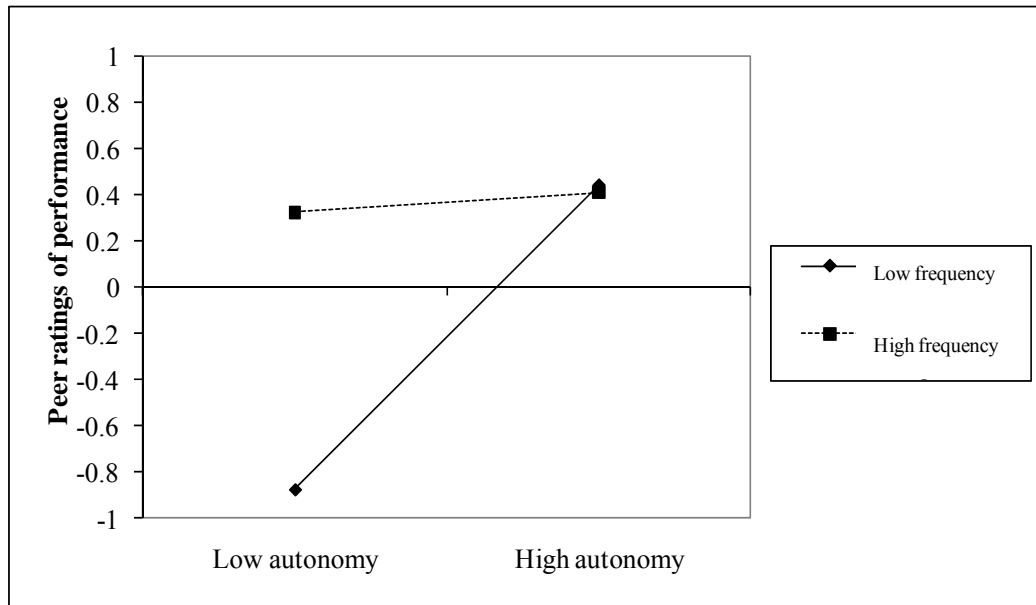


Table 14 below reports the standardized regression coefficients of three models that test for interactions between competitive aggressiveness and the three collaborative network characteristics in impacting peer ratings of performance. Network size and network frequency are negatively and positively related to peer ratings of performance, respectively, at  $p < .05$  across all the models. Although competitive aggressiveness has no significant main effect across the models, it does have significant interactions with all three network variables at  $p < .05$ . Figure 12 illustrates the interaction between aggressiveness and tie heterogeneity, and suggests that organizations with less tie heterogeneity benefit more from acting aggressively. Moreover, peer ratings of performance for organizations with greater tie heterogeneity seem to be harmed by higher levels of aggressiveness. Figure 13 illustrates the interaction between aggressiveness and network frequency, and suggests that organizations operating with less collaborative frequency benefit more from competitive aggressiveness. Furthermore, peer ratings of performance for organizations with higher levels of collaborative frequency seem to be harmed by

higher levels of aggressiveness. Figure 14 illustrates the interaction between aggressiveness and network size, and suggests that organizations with smaller collaborative networks benefit more from competitive aggressiveness. On the flipside, organizations with larger networks may actually be harmed by acting aggressively.

**Table 14: Aggressiveness, Collaborative Networks, and Peer Ratings**

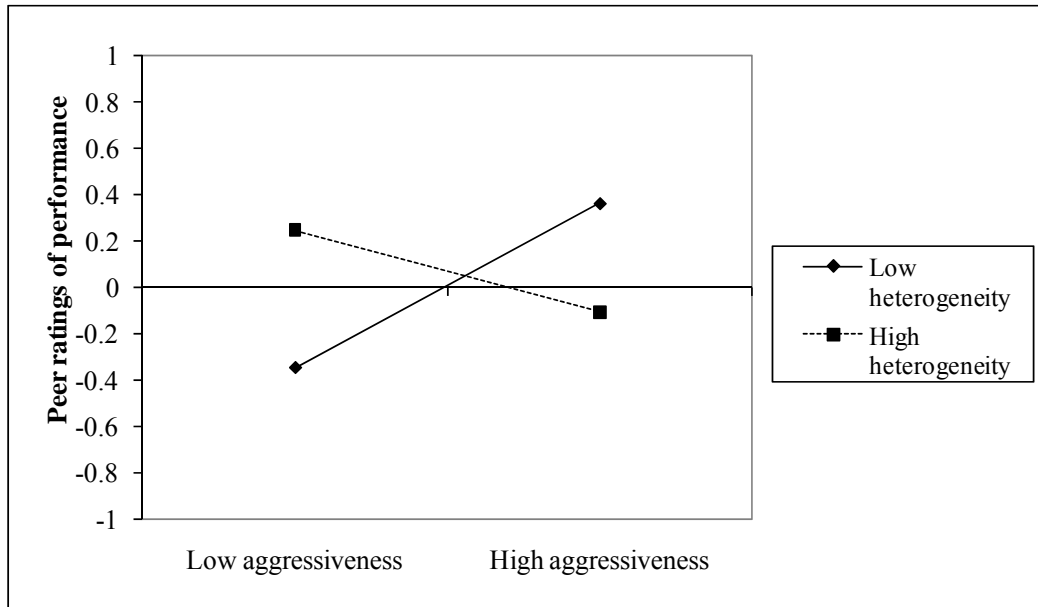
|                   |                                    | Peer ratings of performance |                     |                     |
|-------------------|------------------------------------|-----------------------------|---------------------|---------------------|
|                   |                                    | 1                           | 2                   | 3                   |
| Controls          | Service generalism                 | -0.047<br>(0.135)           | 0.013<br>(0.137)    | -0.019<br>(0.134)   |
|                   | Organizational size                | 0.110<br>(0.131)            | 0.148<br>(0.131)    | 0.182<br>(0.130)    |
|                   | Organizational age                 | 0.151<br>(0.106)            | 0.204+<br>(0.108)   | 0.230*<br>(0.109)   |
| Network variables | Tie heterogeneity                  | 0.035<br>(0.140)            | 0.214<br>(0.120)    | 0.178<br>(0.120)    |
|                   | Network strength                   | 0.354*<br>(0.138)           | 0.319*<br>(0.140)   | 0.330*<br>(0.138)   |
|                   | Network size                       | -0.477**<br>(0.160)         | -0.501**<br>(0.162) | -0.544**<br>(0.162) |
| EO facet          | Aggressiveness                     | 0.095<br>(0.118)            | 0.042<br>(0.117)    | 0.119<br>(0.120)    |
| Interactions      | Aggressiveness X tie heterogeneity | -0.329*<br>(0.111)          |                     |                     |
|                   | Aggressiveness X network strength  |                             | -0.232*<br>(0.146)  |                     |
|                   | Aggressiveness X network size      |                             |                     | -0.290*<br>(0.099)  |
| Observations      |                                    | 72                          | 72                  | 72                  |
| R-squared         |                                    | 0.267                       | 0.249               | 0.265               |
| Adj. R-squared    |                                    | 0.174                       | 0.154               | 0.171               |

