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Entrepreneurial Orientation, Collaborative Engagement, and Performance: Evidence From Rural Economic Development Organizations

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Abstract

This study examines the role of entrepreneurial orientation (EO) and collaborative engagement on the performance of rural economic development organizations. The authors theorize that an organization's EO and collaborative engagement, determined by levels of active engagement within a regional collaboration network, impact its ability to accomplish its goals, satisfy its stakeholders, and influence regional economic development. The authors' analysis of data from 98 collaborating economic development organizations operating in the economically distressed region of eastern Kentucky shows that EO and collaborative engagement are positively associated with performance. This study provides actionable insights for leaders of economic development organizations seeking to improve their operations.

Keywords

entrepreneurial orientation, collaboration, local economic development, performance

Rural counties are replacing inner cities as America's most troubled areas along a range of socioeconomic indicators (Adamy & Overberg, 2017; Porter et al., 2004). A decline of natural resource-based, extractive industries such as fishery, forestry, and coal mining, coupled with a relatively undiversified economic base and population loss, has left many rural regions distressed. Governments and for-profit companies are not the only organizations involved in local economic development efforts in rural regions. Indeed, there are several organizations that have an explicit mission to improve economic conditions in rural regions, including workforce training institutes, chambers of commerce, economic development agencies, tourism commissions, and microfinance institutions. We refer to these broadly as rural economic development organizations (EDOs). Recent work has examined the drivers of successful partnerships between these organizations (Ofem et al., 2018), but it leaves unexplored the strategic and relational antecedents of their performance. Thus, our guiding research question is, "What explains performance for rural EDOs?"

We define performance as the extent to which the EDO accomplishes its mission, obtains sufficient resources, satisfies key stakeholders, and influences rural prosperity. Entrepreneurship scholars commonly view entrepreneurial orientation (EO), a strategic proclivity to act entrepreneurially, as beneficial for for-profit organizations (see Wales, 2016, for a recent review). However, its effects in the context of nonprofit, public, and/or social enterprises have been mixed (Coombes et al., 2011; Morris et al., 2011). Although some researchers caution against the use of entrepreneurial strategies in these contexts due to threats of mission drift (Jones, 2007; Maier et al., 2016), others have noted that such a strategic orientation may help advance

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the organization's mission (Morris et al., 2007). This makes it timely to assess whether EO in EDOs enhances their performance.

In pursuing their social missions, rural EDOs operate in a highly resource-constrained environment (Billings & Blee, 2000; Eller, 2008). As such, they must especially rely on collaborations with one another to address their respective and collective interests (Green et al., 2002). Because greater interaction enhances reciprocal information and resource flow and increases an organization's coordinative capacity (Heide & Miner, 1992), we also investigate how collaborative engagement influences performance. We define *collaborative engagement* as the level of active involvement within a collaboration network for a given organization. By comparing the effects of both the quantity and activity of network partnerships, we provide evidence of the salient value of collaborative action, characterized by a greater frequency of interaction, for performance. In this respect, we provide much needed evidence on optimal network strategies for EDOs (Krebs & Holley, 2006).

We test our ideas using a sample of 98 EDOs in eastern Kentucky, one of the most persistently distressed regions in the United States, as shown in Figure 1 (Appalachian Regional Commission, 2020). By investigating the drivers of performance in this unique context, we hope to contribute knowledge of their optimal functioning, and in a modest way, to overall development efforts in the region (Compion et al., 2015; Ofem et al., 2018).

Entrepreneurial Orientation and Performance

EO has become one of the most widely used constructs in the field of entrepreneurship (Wales, 2016). EO measures an organization's strategic proclivity toward entrepreneurial action by the sustained demonstration of three underlying dimensions: innovativeness, proactiveness, and risk taking (Covin & Lumpkin, 2011). An organization's overall level of EO increases as the combined level of these three dimensions increases. As a way of organizing, these three dimensions provide the "mobilizing vision" for using knowledge-based resources to accomplish organizational objectives (Chirico et al., 2011, p. 308). EO boosts a variety of organizational outcomes because it fosters greater knowledge acquisition and integration (Kreiser, 2011). The entrepreneurial organization is more likely to capitalize and extract value from organizational learning, fueling cyclical complementarity between EO and the accumulation of knowledge-based resources (Wang, 2008; Wiklund & Shepherd, 2003). As the organization actively engages with its environment through the exploration activities associated with an entrepreneurial posture, it accrues market knowledge that facilitates organizational adaption to better meet market needs. Thus, organizational learning is a central mediating mechanism linking EO with organizational adaption and performance.

