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Journal of Business Venturing

journal homepage: www.elsevier.com/locate/jbusvent

Enhancing measures of ESE to incorporate aspects of place: Personal reputation and place-based social legitimacy

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ARTICLE INFO

JEL classification:

O31

O350

Keywords:

Entrepreneurial self-efficacy
Place-based entrepreneurship
Urban/rural divide
Relational context
Community respect

ABSTRACT

We argue that existing measures of entrepreneurial self-efficacy (ESE) are underspecified in the context of tight-knit communities, where personal reputation plays a major role. We propose a new place-based ESE dimension that measures assessment by individuals of their ability to elicit respect from their community. This integral ESE component points to the very meaning of entrepreneurship in highly relational contexts. Although our enhanced ESE measure incorporates some influences of place, other aspects, such as geographical context, continue to moderate the relationship between ESE and entrepreneurial aptitude. We conclude with a discussion of the relevance and utility of this enhanced measure.

Executive summary: Scholars have invested considerable energy in understanding the motivations and practices of high-growth entrepreneurs and urban ecosystems, where business interactions tend to be impersonal and transactional. Most entrepreneurial measures assess either individual characteristics or place-based characteristics. Rural areas or developing regions, where entrepreneurs may be the best hope for revitalization (Sarasvathy, 2008), operate according to cultural principles that are different from those of “high-performance” entrepreneurial ecosystems, and they remain understudied. We argue that in such resource-constrained, tight-knit communities, some important factors in the creation of a venture will jointly depend on place and individual—measuring the fitness of individuals in their community. In such environments, the belief of individuals in their ability to gain a positive reputation within their local community to advance their new enterprise is among the decisive factors for the venture creation process. We develop a measure of such beliefs.

We enhance measures of entrepreneurial self-efficacy (ESE) to account for the confidence of individuals in their ability to fit within their community. ESE is the belief of an individual about his or her ability to perform the various tasks and roles required of a venture creator, which has been shown to be the most robust predictor of entrepreneurial actions and success. Current measures of ESE are place-agnostic; they assess a person's self-efficacy relative to general business activities, such as marketing, innovation, and so forth. However, some features of place have integral effects on ESE beliefs and act as neither antecedents nor moderators. We argue that a perceived ability to navigate complex social networks within the relevant community is a core component of ESE. How people see themselves in relation to their local community—and how they believe others see them—is central to how they think about their entrepreneurial potential. We propose a new ESE dimension that evaluates the fit between an individual and a place by measuring the confidence of an individual in their ability to elicit respect from the community

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<https://doi.org/10.1016/j.jbusvent.2020.106004>

Received 14 September 2018; Received in revised form 4 February 2020; Accepted 10 February 2020
0883-9026/ © 2020 Published by Elsevier Inc.

(ERC). We expected ERC to be most relevant in small, tight-knit, and indigenous communities defined by social hierarchies (e.g., rural), where reputable individuals are better positioned to employ resources embedded in that place to benefit their enterprise.

We developed a new ESE dimension that quantifies ERC beliefs. In doing so, we followed the established protocol (Furr, 2011; Hinkin, 1995). We derived an initial pool of items from existing literature (Chen et al., 1998; De Noble et al., 1999; McGee et al., 2009), enhanced this pool based on semistructured interviews with 23 rural residents with a history of self-employment, finalized the item pool based on feedback from eight experts, administered a large-scale survey of 1481 Kentucky residents (established, nascent, and non-entrepreneurs; approximately half of whom were from rural areas), derived the scale structure using exploratory and confirmatory factor analyses, and examined its reliability and validity. Contrary to our expectations, we found that the enhanced ESE scale converged to the same structure in both rural and urban subsamples, which indicates that ERC is a unique dimension of ESE in both settings.

Although our enhanced ESE measure incorporates some components of place, we show that other aspects, such as urban or rural context, continue to moderate the relationship between ESE and entrepreneurial aptitudes. For instance, the urban/rural moderates ERC's impact on individual propensity toward business risk-taking (BRT). In urban areas, as expected, the relationship between ERC and BRT was positive and monotonic. In rural areas, however, the relationship had an inverse U-shape, which may reflect the problem of over-embedding: whereas those who are embedded in their communities may be more likely to pursue entrepreneurship, a high level of community embeddedness could discourage venture creation. Overall, our results suggest that some common measures of entrepreneurship may be underspecified for small-world, relational environments. Many of these environments have been left behind by uneven development and thus could benefit from a research-based understanding of how to foster entrepreneurial activity and innovation.

1. Introduction

Recent scholarship has reinvigorated the debate about place and how it influences entrepreneurship. This new body of literature examines entrepreneurial ecosystems and the complex, multidirectional interactions between their social and economic components (Isenberg, 2010; Julien, 2008; Kibler et al., 2015). Using a place-based framework brings to light the various ways that aspects of place influence entrepreneurship as well as the impact of personal characteristics on individual responses to local environments (Pret and Carter, 2017). This research specifically highlights rural ecosystems that have been underrepresented in the literature. The consideration of place helps us understand more fully the specific challenges and opportunities facing these communities.