*Standard errors in parentheses*

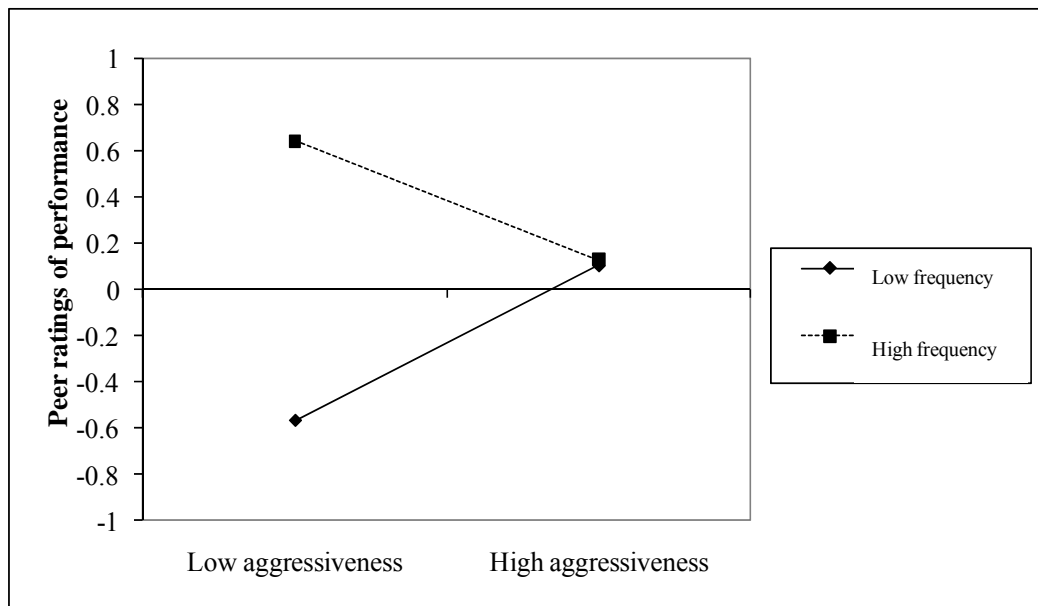
\*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$



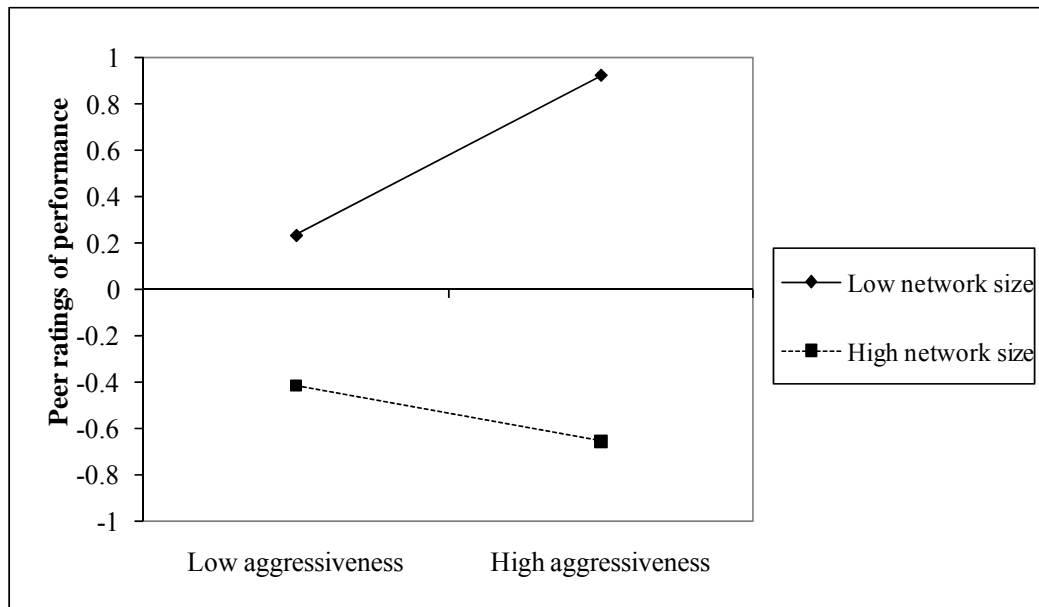
**Figure 12: Aggressiveness, Tie Heterogeneity, and Peer Ratings**



**Figure 13: Aggressiveness, Network Frequency, and Peer Ratings**



**Figure 14: Aggressiveness, Network Size, and Peer Ratings**



## CHAPTER 7: DISCUSSION

Characteristics internal and external to an organization are likely to affect the outcomes of a focal organization. In this study, I sought to demonstrate how one particular type of internal characteristic, EO, and a focal nonprofit's pattern of external ties independently and interactively impact nonprofit performance. I explored these drivers of performance in the context of nonprofit development organizations operating in the rural region of eastern Kentucky. Consistent with prior work, I theorized and found that EO has a consistently strong effect on performance. This finding contributes to EO literature by demonstrating its benefit outside of the often-studied for-profit arena (Morris, Webb, & Franklin, 2011). I also found positive effects of two forms of social capital, tie heterogeneity and tie frequency. These results suggest that development organizations typically benefit from a greater diversity of ties as well as more frequent interactions with their collaborators. Unexpectedly, however, I found that network size has a statistically significant *negative* effect on performance. This result suggests that it may not be the quantity of collaborative ties that matter the most for performance, but the strength, frequency, and/or quality of the partnerships.

Aside from the direct effects of EO and social capital, I also explored their interactions in predicting performance. I did this to test the common notion that EO must necessarily be a resource-intensive strategic posture. Contrary to the majority of EO studies that have been conducted in the for-profit arena (Rauch et al., 2009), I theorized that nonprofit organizations, which tend to be more labor-intensive than their for-profit counterparts, would benefit more from an EO if they had access to less social capital. Furthermore, I posited that this would be especially true in an environmental context characterized by resource-scarcity.