The theoretical utility of EO is increasingly recognized in the nonprofit, public, and social sectors (Covin & Wales, 2018). Although the theoretical underpinnings (i.e., entrepreneurial action) do not change in these contexts, concepts such as the accomplishment of a social mission, accountability toward a greater variety of stakeholders with diverse (and sometimes conflicting) needs, and the nature of performance do change (Lumpkin et al., 2013; Morris et. al., 2007). In the social sector, performance is based on the dual and synergistic accomplishment of both financial and nonfinancial social objectives. As such, in this study, we operationalize *performance* as the extent to which the EDO accomplishes its mission, obtains sufficient resources, satisfies its key stakeholders, and influences local economic development. This operationalization includes both social (i.e., mission accomplishment) and economic (i.e., resource acquisition) dimensions.

With respect to EO's first dimension, *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. Organizations exhibiting innovativeness tend to pursue new combinations of resources, knowledge, and practices that improve operations or offer a new basis to meet customer needs (Pearce et al., 2010). In the context of EDOs, which are focused on revitalizing their communities (Eller, 2008; Leigh & Blakely, 2013), a tendency to experiment and act creatively is likely to generate more innovative solutions in promoting local economic development. Creative solutions, characterized by original problem-driven insights (Mumford et al., 2012), represent a valuable strategic resource. These innovative ideas (e.g., new marketing campaigns for industrial recruitment, new business model competitions to promote entrepreneurship, new approaches to service administration) can more effectively promote economic vitality within communities.

Proactiveness captures the extent to which an organization can anticipate changes and opportunities in the environment, and act on them. In doing so, proactiveness enhances organizational learning and problem-based knowledge that can further refine creative ideas and solutions (Kollmann & Stöckmann, 2014; Wang, 2008; Zhao et al., 2011). For example, an organization might champion a new association to promote collaboration, and on feedback from participants, restructure

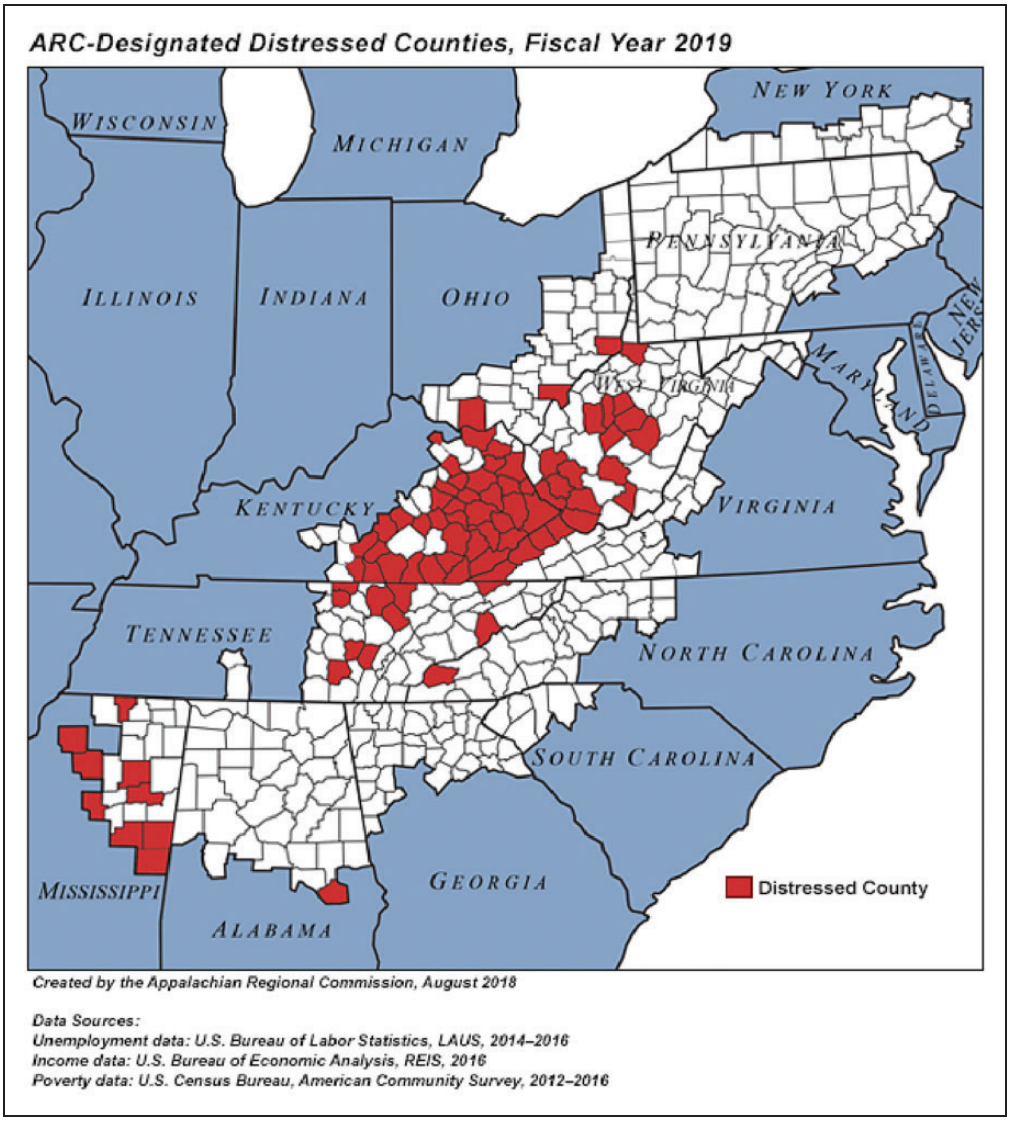

Figure 1. Distressed counties.

itself to better serve client needs. Such proactive action and the learning that results is inherent in the entrepreneurial processes that drive wealth creation (Harrison & Leitch, 2005), and congruent with the goals of local economic efforts. Consequently, proactiveness is likely to have a positive effect on 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 (Leigh & Blakely, 2013), organizations must take calculated risks to produce any sort of real change in their communities. In the social context, this dimension captures *social risk taking*, which involves the degree of tolerance in taking actions in pursuit of the social mission in an uncertain environmental and institutional milieu (Lurtz & Kreutzer, 2017). In the economic development context, risk taking is likely to support the other two EO dimensions of innovativeness and proactiveness by not letting environmental uncertainty constrain creative solution development and deployment.

Taken together, we believe these three dimensions of EO are consistent and mutually reinforcing. Given that poverty in Appalachia is pervasive and persistent, we theorize that EDO performance (i.e., economic and social) simultaneously requires high levels of *all three* EO dimensions. What good is being innovative if a given organization has only a weak and superficial

understanding of prior failures in its own (or others') attempts to improve the economic and social standing of the community (i.e., it does not proactively learn from the past, nor can it connect the dots in a new way)? Furthermore, a highly innovative EDO is likely to be ineffectual if it doesn't view, understand, and adjust to the risks of action (or inaction) in new, more nuanced ways.

In sum, organizations with higher levels of EO are more likely to generate innovative solutions, proactively take disruptive-type actions that differentiate them from their peers and take calculated risks in carrying out those actions. Organizations that encourage experimentation in employees act quickly, and lead new projects based on new ideas and bear the risk(s) in doing so should be more likely to accomplish their social purpose, satisfy relevant stakeholders, and influence local economic development. In rural areas with scarce human capital and financial resources (Snavely & Tracy, 2000), these entrepreneurial actions should be especially vital as organizations attempt to better accomplish their social objectives in a resource-constrained environment.

Hypothesis 1: Entrepreneurial orientation is positively associated with organizational performance.

Collaborative Engagement and Performance

In addition to EO, management research has established that collaborative partnerships are critical for performance (Arya & Lin, 2007; Gulati, 2007). Collaborative ties are related to access to material resources, information, and cooperative actions that better serve the goals of a focal organization (see Zaheer et al., 2010, for a review). Such ties serve as pipes through which resources flow and as bonds facilitating coordinative action (Borgatti & Halgin, 2011). More ties mean a focal organization should have access to more resources (e.g., information, money, status) and be able to coordinate more comprehensive types of projects that increase its performance.

Despite the competition, regional economic development goals such as resolving financial stress and reducing unemployment rates for the local economy require greater collaborative linkages and coordination between development organizations (Ha et al., 2016; Oh et al., 2014). Collaborative economic development networks arise from the necessity of cooperating at a regional level to coordinate solutions for the multifaceted, complex problem of local economic development. Rural development organizations in particular face greater constraints in their resource environment, which increases the value of resource sharing and collective action in tackling the development problem (Green et al., 2002). However, prior to the collection of these data, assessments of economic development planning processes in the region suggest that building network resources is consistently a low priority for official economic development agencies (Knight et al., 2009). If many of the leaders of these organizations place little emphasis on relationship building, the ones that do should be expected to reap larger gains and higher levels of performance.

In the economic development context, it becomes important to assess collaborative engagement in evaluating the extent and capacity of network resources. We define *collaborative engagement* as the total number of collaborative partnerships characterized by a high level of engagement and interaction for a given organization. Greater interaction enhances information flow, facilitates a richer exchange of knowledge, and increases an organization's coordinative capacity (Heide & Miner, 1992). We therefore theorize that collaborative engagement should be particularly important for organizations operating in the rural region of eastern Kentucky. Richer information exchange facilities enhanced market knowledge (e.g., new funding opportunities, corporate relocation proposals, promising local ventures to support) that an organization can exploit to achieve superior performance.

In addition, more frequent interactions between an organization and its partners are likely to engender trust (Gulati, 1995), a particularly vital strategic resource in the economic development arena. Since the economic development arena is highly competitive (Leigh & Blakely, 2013), development efforts can be riddled with distrust between EDOs. This creates a tension between the incentive to compete and the incentive to cooperate (Feiock et al., 2012; Lee et al., 2012). Indeed, an executive director of an organization in this study speaks of that tension: "We need to remove the barriers caused by competition that leads to fragmentation of efforts and wasting of resources. Collaboration and cooperation need to replace competition." Higher levels of trust forged through more frequent interactions with network partners are likely to facilitate more advantageous information and financial resource access and more efficient resource mobilization leading to higher levels of performance.