Unlike the empirical findings of EO studies that have been conducted in the for-profit arena (e.g. Stam & Elfring, 2008), I predicted and found that nonprofit organizations with *less*, not more, social capital benefit more from an EO. I found that organizations with smaller and less heterogeneous sets of collaborative ties benefit more from the simultaneous demonstration of innovativeness, risk-taking, and proactiveness than organizations with larger and more heterogeneous sets. The results reveal a substitution effect between firm-level resources/capabilities (i.e. EO), and collaborative networks. These findings contribute to limited empirical evidence suggesting that there may be certain environmental conditions in which EO may be more beneficial for organizations with *less* capital (Wiklund & Shepherd, 2003).

As theorized, it could be that the availability of less social capital necessitates a greater need for these organizations to act entrepreneurially. Or, it could be that more ties to the economic development community constrain an EO, making an EDO more likely to act in congruence with established modes of operation. The theoretical and practical implications of this are many. While much EO research has asserted that for firms to truly benefit from an EO they must have plenty of capital to do so, this study identifies a context in which this does not seem to be the case. It demonstrates that for EDOs operating in the economically distressed region of eastern Kentucky, EO is even more important a focal nonprofit's performance if that nonprofit has access to less social capital. This means that EO may not necessarily be a resource-intensive strategic posture, and that the nonprofits in general, and EDOs in the study region in particular, should be encouraged to engage entrepreneurially if they have access to less social capital. They have more to gain from doing so. It also means that future work might explicate other boundary conditions under which this is also likely to be the case (e.g. service orientated firms, stable industries, etc.).

This study also contributes to social network theory by offering empirical evidence of the interactive effects between firm-level characteristics and network properties in explaining nonprofit performance (Arya & Lin, 2007; Shipilov, 2006). Examining firm-level and network variables in isolation offers an incomplete explanation of organizational performance. This study shows that EO, its various facets, and network characteristics interact in impacting performance. Collaborative networks serve to substitute and/constrain collaborative networks and vice versa. With respect to theory of social networks, the results did not show support for the hypotheses. I predicted that EO was likely to shape a focal EDO's pattern of collaborative ties, but the results did not reveal any significant relationships between EO and collaborative network size or tie heterogeneity.

Aside from EO and social network research, this study also contributes to research regarding poverty alleviation (Bruton, Ketchen, Ireland, 2013; Bruton, 2010). I employ lenses from strategic theorizing to the study of organizations that are directly tackling the poverty problem in a geographic and socioeconomic region beset with persistent poverty. Unlike other approaches to addressing poverty, this study leverages the core competence of management scholarship, the study of organizations. The idea is that by studying the drivers of performance for a sample of organizations on the frontlines of wealth creation, this study can contribute to theory regarding their more optimal performance, and in turn, overall levels of regional economic development.

### **Post Hoc Findings**

I conducted post hoc analyses to accomplish three goals. First, I tested the same models on peer ratings of performance as robustness checks. Unlike the effectiveness items that were based on self-report, the peer ratings are more likely to

be less biased or inflated since they are based on peer evaluations. Second, given that the manifestation of EO in a nonprofit context is difficult to ascertain a priori, I examined the possible direct effects of the different facets of the multidimensional conceptualization of EO on those peer ratings. This allowed me to explore the possibility that some facets might have stronger and/or different independent effects on performance. Third, and in line with the thesis of this dissertation, I tested for interactions between those individual EO facets, collaborative network size, tie heterogeneity, and network frequency. I included network frequency as a form of social capital given its strong positive effect in the main analysis.

The results of the post hoc analysis were telling. With respect to the first part of the post hoc analysis, innovativeness, proactiveness, risk-taking, and autonomy all have statistically significant relationships with peer ratings of performance. Competitive aggressiveness had no statistically significant effect. In the second part, I found statistically significant interactions between innovativeness and network size, risk-taking and tie heterogeneity, and autonomy and network frequency in predicting peer ratings of performance. In each of those cases, the results indicate that organizations with less social capital benefit more from higher levels of each of those EO facets. Given that the effects of the EO facets are not uniform across models, the various EO facets may indeed have independent effects on organizational outcomes.

Furthermore, even though competitive aggressiveness had no main effects, it has a statistically significant interaction with network size, network frequency, and tie heterogeneity at  $p < .05$ . These interactions reveal that EDOs with less social capital, measured by higher levels of those measures, benefit more from acting aggressively. On the flipside, EDOs that have many collaborative ties, interact frequently, and have a greater heterogeneity of ties may actually be harmed by having a competitive

posture. This finding is consistent with the thematic analysis, where respondents recommended reducing competition and improving collaboration.

This finding is also consistent with recent trends in local economic development theory and practice. In the old-fashioned or “first-wave” of development practice, a competitive posture was often necessary to recruit and attract the firms that could bring jobs to local communities. If the firm decided to locate in one region, it meant that it did not in another. This pitted different locales against one another in vying for the business of the employing firm. They had to compete with their inducements and offers in order to attract the firm. However, in more recent “waves” of development practice collaboration has taken precedence not only in carrying out the traditional tactic of business recruitment, but also in promoting endogenous, grass-roots development (Blakely & Leigh, 2009). The findings of this dissertation corroborate this notion, and reveal the greater a focal EDO is embedded in the local economic development community, the greater the negative impact of a competitive posture.

Taken together, the post hoc findings are largely in line with the theoretical expectations of my dissertation, albeit with a few exceptions. With respect to the direct effect of EO on performance, I found that the unitary and multidimensional conceptualizations of EO both have consistent and positive effects on peer ratings of performance. With respect to the direct effects of social capital, however, I found a consistent *negative* effect of network size performance. Tie frequency, on the other hand, had a consistent positive effect. I found limited evidence for a positive effect of tie heterogeneity. These results reveal that network size may be a liability for these EDOs, and that maybe the original model should be adjusted to focus on other characteristics of collaborative networks (e.g. network frequency; frequency of a

particular type of tie, combinations thereof, etc.) that might be a bit more reflective of how social capital manifests in the given context.

### **Limitations and Future Research Directions**

This study has limitations with respect to data collection and response burden. From the ethnographic interviews at the beginning of the study, it was discovered that practitioners would be more willing to complete the survey if it was simple, short, and intuitive. To do so, tradeoffs had to be made about what and what not to include in the survey instrument. In order to obtain data on alter-to-alter ties, the survey would have to have been much longer and burdensome. With the goal to maximize the response rate of a sample consisting of busy presidents, CEOs, and directors, the research team decided to focus solely on direct ties. This decision was made with logic that at higher levels of analysis (e.g. teams, departments, organizations, etc.), networks are often fuzzier, more loosely-coupled systems, with direct ties likely having a substantial effect on immediate outcomes for a focal actor. Hence, this present study did not theorize about the antecedents or consequences of the density of collaborative networks. This should be noted as a limitation since EDOs might perform better if their collaborative partners also have ties. One might expect that such higher levels of density would have a positive effect on performance. Ties between alters could make coordination easier for the successful implementation of projects that involve a shared objective. Or, such ties might also have a negative affect due to a greater likelihood of less nonredundant information and less control for the focal EDO (Burt, 2005). It could be that a greater density for an EDO leads to constraint, preventing an EDO from engaging in entrepreneurial and innovative activity that could lead to substantial gains in performance and/or effectiveness. Future work could explore such possibilities.



The data used to test the theoretical framework and hypotheses are also cross-sectional, which means statements of causality are more difficult to infer. This is a limitation due to the lack of temporal precedence necessary to more confidently assert directions of causality (Trochim & Donnelly, 2008). The associations between the variables, therefore, could possibly move in the other direction, or maybe even move in both directions over time. For example, it could be that better performing EDOs are more likely to act entrepreneurially. That entrepreneurial activity could then lead to higher performance. It could be a feedback loop over time, with both variables influencing and reinforcing the other. This present study sought only to establish that such associations exist. Future research could better tease out directions of causality with a longitudinal design.

Future research could also use a longitudinal design to better address antecedents to collaborative networks. I theorized that an EO might manifest itself in a focal nonprofit's pattern of collaborative ties, but the analysis did not support the hypotheses. EDOs with higher levels of EO did not tend to have larger collaborative networks and more heterogeneous sets of collaborative ties. Rather than EO always leading to larger networks, it could be that EO leads to more *network change*. It could be that organizations with higher levels of EO might have more *dynamic* networks. A longitudinal design could test this possibility.

Another limitation of the study is that it is focused exclusively on EDOs operating within eastern Kentucky. This may affect issues of generalizability to other EDOs across the nation. In other cities, regions, and states, it could be that the observed relationships between variables change or systematically differ. Future work could sample a larger population of EDOs across the nation to generate a representative sample of the entire population of EDOs. Although such a study would

be difficult in terms of bounding and identifying the entire population, it could be done with a similar methodology employed in this study. This present study took a more contextual approach by focusing specifically on a region that has faced particularly severe obstacles to economic development. The larger project from which this dissertation stems was birthed from the idea that by better understanding these particular organizations and their collaborative practices, the project may contribute in some way to helping these organizations better work together, and in turn, in some small way, help move the entire region forward. Future work might replicate this project in other regions that have historically faced obstacles to economic development. For example, referring back to Figure 1 that showed the economically distressed counties, maybe a future study could explore EDOs in northern Mississippi, another area with a high concentration of distressed counties. It could be used as a comparison case for the sample of EDOs in this present study.

Another opportunity to build upon this work regards the operationalization and measurement of performance. The performance construct explained in this study is based on an index of self-report and peer ratings of performance. While such a measure offers information about how managers and peer organizations think about an organization's performance, it is not as objective as financial metrics like change in revenue. I hope in future work to build upon this data set using information provided by the IRS when it becomes publicly available. Future analyses might show that some operational and collaborative strategies are more beneficial for certain dimensions of performance. When I do so, I hope to utilize a longitudinal design, so that causality can be more strongly inferred. This will be possible since the objective performance data, including nonprofit survival, will be at a different time point from the initial survey.

## **Managerial Implications**

As an offshoot of the theoretical contributions, this study offers a few practical insights for EDO managers working within the region. First, an EO seems to be especially valuable for these organizations. Managers should actively encourage innovativeness, risk-taking, and proactiveness among their employees (see Certo, Moss, & Short, 2009 for an applied perspective). Second, they should especially encourage an EO if their organization does not have many collaborative ties. For such organizations, it is even more important that they be scrappy, resourceful, and entrepreneurial in accomplishing organizational objectives. Third, a buzzword in economic development is “networking.” Although important, results suggest that more ties for the sake of more ties may not necessarily be a good thing. Indeed, the results reveal a statistically significant negative main effect of network size on performance. In contrast, network frequency, measured by the frequency of interaction had a statistically significant positive effect. The implication of these findings is that EDO managers might consider ways to strengthen their existing partnerships and ties rather than seeking to build larger networks. Finally, EDOs that have many collaborative ties should seek to adopt a collaborative rather than a competitive posture to achieve superior performance.

## **CHAPTER 8: CONCLUSION**

This study integrates research streams from the EO and interorganizational collaboration literatures by examining the interrelationships between EO, collaborative networks, and nonprofit organizational performance. I found that EO serves as a key driver of nonprofit performance. Furthermore, with the aid of the social network perspective, I theorized that collaborative network size and tie heterogeneity moderate the effect of EO on performance, such that organizations with smaller and less heterogeneous sets of collaborative ties reap higher performance gains from EO than those with larger and more heterogeneous sets. The results empirically support this idea, and reveal a substitution effect between social capital and firm-level characteristics. I conducted this study in a context particularly well-suited to do so: EDOs operating in eastern Kentucky. Due to the nature of local economic development, the prevalence of collaboration in development practice, and the resource scarcity of the region, EDOs in eastern Kentucky provide an ideal empirical setting to study the questions of interest. By identifying and testing the significant drivers of nonprofit performance in this context, I hope to provide theoretical and empirical insights for practicing managers of similar organizations across the globe.

**APPENDIX**  
**Economic Development Organization Survey**

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Welcome to the KY-NSF Economic Development Organization Survey. The intent of this survey is to gather data on the population of Economic Development Organizations operating within eastern Kentucky for the purpose of better understanding their workings and overall patterns of collaboration. Your individual responses will be aggregated, coded, and kept strictly confidential. We look forward to learning more about economic development networks in this region and sharing the findings with you.



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**Consent to Participate in Research Study**

**WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?**

You are being invited to take part in this research project due to your unique role as an economic development practitioner working in Kentucky Appalachia.

**WHO IS DOING THE STUDY?**

The person in charge of this study is Dr. Wally Ferrier of University of Kentucky Department of Management. Five other faculty members across the university will also be assisting in the project. This study is funded by the National Science Foundation.

**WHAT IS THE PURPOSE OF THIS STUDY?**

By doing this study, we hope to better understand economic development networks in eastern Kentucky.

**ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?**

As long as you are knowledgeable about your organization, you qualify to participate.

**WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?**

This study spans a two year period but the online survey should only take 10 to 20 minutes.

**WHAT WILL YOU BE ASKED TO DO?**

The survey will ask about characteristics of your organization.

#### WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

#### WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

We hope that the findings of this project will be beneficial to you as an economic development practitioner as well as to your organization.