Furthermore, coordinative demands are often heightened in local economic development efforts due to the complex interdependence between businesses, employees, policy makers, and development practitioners (Leigh & Blakely, 2013). Organizations with greater involvement and engagement with their collaborative

partners should have a greater strategic capability to provide broader, more comprehensive solutions (e.g., multicounty training initiatives, marketing campaigns, policy advocacy, assistance to entrepreneurs, infrastructure development) to the local economic development problem. We therefore hypothesize the following:

Hypothesis 2: Collaborative engagement is positively associated with performance.

Method

Empirical Context

Eastern Kentucky is part of the Appalachian Region as defined by the Appalachian Regional Commission (2020). Although the term "Appalachia" was originally coined by urban journalists in the years following the Civil War, the term was revived in the 1960 s to describe the impoverished area surrounding the Appalachian Mountains (Eller, 2008). With the efforts of President Kennedy and the following work of President Johnson with his War on Poverty campaign and establishment of the Appalachian Regional Commission 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.

Despite decades of reforms and investments, eastern Kentucky remains an area especially beset by chronic poverty and economic distress. 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 (Billings & Blee, 2000; Eller, 2008). In addition, an overreliance on extractive industries, such as coal mining and logging, resulted in a relatively undiversified economic base that has made the region more vulnerable to external market forces (Eller, 2008). Rural EDOs within the region play a vital role in altering this troublesome trajectory (Compion et al., 2015; Ofem et al., 2018); however, they face especially difficult challenges. They operate in an environment of greater resource scarcity, a relatively undiversified economic base, and an economic and political history that has been slow to change.

Data Collection

The research team identified a preliminary set of organizations to include in the sample using a roster of members from the Growing Local Economies Network, an organization created to promote and facilitate collaboration among development practitioners in eastern Kentucky. The initial list was used as a starting point for identifying and bounding the population of EDOs in the region. We used a broad definition of local economic development to identify more organizations based on prior literature: the process by which local governments or community-based organizations seek to stimulate or maintain business activity and/or job creation (Leigh & Blakely, 2013). We also used 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). Utilizing the Internal Revenue Service public database on nonprofits that includes activity codes (Internal Revenue Service, 2011), the research team identified nonprofit organizations that met the criteria of promoting "social and economic wealth" for the people of eastern Kentucky. Such codes included community development, economic development, rural development, and workforce training (Internal Revenue Service, 2011). The extensive list was then vetted by the research team to include only those organizations that had activities targeted toward local economic development.

With the aid of the qualitative data provided by 16 semistructured interviews with experienced development practitioners in the region, we crafted an online survey to collect quantitative data on organizational and network characteristics. Three local experts and five graduate students pilot tested the survey, which resulted in a few minor revisions to improve item clarity. Once completed, we embedded the online survey in an introductory email to the final contact list of 203 EDO leaders. Each e-mail was personalized and addressed to the leader on a first-name basis. Most of the leaders had titles such as president, CEO, chair, or director, and were chosen due to their unique vantage point in offering information regarding their organizations. In addition to the online contact, formal letters were sent through U.S. mail on university letterhead to the organizations that did not respond to the online invitation; we also made phone calls to boost the response rate.

The final sample consists of 98 organizations, resulting in a response rate of 48%. We note that the response rate is a conservative estimate since many of the contacts could not be reached and/or existed only on paper. Included are representatives of 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 2013 survey instrument collected data on both organizational and network characteristics. The network variables were collected using a full roster method, in which participants saw a list of all the development organizations in the region, identified the ones they collaborated with during the previous year (i.e., 2012), and then answered more detailed questions about their organization's *current* assessments of each of their relationships. Given the wide range of activities that development organizations engage in and the many ways they collaborate (Leigh & Blakely, 2013), network partners were identified as organizations with which a focal organization collaborated along one or more of the following dimensions: material/monetary resource sharing, information sharing, sent/received referrals, and/or worked on specific projects together. Thus, the overall collaboration network is defined by a set of nodes (i.e., organizations) and ties (i.e., collaboration), where a tie exists if two organizations engaged in one or more of the abovementioned activities over the previous year.

Measures

Performance. The performance of social enterprises is always a matter of comparison, with multiple models and approaches to capture it (Herman & Renz, 2008; Sowa et al., 2004). In the context of EDOs, performance is best gauged through the achievement of both social and economic objectives. We therefore operationalized performance as a composite index based on four items that measure its various dimensions. The four items use the following five-item scale: *strongly disagree* (1), *moderately disagree* (2), *neutral* (3), *moderately agree* (4), and *strongly agree* (5). The first two items are based on the organization's ability to accomplish its stated goals (Bluedorn, 1980; Price, 1982; Rojas, 2000). The third item is based on the organization's ability to satisfy its dominant stakeholders (Clarkson, 1995; Connolly et al., 1980). The fourth item is based on the organization's ability to promote economic development in the region. These items reflect some of the dominant models of organizational effectiveness (see Cameron, 2005, for a review) and are based on perceptual performance, since EDOs often work on different pieces of the economic development problem with different missions (Leigh & Blakely, 2013). Table 1 includes the scale. The final performance index is calculated as the sum of scores for each of these four items. Cronbach's α for evaluating reliability across the items is .69.