#### DO YOU HAVE TO TAKE PART IN THE STUDY?

You do not have to take part in this study. It is completely voluntary.

#### IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

#### WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study.

#### WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

As a participant in the study, you will have access to the findings which might be beneficial to your organization.

#### WHO WILL SEE THE INFORMATION THAT YOU GIVE?

Your information will be combined with information from other people taking part in the study. When we summarize and present the study to other researchers, we will write about the aggregated, generalized information we have gathered. You will not be personally identified in these written materials. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Your responses are confidential. That means that the research team will assign you a random ID number when you complete the survey. This random ID will never be re-attached in any way to your name. However, there are some circumstances in which we may have to show your information to other people. We may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be authorized people from such organizations as the University of Kentucky and our funding source, the National Science Foundation.

#### CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study. The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the agency funding the study decides to stop the study early for a variety of scientific reasons.

#### WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Dr. Wally Ferrier at 859-361-2128 or walter.ferrier@uky.edu. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. You are advised to print this page from the computer you are using to complete this survey or write down this information for your own recordkeeping.

- 1) By putting a check mark here, you are stating that "I have read and understood the information provided in this consent form, and further I have understood my rights as a volunteer research participant."\*
- I volunteer to participate

---

Please do not use the ENTER button at any point of the survey!

- 2) What is the name of your organization?
- 

- 3) What is your title or position within this organization?
- 

**4) How many years have you worked for this organization?**

**5) How would you classify this organization? (Check all that apply)**

- Public  
 Private/independent  
 Public/Private (Hybrid)  
 For-Profit  
 Non-Profit

**6) Which of the following best describes your organization's level of focus on local and/or regional economic development?**

- >75% of efforts directed toward economic development  
 51-75% of efforts directed toward economic development  
 26-50-% of efforts directed toward economic development  
 0-25% of efforts directed toward economic development

**7) What is your organization's mission statement? (Feel free to copy and paste)**

**8) What are your organization's core objectives or goals? (Feel free to copy and paste)**

**9) Which of the following 54 Kentucky “Appalachian” counties (as designated by the Appalachian Regional Commission) does your organization serve? (Check all that apply)**

- |  |                                     |
|--|-------------------------------------|
| <input type="checkbox"/> All 54 counties | <input type="checkbox"/> Monroe     |
| <input type="checkbox"/> Adair           | <input type="checkbox"/> Montgomery |
| <input type="checkbox"/> Bath            | <input type="checkbox"/> Morgan     |
| <input type="checkbox"/> Bell            | <input type="checkbox"/> Nicholas   |
| <input type="checkbox"/> Boyd            | <input type="checkbox"/> Owsley     |
| <input type="checkbox"/> Breathitt       | <input type="checkbox"/> Perry      |
| <input type="checkbox"/> Carter          | <input type="checkbox"/> Pike       |
| <input type="checkbox"/> Casey           | <input type="checkbox"/> Powell     |
| <input type="checkbox"/> Clark           | <input type="checkbox"/> Pulaski    |
| <input type="checkbox"/> Clay            | <input type="checkbox"/> Robertson  |
| <input type="checkbox"/> Clinton         | <input type="checkbox"/> Rockcastle |
| <input type="checkbox"/> Cumberland      | <input type="checkbox"/> Rowan      |
| <input type="checkbox"/> Edmonson        | <input type="checkbox"/> Russell    |
| <input type="checkbox"/> Elliott         | <input type="checkbox"/> Wayne      |
| <input type="checkbox"/> Estill          | <input type="checkbox"/> Whitley    |
| <input type="checkbox"/> Fleming         | <input type="checkbox"/> Wolfe      |
| <input type="checkbox"/> Floyd           | <input type="checkbox"/> None       |
| <input type="checkbox"/> Garrard         |                                     |
| <input type="checkbox"/> Green           |                                     |
| <input type="checkbox"/> Greenup         |                                     |
| <input type="checkbox"/> Harlan          |                                     |
| <input type="checkbox"/> Hart            |                                     |
| <input type="checkbox"/> Jackson         |                                     |
| <input type="checkbox"/> Johnson         |                                     |
| <input type="checkbox"/> Knott           |                                     |
| <input type="checkbox"/> Knox            |                                     |
| <input type="checkbox"/> Laurel          |                                     |
| <input type="checkbox"/> Lawrence        |                                     |
| <input type="checkbox"/> Lee             |                                     |
| <input type="checkbox"/> Leslie          |                                     |
| <input type="checkbox"/> Letcher         |                                     |
| <input type="checkbox"/> Lewis           |                                     |
| <input type="checkbox"/> Lincoln         |                                     |
| <input type="checkbox"/> McCreary        |                                     |
| <input type="checkbox"/> Madison         |                                     |
| <input type="checkbox"/> Magoffin        |                                     |
| <input type="checkbox"/> Martin          |                                     |
| <input type="checkbox"/> Menifee         |                                     |
| <input type="checkbox"/> Metcalfe        |                                     |



**10) Which of the following activities or services does your organization engage in or supply? (Check all that apply)**

- Advocacy, lobbying and policy change
- Business incubation
- Business networking
- Business retention / growth
- Downtown revitalization
- Entrepreneurial / small business coaching
- Historic preservation and restoration
- Infrastructure development
- Job creation and promotion
- Leadership training / development
- Lending / financing
- New business recruitment
- Product innovation and development
- Referral and information services
- Research
- Technical assistance
- Tourism services
- Workforce development / human capacity building
- Other
- Other

**11) What year (or approximately) was your organization formally founded?**

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**12) Including yourself, how many people does your organization employ on a full-time basis?**

---

**13) Including yourself, how many people does your organization employ on a part-time basis?**

---

**14) Which of the following best describes how the number of people employed by your organization has changed over the past three years?**

- Lost employees
- Remained the same
- Gained employees

**15) Which of the following best describes how your organization's financial assets have changed over the past three years?**

- Substantial decline
- Moderate decline
- Remained the same
- Moderate increase
- Substantial increase

**16) What are the primary sources of funding for your organization? (Check all that apply)**

- Appalachian Regional Commission
- Contributions (individual, organization, or foundation)
- Government
- Commercial income (sale of goods/services)
- Interest income
- Special events
- Membership fees
- Other