Entrepreneurial Orientation. The EO scale is based on the most widely used nine-item unidimensional scale developed by Covin and Slevin (1989). This construct consists of three sets of items that capture the three EO dimensions (i.e., innovativeness, proactiveness, and risk taking). Given that the original scale was developed for an industry setting, the scale was adapted in consultation with development practitioners in a contextually appropriate manner. Table 1 includes the scale. Slight revisions in the scale included changing "business" to "organization," "employees" to "people within our organization," and "competitors" to "similar organizations." The scale for each item ranges from statements anchored *strongly disagree* (1), *moderately disagree* (2), *neutral* (3), *moderately agree* (4), and *strongly agree* (5). Example items include "Our organization continually seeks out new ways to do things," and "Our organization has a strong emphasis on both exploration and experimentation for new opportunities." The final EO measure is calculated as the sum of scores for each of the nine items, with a Cronbach's α of .90.

Collaborative Engagement. Collaborative engagement is measured as the total level of interaction between a focal organization and its set of collaborative partners. The frequency for a given collaboration ranged from 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). The sum of frequencies across all partners was calculated to create this measure. We took the natural logarithm of this variable to better approximate a normal distribution.

Controls

Organizational Age. Organizational age is measured as the total number of years since an organization's founding. Older organizations have more time to build relationships in their communities as well as more experience in accomplishing their missions. We take the natural logarithm to correct for skewness.

Organizational Size. Organizational size is measured as the total number of full-time employees. Although research on organizational size indicates that there are other ways to measure size (Josefy et al., 2015), nonprofit organizations tend to be more labor intensive than their for-profit counterparts (Oster, 1995). Thus, the total number of employees is an appropriate operationalization of the construct in our empirical context. Since some organizations had many employees, we take the natural logarithm to correct the skewed distribution of the variable.

Table 1 Entrepreneurial Orientation Scale and Performance Index.

Entrepreneurial orientation	
Risk 1	The term risk taker is considered a very positive attribute for people in our organization.
Risk 2	People working for our organization are very much encouraged to take calculated risks with new ideas.
Risk 3	Our organization has a strong emphasis on both exploration and experimentation for new opportunities.
Innovative 1	People within our organization actively introduce improvements and innovations in our organization.
Innovative 2	Our organization is very creative in its methods of operation.
Innovative 3	Our organization continually seeks out new ways to do things.
Proactive 1	People within our organization always try to take the initiative in every situation (e.g., in projects and when working with others).
Proactive 2	Our organization excels at identifying opportunities.
Proactive 3	People within our organization initiate actions to which other organizations respond.
Performance	
Effective 1	Our organization has been very effective in accomplishing our stated organizational goals over the past year.
Effective 2	Our organization has had plenty of resources in carrying out our organizational objectives over the past year.
Effective 3	The primary stakeholders of our organization have been very pleased with our performance over the past year.
Effective 4	Relative to other organizations in the region, our organization has been very influential in impacting economic development in eastern Kentucky.

Table 2. Summary Statistics and Correlations.

		M	*SD*	Minima	Maxima	1	2	3	4	5	6	7	8	9
1	Performance	10.56	2.85	3	16	1								
2	Organizational size (ln)	1.41	1.47	0	5.99	.31	1							
3	Organizational age (ln)	3.14	0.79	0.69	4.51	.06	.30	1						
4	Service area	12.5	19.6	1	54	.30	.41	.02	1					
5	Total services	7.29	4.19	0	17	.30	.21	.11	−.02	1				
6	Total funders	1.9	1.25	0	5	.09	.18	.08	.03	.38	1			
7	Network size (ln)	1.73	.92	0	46	.33	.44	.20	.31	.52	.25	1		
8	Entrepreneurial orientation	34.82	34.82	18	45	.54	.21	−.14	.24	.47	.25	.26	1	
9	Collaborative engagement (ln)	4.79	1.47	0	7.59	.37	.28	.15	.06	.40	.19	.53	.21	1

$p < .05$ if $|r| > .20$.

Service Area. Service area is a count measure of the total number of counties that the organization serves. Organizations that have a larger service coverage area could potentially have different resource needs and/or impact that could affect their levels of performance.

Total Services. We measured total services by the total number of different types of services offered by a given EDO. The number of services could be correlated with performance since more services might be indicative of more capabilities to tackle different aspects of the economic development problem.