**17) How much do you agree with each of the following statements about your organization?**

|   | Strongly disagree | Moderately disagree | Neutral | Moderately agree | Strongly agree |
|---|-------------------|---------------------|---------|------------------|----------------|
| The term 'risk taker' is considered a very positive attribute for people in our organization.   | ()                | ()                  | ()      | ()               | ()             |
| People within our organization are permitted to act and think without interference.   | ()                | ()                  | ()      | ()               | ()             |
| People within our organization actively introduce improvements and innovations in our organization.                                   | ()                | ()                  | ()      | ()               | ()             |
| People within our organization always try to take the initiative in every situation (e.g., in projects and when working with others). | ()                | ()                  | ()      | ()               | ()             |
| People working for our organization are very much encouraged to take calculated risks with new ideas.                                 | ()                | ()                  | ()      | ()               | ()             |
| People within our organization are given much freedom to communicate without interference.  | ()                | ()                  | ()      | ()               | ()             |
| People within our   | ()                | ()                  | ()      | ()               | ()             |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
| organization perform jobs that allow us to make and instigate significant changes in the way we perform our work tasks.             |     |     |     |     |     |
| People within our organization are given much freedom and independence to decide on how to go about doing our work.                 | ( ) | ( ) | ( ) | ( ) | ( ) |
| People within our organization initiate actions to which other organizations respond.   | ( ) | ( ) | ( ) | ( ) | ( ) |
| In general, our organization takes a very bold or aggressive approach in accomplishing our mission.                                 | ( ) | ( ) | ( ) | ( ) | ( ) |
| We try to outperform similar organizations as best we can.  | ( ) | ( ) | ( ) | ( ) | ( ) |
| Our organization is very creative in its methods of operation.  | ( ) | ( ) | ( ) | ( ) | ( ) |
| Our organization has a strong emphasis on both exploration and experimentation for new opportunities.                               | ( ) | ( ) | ( ) | ( ) | ( ) |
| Our organization continually seeks out new ways to do things.   | ( ) | ( ) | ( ) | ( ) | ( ) |
| Our organization excels at identifying opportunities.   | ( ) | ( ) | ( ) | ( ) | ( ) |
| Our organization has much authority and responsibility to act alone if we think it to be in the best interests of the organization. | ( ) | ( ) | ( ) | ( ) | ( ) |
| Our organization has  | ( ) | ( ) | ( ) | ( ) | ( ) |

|  |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| access to all vital information.   |                       |                       |                       |                       |                       |
| Our organization is intensely competitive.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Our organization has been very effective in accomplishing our stated organizational goals over the past year.                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Our organization has initiated many new programs, projects, and/or activities over the past year.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Our organization has had plenty of resources in carrying out our organizational objectives over the past year.                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The primary stakeholders of our organization have been very pleased with our performance over the past year.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Relative to other organizations in the region, our organization has been very influential in impacting economic development in eastern Kentucky. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**18) Below is a list of economic development organizations operating in eastern Kentucky. Please select all the EDOs that your organization has collaborated/interacted with over the past year. (TIP: Think of collaboration in its broadest definition including anything from sharing/receiving monetary and material resources, sharing information, sending/receiving referrals, working on specific projects together, and/or co-attended events.)**

**We acknowledge that the process of identifying each EDO that your organization has a relationship with might be somewhat tedious. We beg your indulgence and ask that you carefully scroll through the entire list. The rest of this survey is relatively easy to complete.**

**Your responses are not confined to this list. There is also a set of ten open spaces where you can fill in the names of any other organization/entity your organization works with in carrying out your organizational objectives.**

- |   |  |
|---|--|
| <input type="checkbox"/> 1  | <input type="checkbox"/> Berea Business Development Department                                     |
| <input type="checkbox"/> 2  | <input type="checkbox"/> Berea Chamber of Commerce   |
| <input type="checkbox"/> 3  | <input type="checkbox"/> Big Sandy Area Community Action Program Incorporated                      |
| <input type="checkbox"/> 4  | <input type="checkbox"/> Big Sandy Area Development District Inc.                                  |
| <input type="checkbox"/> 5  | <input type="checkbox"/> Big Sandy Regional Industrial Development Authority                       |
| <input type="checkbox"/> 6  | <input type="checkbox"/> Bluegrass Pride   |
| <input type="checkbox"/> 7  | <input type="checkbox"/> Bluegrass Tomorrow, Inc.  |
| <input type="checkbox"/> 8  | <input type="checkbox"/> Booneville Owsley County Chamber of Commerce Inc.                         |
| <input type="checkbox"/> 9  | <input type="checkbox"/> Booneville Owsley County Industrial Authority                             |
| <input type="checkbox"/> 10   | <input type="checkbox"/> Boyd Co Fair Inc.   |
| <input type="checkbox"/> Albany Clinton County Chamber of Commerce                  | <input type="checkbox"/> Breathitt County Action Team Inc.   |
| <input type="checkbox"/> America Electric Power Economic Development                | <input type="checkbox"/> Breathitt County/City of Jackson Industrial Development Authority         |
| <input type="checkbox"/> Appalachian Alternative Agriculture of Jackson County Inc. | <input type="checkbox"/> Brushy Fork Institute   |
| <input type="checkbox"/> Appalachian Artisan Center of Kentucky Inc.                | <input type="checkbox"/> Buffalo Trace Area Development District Inc.                              |
| <input type="checkbox"/> Appalachian Development Alliance Inc.                      | <input type="checkbox"/> Burkesville Cumberland County Development Corporation                     |
| <input type="checkbox"/> Appalachian Fund Management Company                        | <input type="checkbox"/> Burkesville-Cumberland County Chamber of Commerce                         |
| <input type="checkbox"/> Appalachian Investment Corporation                         | <input type="checkbox"/> Burnside Tourist and Recreation Commission                                |
| <input type="checkbox"/> Ashland Alliance Corporation                               | <input type="checkbox"/> Business Babes Society Inc.   |
| <input type="checkbox"/> Ashland Alliance Foundation Inc.                           | <input type="checkbox"/> Carlisle Nicholas County Chamber of Commerce                              |
| <input type="checkbox"/> Ashland Area Entrepreneur Center                           | <input type="checkbox"/> Carlisle Nicholas County Tourism Inc.                                     |
| <input type="checkbox"/> Ashland Area Innovation Center                             | <input type="checkbox"/> Carlisle/Nicholas County Industrial Development Authority                 |
| <input type="checkbox"/> Ashland Main Street Program, Inc.                          | <input type="checkbox"/> Carter County Fair Inc.   |
| <input type="checkbox"/> Ashland Small Business Development Center                  | <input type="checkbox"/> Casey Co Agricultural and Educational Fair Inc.                           |
| <input type="checkbox"/> Augusta Renaissance  | <input type="checkbox"/> Catlettsburg Main Street Program Inc.                                     |
| <input type="checkbox"/> Bath County Industrial Foundation                          | <input type="checkbox"/> Center for Economic Development, Entrepreneurship, and Technology (CEDET) |
| <input type="checkbox"/> Beattyville Main Street                                    | <input type="checkbox"/> Center for Rural Strategies Inc.  |
| <input type="checkbox"/> Beattyville-Lee County Chamber of Commerce                 |  |
| <input type="checkbox"/> Bell County Chamber of Commerce                            |  |
| <input type="checkbox"/> Bell County Fair and Exhibition Board Inc.                 |  |
| <input type="checkbox"/> Bell County Industrial Foundation Inc.                     |  |
| <input type="checkbox"/> Bell-Whitley Community Action Agency Inc.                  |  |