Total Funders. We measured total funders as the number of different funding sources for each organization. This measure captures not only the possession of critical resources (i.e., financial capital), but the availability of alternative suppliers of those resources. The six funding sources include government funding, private contributions, commercial activities, special events, membership fees, and interest income.

Network Size. Network size is a count measure of the total number of collaborative partners of a given organization. Since network size could be indicative of access to more network resources and capabilities, it could potentially enhance performance (Shuai & Chmura, 2018). Since some organizations had a large number of ties, we took the natural logarithm of this variable to correct the skewness of the distribution.

Analysis

The analysis began with an examination and description of the collected data. We examined descriptive statistics to get a better sense of the nature of the organizations

and their characteristics. Prior to using hierarchical ordinary least squares regression to test our hypotheses, we tested for normality of the data and variables of interest to ensure that the traditional parametric tests of statistical analysis could be employed, which resulted in the log transformation of four variables (organization age, organization size, network size, and collaborative engagement), to better approximate a normal distribution. We also log transformed EO and the performance measure to facilitate intuitive interpretation. We then tested the two hypotheses with three statistical models using hierarchical regression. Model 1 includes only the controls. Model 2 adds EO and Model 3 is the full model. Tests for heteroskedasticity (i.e., White test and Breusch–Pagan/Cook–Weisberg test) show constant variance supporting the assumption of homoskedasticity.

Results

Table 2 reports the means, standard deviations, minima, maxima, and correlations of all the variables used in the analyses. Although the organizations in the sample are engaged in similar services, they come in a variety of forms with an even wider variety of organizational characteristics. Figure 2 summarizes the activities in which these organizations are engaged.

Table 3 shows the unstandardized coefficients of Models 1 to 3. According to the full model (i.e., Model 3), EO predicts performance at $p < .001$ ($b = .71$) and collaborative engagement predicts performance at $p < .01$ ($b = .05$). Since these variables and the performance measure are log transformed, they can be interpreted in terms of elasticity. A 1% increase in EO results in a 0.71% increase in performance, while a 1% increase in collaborative engagement results in a 0.05% increase in performance. Thus, EO and collaborative engagement are positively associated with performance for these organizations, with EO showing the stronger correlation.

Alternative Model Specifications and Robustness Checks

To further investigate the data and gain more empirical evidence, we considered two different sets of alternative model specifications. First, we explored three models that examine each facet of EO independently. Model 1 includes innovativeness, Model 2 includes risk taking, and Model 3 includes proactiveness. We kept them separate because they are highly correlated. Table 4 reports the results. As shown, proactiveness has the strongest correlation with performance, with a 1% increase in

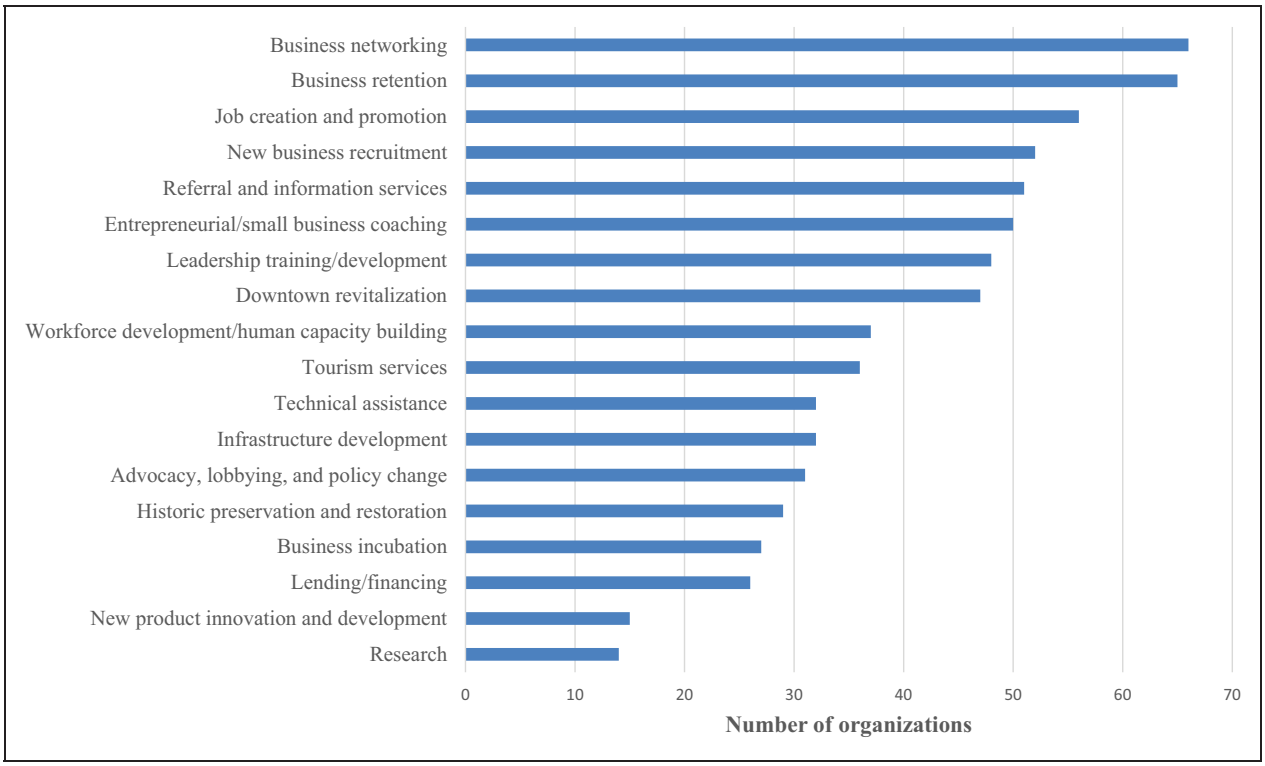

Figure 2. Economic development organization services.

Table 3. Predicting Performance.

	Model 1	Model 2	Model 3
Organizational size (ln)	0.04 (0.02)	0.03 (0.02)	0.03 (0.02)
Organizational age (ln)	0.00 (0.04)	0.04 (0.04)	0.03 (0.04)
Service area	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total services	0.08* (0.04)	0.01 (0.04)	−0.00 (0.04)
Total funders	0.00 (0.03)	−0.01 (0.02)	−0.01 (0.02)
Network size (ln)	0.01 (0.04)	0.02 (0.04)	−0.02 (0.04)
Entrepreneurial orientation (ln)		0.74*** (0.17)	0.71*** (0.17)
Collaborative engagement (ln)			0.05** (0.02)
Constant	2.20 (0.14)	−0.49 (0.65)	−0.58 (0.63)
F test	3.63**	6.25***	6.59***
R^2	.19	.33	.37
Adjusted R^2	.14	.27	.32

Note. $N = 98$. Standard errors are in brackets.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 4. Predicting Performance with EO's Three Dimensions.

	Model 1	Model 2	Model 3
Organizational size (ln)	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)
Organizational age (ln)	0.01 (0.04)	0.02 (0.04)	0.04 (0.03)
Service area	0.00 (0.00)	0.00 (0.00)	0.0 (0.00)
Total services	0.03 (0.04)	0.03 (0.04)	0.02 (0.03)
Total funders	−0.01 (0.02)	−0.01 (0.02)	−0.01 (0.02)
Network size (ln)	−0.02 (0.04)	−0.03 (0.04)	−0.03 (0.04)
Collaborative engagement (ln)	0.05* (0.02)	0.07 (0.02)	0.05 (0.02)
Innovativeness (ln)	0.21** (0.07)		
Risk taking (ln)		0.18** (0.07)	
Proactiveness (ln)			0.52*** (0.10)
Constant	1.57 (0.21)	1.60 (0.22)	0.92 (0.24)
F test	5.04***	4.62***	8.18***
R^2	.31	.29	.42
Adjusted R^2	.25	.23	.37

Note. $N = 98$. Standard errors are in brackets.
*$p < .05$. ** $p < .01$. ***$p < .001$.

proactiveness resulting in a 0.52% increase in performance. We note that the proactiveness model explains more overall variance ($R^2 = .42$) than the overall EO model ($R^2 = .37$), but EO has a stronger coefficient ($b = .71$).

Next, we ran our primary model (i.e., overall EO and collaborative engagement) on the four constituent items comprising the performance index. Table 5 reports four models corresponding to each item. We labeled each one corresponding to the key idea it seeks to measure (see Table 1 for the four items). Each one was log transformed prior to the analysis to facilitate intuitive interpretation. We see three notable observations: (a) EO has a positive and statistically significant association with all four items; (b) EO is most strongly associated with local economic development influence ($p < .001$; $b = .71$); and (c) collaborative engagement is associated with an EDO's ability to accomplish goals and secure resources, but not its ability to satisfy stakeholders and influence development efforts. These findings show additional support for the salient value of EO for these organizations.

Finally, since we log transformed our dependent and both independent variables prior to the analysis, we also conducted robustness checks with the untransformed variables (i.e., with performance and EO untransformed). We find consistent effects across these models, with EO ($b = .15$; $p < .001$) and collaborative engagement ($b = .40$; $p < .01$) both showing positive associations.

Table 5. Predicting Constituent Performance Items.