- Central Appalachian Rural Investment Corporation
- Christian Appalachian Project
- City of Barbourville
- City of Grayson Tourism and Convention Commission
- City of Olive Hill Main Street Program
- City of Salyersville Renaissance
- Clinton County EZ Community Inc.
- Columbia Adair County Chamber of Commerce Inc.
- Columbia/Adair County Industrial Development Authority
- Community Action of Southern Kentucky
- Community Action Kentucky
- Community and Economic Development Initiative of Kentucky (CEDIK)
- Community Ventures Corporation (Head Office-Lexington)
- Corbin Economic Development Agency
- Corbin Main Street
- Cumberland County Arts Council
- Cumberland County Tourist & Convention Commission
- Cumberland Valley Area Development District
- Cumberland Valley RC&D Council Incorporated
- Cumberland, Benham & Lynch
- Cutshin Rural Enrichment Enterprises Of Kentucky Inc.
- Daniel Boone Community Action Agency Inc.
- Daniel Boone Pioneer Festival Inc.
- David Community Development Corporation
- Discover Downtown Middlesboro Inc.
- Downtown Beattyville Alliance Incorporated
- Downtown Pineville Incorporated
- Downtown Somerset Development Corporation Inc.
- East Kentucky Economic Development Division
- East Kentucky Leadership Foundation Inc.
- East Kentucky Power Cooperative Inc.
- Eastern Kentucky Distance Earning Initiative.
- Eastern Region Innovation & Commercialization Center
- Edmonson County Chamber of Commerce Inc.
- Edmonson County Industrial Authority
- Edmonson County Tourist & Convention Commission
- Edmonton Metcalfe County Chamber of Commerce Inc.
- Edmonton Metcalfe County Industrial Development Authority
- Estill County Chamber of Commerce
- Estill Development Alliance
- FIVCO Area Development District
- Flat Woods Community-Based Development Corporation Inc.
- Fleming County Chamber of Commerce
- Fleming County Economic Development Industrial Authority
- Fleming County Tourism Committee Inc.
- Flemingsburg Mainstreet Program Inc.
- Floyd County Chamber of Commerce
- Foothills Community Action Partnership
- Foundation for Appalachian Kentucky
- Frenchburg Menifee County Chamber of Commerce and Tourism
- Garrard County Chamber of Commerce
- Garrard County Entrepreneurs
- Garrard County Fair Board Inc.
- Garrard County Industrial Development Authority
- Gateway Area Development District Inc.
- Gateway Community Action Agency

- Grayson Area Chamber of Commerce Inc.
- Greensburg-Green County Chamber of Commerce
- Greensburg-Green County Industrial Foundation
- Greenup County Tourism & Convention Commission
- Growing Garrard County
- Harlan 2020 A Community Development Foundation
- Harlan County Chamber of Commerce
- Harlan County Community Action Agency
- Harlan County Outdoor Recreation Board Authority Inc.
- Harlan Main Street
- Hart County Chamber of Commerce
- Hart County Entrepreneur Resource Center
- Hart County Fair Association Inc.
- Hart County Industrial Authority
- Hazard Perry County Chamber of Commerce
- Hazard-Perry County Economic Development
- Horse Cave Development Corporation
- Human/Economic Appalachian Development Corporation
- Jackson Breathitt County Chamber of Commerce
- Jackson County EZ Community Inc.
- Jackson County/Mckee Industrial Development Authority
- Jackson Tourism and Convention Board
- Jamestown Development Corporation
- KCEOC Community Action Partnership
- Kentucky Association for Economic Development
- Kentucky Cabinet for Economic Development
- Kentucky Center for Agriculture and Rural Development (Lexington Office)
- Kentucky Enterprise Fund (KEF)
- Kentucky Farm Bureau Federation
- Kentucky Hereford Association Inc.
- Kentucky Highlands Community Development Corporation
- Kentucky Mountain Laurel Festival Inc.
- Kentucky River Area Development District Inc.
- Kentucky River Foothills Development Council Inc.
- Kentucky Science & Technology Corporation
- Kentucky Small Business Development Center
- Kirksville Community Inc.
- Knott County Industrial Authority
- Knox County Chamber of Commerce
- Knox County Economic Development
- Lake Cumberland Association Inc.
- Lake Cumberland Community Action Agency Inc.
- Lake Cumberland Development Council Inc.
- Lawrence County Recreation Board
- Lawrence County Tourism Commission
- Leadership Tri-County Inc.
- Leslie County Industrial Development Authority
- Leslie Knott Letcher Perry Community Action Council
- Letcher County Chamber of Commerce
- Letcher County Economic Development
- Letcher County Industrial Development Authority
- Letcher County Planning Commission Inc.
- Letcher County Tourism & Convention Commission
- Letcher County Tourism Board
- Lewis County Chamber of Commerce
- Liberty/Casey County Chamber of Commerce
- Licking Valley Community Action Program