	Effective	Resources	Stakeholders	Influence
Organizational size (ln)	0.01 (0.02)	−0.01 (0.03)	0.02 (0.01)	0.03 (0.02)
Organizational age (ln)	0.03 (0.03)	0.04 (0.04)	0.00 (0.02)	0.00 (0.03)
Service area	0.00 (0.03)	0.00 (0.00)	0.00 (0.00)	−0.00 (0.00)
Total services	0.02 (0.03)	−0.01 (0.04)	0.01 (0.02)	−0.01 (0.03)
Total funders	−0.03 (0.02)	−0.01 (0.03)	−0.01 (0.01)	0.01 (0.02)
Network size (ln)	0.00 (0.03)	−0.02 (0.05)	−0.01 (0.02)	−0.02 (0.04)
Entrepreneurial orientation (ln)	0.26* (0.12)	0.45* (0.21)	0.36** (0.10)	0.54** (0.15)
Collaborative engagement (ln)	0.03* (0.02)	0.05* (0.03)	0.02 (0.01)	0.03 (0.02)
Constant	0.43 (0.45)	−0.57 (0.77)	0.22 (0.38)	−0.54 (0.15)
F test	3.79***	2.14*	5.33***	3.45**
R^2	.25	.16	.32	.24
Adjusted R^2	.19	.09	.26	.17

Note. $N = 98$. Standard errors are in brackets.
*$p < .05$. **$p < .01$. ***$p < .001$.

Thematic Analysis

Our survey instrument included two open-ended questions pertaining to improving each organization's performance. We collated and organized these responses thematically and report them in Table 6. Overall, these responses provide qualitative evidence of the perceived importance of collaboration, the constraints of resource scarcity, and the need to be proactive in gaining knowledge about the activities of peer organizations.

Discussion

In this study, we investigate how the entrepreneurial orientation and collaborative engagement of EDOs affect performance. Our study provides valuable *midrange theory* that utilizes context-specific theorizing to explore these drivers of performance in the context of rural development organizations operating in the rural region of eastern Kentucky, an area in need of new, innovative, and revitalizing solutions (Lowrey, 2014; Weick, 1989). EDOs in the region work to generate and administer those solutions, and this study identifies two key drivers of performance. We find that EO has a positive correlation with the performance of development organizations, demonstrating EO's benefits outside of the often-studied for-profit arena (Morris et al., 2011; Pearce et al., 2010). That association is explained by our theorizing that EO is likely to result in strategic resources and capabilities (e.g., new solutions, market knowledge) that enhance performance. Our findings may help reconcile the inconsistent correlations observed between EO and social enterprise performance by demonstrating the importance of context (Coombes et al., 2011). The EO performance link must be unpacked in light of the contextual environment in which it is studied and universal claims of EO's benefits should be tempered with conditional statements of contingent effects.

We also find a positive correlation of collaborative engagement, characterized by high levels of interaction with collaborative partners, with the performance of EDOs. That effect is explained by our theorizing that ties characterized by greater activity are likely to engender trust, richer information exchange, and more complex coordination that are of increased strategic value in local economic development efforts. In contrast to network size, which we find has no effect, collaborative engagement explains an additional 4% of the variation in performance. We encourage future researchers to explore and use this construct in their work.

Limitations and Future Research

This study has a few limitations. The data used to test the theoretical framework and hypotheses are cross-sectional, which makes it more difficult to empirically assert directions of causality. Another limitation is the threat of common method variance (CMV) since our data are based on a single source. However, we took steps a priori in the survey design to reduce the impact of CMV. At the outset of the survey, we communicated to respondents that their individual responses would be aggregated, coded, and kept strictly confidential. Assurances of anonymity reduce the likelihood of social desirability bias (Dillman, 2011). Additionally, the items for the core constructs (e.g., EO and collaborative engagement) used different scales and were presented in a different sequence within the survey, further reducing the risk of CMV (Chang et al., 2010).

In addition to work that collects longitudinal data to better tease out causality, we also see an opportunity to

Table 6. Thematic Analysis.

Theme	Quote	Position of respondent
Importance of collaboration	"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
	"We are always looking for new organizations to partner with to improve our service offerings."	Executive director
Limited resources	"We only have an annual budget of $8000 a year total. We actually do a lot 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
	"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
Improving collaboration	"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 barriers caused by competition that leads to fragmentation of efforts and wasting resources. Collaboration and cooperation need to replace competition."	Director

apply our model to urban settings. Future research could fruitfully apply our approach to identify, bound, and study EDOs in urban settings to see if these key cofactors of performance persist.

Conclusion

This study investigates the factors associated with the performance of EDOs operating in one of the most persistently distressed regions in the United States. We theorize that two organizational properties, EO and collaborative engagement, are especially important and test our ideas on a unique sample of 98 EDOs. Our findings suggest that an organizational proclivity toward entrepreneurial action is particularly beneficial for helping these organizations perform better. In addition, of EO's three dimensions, proactiveness (i.e., actively seeking and acting on new opportunities) has the strongest correlation with performance. We also provide initial quantitative and qualitative evidence that points to the importance of vibrant partnerships, characterized by active engagement, in promoting goal

accomplishment. We hope our work stimulates additional research combining entrepreneurial and network theorizing to better understand the performance of organizations on the front lines of wealth creation, particularly in contexts where entrepreneurial and collective efforts of multiple actors are aimed (or not) at solving endemic economic maladies.

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