- Lincoln County Chamber of Commerce
- Lincoln County Fair Inc.
- London Downtown Inc.
- London-Laurel County Chamber of Commerce
- Madison County Action Team
- Madison County Fair and Horse Show Inc.
- Magoffin County Development Authority
- Magoffin County Development Council Inc.
- Main Street Munfordville Inc.
- Manchester/Clay County Chamber of Commerce
- MAPP Magoffin Action Project
- Martin County Economic Development Authority
- Martin County Fair Board Inc.
- McCreary County Chamber of Commerce Inc.
- McCreary County Development Association Inc.
- McCreary County Industrial Development Authority
- McCreary County Tourist Commission
- Menifee County Community Development
- Middle Kentucky Community Action Partnership Inc.
- MMRC Regional Industrial Development Authority Inc.
- Monroe County Economic Development Center
- Montgomery County Fair Inc.
- Monticello/Wayne County Industrial Development Authority
- Monticello-Wayne County Chamber of Commerce
- Morehead Downtown Association Inc.
- Morehead Rowan County Chamber of Commerce Inc.
- Morehead Rowan County Industrial Development Authority Inc.
- Morehead Small Business Development Center
- Morehead State University Center for Regional Engagement
- Morehead Tomorrow
- Morehead-Rowan County Economic Development Council Inc.
- Morgan County Agricultural Fair Inc.
- Morris Fork Crafts
- Mount Sterling-Montgomery County Industrial Authority
- Mountain Association for Community Economic Development
- Mountain Economic Development Fund Inc.
- Mountain Heritage Festival Committee Inc.
- Mt Sterling Main Street Program
- Mt Sterling Montgomery County Chamber of Commerce
- Mt Sterling Montgomery County Tourist Commission
- Mt Vernon-Rockcastle County Tourist Llc
- Munfordville Tourism Commission
- Natural Bridge Powell County Chamber of Commerce
- North Carolina Coal Institute Inc.
- North Side Community Council Inc.
- Northeast Kentucky Community Action Agency Inc.
- Olive Hill Area Chamber of Commerce
- Owen County Industrial Foundation
- Owingsville/Bath County Chamber of Commerce
- Owsley County Action Team Incorporated
- Paintsville Area Innovation Center
- Paintsville Main Street Association Inc.
- Paintsville Small Business Development Center
- Paintsville Tourism Commission
- Paintsville/Johnson County Chamber of Commerce
- Paintsville/Johnson County Industrial Development Authority
- Pathfinders of Perry County Inc.
- Pike County Tourism Commission



- Pike Industrial Development Economic Authority
- Pikeville City Tourism & Convention Commission
- Pikeville Main Street Inc.
- Pikeville Small Business Development Center
- Pine Mountain Community Development Corporation
- Pine Mountain Regional Industrial Development Association
- Pine Mountain-Letcher County Crafts Co-Op Inc.
- Pineville Main Street Program
- Pleasant Hill-Rattlesnake Ridge Community Development Club Inc.
- Powell County Industrial Development Authority
- Powell County Tourism Commission
- Prestonsburg Convention & Visitors Bureau
- Prestonsburg Industrial Corporation
- Pulaski County Fair Board Inc.
- Pulaski County Kentucky Industrial Development Authority Inc.
- Reedyville Rural Development Club
- Regional Technology and Innovation Center Inc.
- Richmond Chamber of Commerce Inc.
- Richmond Industrial Development Corporation
- Richmond Small Business Development Center
- Robertson County Tourism Commission
- Rockcastle County Chamber of Commerce
- Rockcastle County Development Board Inc.
- Rockcastle Industrial Development Authority
- Russell County Chamber of Commerce Inc.
- Russell County Industrial Development Authority
- Russell County Tourist Commission
- Russell Downtown Civic League Inc.
- Score-Ashland
- Score-Kentucky
- Score-London
- Score-Pikeville
- Small Business Development Center-Southeast Ky Community & Tech College-Middlesboro
- Somerset Small Business Development Center
- Somerset-Pulaski County Chamber of Commerce
- Somerset-Pulaski County Convention & Visitors Bureau
- Somerset-Pulaski County Development Foundation
- Southeast Kentucky Chamber of Commerce
- Southeast Kentucky Economic Development Corporation Inc.
- Southern & Eastern Kentucky Tourism Development Association Inc.
- Southern Kentucky Chamber of Commerce Inc.
- Southern Kentucky Vacations Inc.
- Stanford-Lincoln County Industrial Authority
- Stanford-Lincoln County Tourism
- Summer Motion Inc.
- Sustainable Berea Inc.
- The Ashland Main Street Program Inc.
- The Center for Rural Development
- The Elliott County Chamber of Commerce Incorporated
- The Kentucky Association of Fairs and Horse Shows Inc.
- The Kentucky Main Street Program
- The Tri-Cities Heritage Development Corporation Inc.
- Tompkinsville-Monroe County Chamber of Commerce
- Tri-City Chamber of Commerce Inc.
- Tri-Co Industrial Foundation
- United States Junior Chamber of Commerce
- University Center of the Mountains
- USDA Rural Development-Kentucky
- Vanceburg Renaissance

- Vanceburg-Lewis County Industrial Authority
- Vision Horse Cave Inc.
- Wayne County EZ Community Inc.
- Wayne County EZ Industrial Development Authority
- West Liberty Area Innovation Center
- West Liberty Kentucky Chamber of Commerce
- West Liberty-Morgan County Chamber of Commerce
- Western Kentucky University Small Business Development Center
- Whitley County Fair Board Incorporated
- Williamsburg Main Street
- Winchester & Clark County Industrial Development Authority
- Winchester Clark County Chamber of Commerce
- Winchester Labor Day Committee Inc.
- Wolfe County Economic Development Office
- World Chicken Festival Association Inc.

**What is the nature of the collaboration with each of these organizations?  
(Check all that apply)**

Share Information      Share Monetary/Material Resources      Send/receive referrals      Work on specific projects together      Co-attend events

**Which of these best describes the collaborative relationship between each of these organizations and your own?**

Formal      Informal      Formal and informal

**How important is each organization in the accomplishment of your organization's goals?**

Unimportant      Slightly important      Important      Very Important      Critical

**How satisfied are you with the collaboration with each organization?**

Dissatisfied      Somewhat dissatisfied      Neutral      Satisfied      Very satisfied

**How easy/difficult has it been working with each organization?**

Very difficult      Difficult      Neutral      Easy      Very easy

**Which best describes the frequency of interaction between each of these organizations and your own? (Think of online interaction as well)**

Daily      Weekly      Monthly      Quarterly      Only once this year

**19) How satisfied are you with your organization's current portfolio of partnerships/collaborations with other organizations?**

- Dissatisfied
- Somewhat dissatisfied
- Neutral
- Satisfied
- Very satisfied

**20) How might your organization's current portfolio of collaborations/partnerships be improved for the benefit of your organization?**

**21) Thank you, you are almost done. Is there anything else that you'd like to tell us about your organization's networks and partnerships that was not covered in this survey?**

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**22) What is your highest level of formal education?**

- 12th grade or less
- Graduated high school or equivalent
- Some college, no degree
- Associate degree
- Bachelor's degree
- Post-graduate degree

**23) What is your age (in years)?**

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**24) What is your gender?**

- Male
- Female
- Decline to respond

**25) What is your race?**

- Asian/Pacific Islander
- Black/African-American
- White/Caucasian
- Hispanic
- Native American/Alaskan Native
- Other/Multi-Racial
- Decline to Respond

**Thank You!**

**Thank you for taking our survey. Your participation is very important. If you have any questions about the study, please feel free to contact Dr. Walter Ferrier at [walter.ferrier@uky.edu](mailto:walter.ferrier@uky.edu).**

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