We argue that some features of place have integral effects on the individual's entrepreneurial abilities and beliefs and act as neither antecedents nor moderators. Consider relational societies where personal reputation is paramount, such as rural communities characterized by tight-knit interpersonal relations and rigid norms. In such contexts, a perceived ability to navigate complex social networks is internal to what it means to be an entrepreneur and is key to creating a successful venture. This confidence is likely to depend both on the environment and on the individual's personal characteristics and life experiences (Balfour, 2017; Granovetter, 1985; Jack and Anderson, 2002). It has been shown that an entrepreneur's attachment to place and their social legitimacy influence their economic ambitions (Giuliani, 2003; Kibler et al., 2015; McKeever et al., 2015). In a resistant social environment, an esteemed community member may be able to push through an unconventional innovation or draw a steady stream of local customers and community support that another with a lesser reputation cannot (Hoang and Antoncic, 2003; Kim and Aldrich, 2005; Ruef, 2000).

How people see themselves in relation to their local community—and how they believe others see them—is central to how they think about their entrepreneurial potential. These perceptions are neither exclusively place-based nor individual; the interaction of an individual's characteristics with a specific community is unique. Some measures related to entrepreneurship may be underspecified because they ignore this important person–place interaction, which may provide a truly important addition in some contexts (rural), whereas in other contexts (urban) current place-agnostic measures may be sufficient.

1.1. Entrepreneurial self-efficacy and place

Entrepreneurial self-efficacy (ESE), or the beliefs of an individual about their ability to perform the various tasks required of a venture creator, plays a central role in entrepreneurial motivation (Krueger and Dickson, 1994). In short, individuals who do not believe they can perform these critical tasks are unlikely to engage in entrepreneurial activities (Boyd and Vozikis, 1994; Chen et al., 1998; De Noble et al., 1999; Newman et al., 2019; Zhao et al., 2005). Current measures of ESE do not incorporate information about place; they instead assess a person's self-efficacy relative to general business activities, such as marketing, innovation, and so forth (see Chen et al., 1998; De Noble et al., 1999; McGee et al., 2009). However, some components of place have been incorporated in the study of ESE as key antecedents or moderators (Hopp and Stephan, 2012; Luthans and Ibrayeva, 2006). Research has shown that aspects of the cultural or institutional environment influence ESE (Newman et al., 2019), and that the effect of ESE on entrepreneurial aptitudes, actions, and outcomes can also be moderated by place. For example, ESE has a stronger positive impact on firm

performance in dynamic and competitive environments than in contexts where there is little competition (Cumberland et al., 2015; Hmieleski and Baron, 2008). In environments where entrepreneurship is regarded as a legitimate occupation, ESE is a weaker predictor of firm performance (Klyver and Thornton, 2010) than in environments that are less accepting of entrepreneurship.

Personal characteristics, such as place-specific knowledge or experience, can be key to navigating the challenges idiosyncratic to a particular entrepreneurial ecosystem. Place-based embeddedness not only allows the entrepreneur to draw resources and support from the community but also strengthens their confidence in their ability to locate the support necessary for any possible contingency. Thus, this embeddedness in place and culture may be central to how the individual perceives their potential for success. We propose a new dimension of ESE that evaluates the fit between an individual and a place by measuring the individual's own assessment of their ability to elicit respect from the community (ERC). We argue that ERC is a critical resource for venture creation in certain contexts and that some individuals have more confidence in their abilities to garner respect than others do. Such a component is likely to complement existing measures of ESE that focus on the skills necessary to execute specific business functions. Both are likely to play key and distinct roles in the decision to engage in a venture.

1.2. Entrepreneurial self-efficacy measures

The concept of self-efficacy was first applied to the study of entrepreneurship in the early 1990s (Boyd and Vozikis, 1994; Krueger and Dickson, 1994). Early ESE scales focused on the beliefs of individuals about their ability to use their managerial, functional, and technical skills to develop a business venture (Chandler and Jansen, 1997). The most recent ESE scales are grounded in an understanding of the distinct stages of an entrepreneurial project (Stevenson and Gumpert, 1985; Stevenson et al., 1989). McGee et al. (2009) identified five critical constructs for inclusion in an ESE measure: (1) Searching, (2) Planning, (3) Marshalling, (4) Implementing-People, and (5) Implementing-Financial. De Noble et al. (1999) proposed a sixth construct: Coping with Unexpected Challenges. Moberg (2013) subsequently combined items from previous ESE scales that had strong empirical support (Chen et al., 1998; De Noble et al., 1999; McGee et al., 2009) and reworked each item to eliminate technical jargon and to include neutral wording. The result was a multidimensional scale with a high level of convergent, discriminatory, and nomological validity. For our enhanced ESE scale, we built on this prior work and incorporated the effects of a perceived fit between an individual and a place by measuring the individual's assessment of their ability to elicit respect from the local community.

1.3. Urban versus rural setting

Knowing how to be recognized as a person worthy of respect and trust may be particularly consequential for entrepreneurs who operate in tight-knit, relational settings. Sociological theories have differentiated between rural and urban contexts, as the “modern city” brought a host of new phenomena: immigration, cultural mixing, wage employment, the division of labor, intergroup conflict, ethnic clustering, density, rapid growth, and urban poverty. Weber (1930) introduced the theory of rationalization, or the abandonment of social ties based on personal reputation for those based on transactional elements (e.g., a person's formal professional title, social status, or employer). This is the difference between trusting one's neighbor because of their family's good name and giving personal information to a stranger over the phone because they are an agent for one's bank. Simmel (1903/1971) referred to rational relations as a protective organ, as humans cannot possibly invest emotionally in the thousands of simultaneous personal relationships that would otherwise be necessary.

Relying on rationality over reputation simplifies urban life while providing sufficient anonymity to engage in business ventures without fear of reputational damage. Paired with Weber's (1930) observation that urban centers have a cultural proclivity toward productivity and prosperity, it is little wonder that growth-oriented entrepreneurship is often viewed as an urban phenomenon. By contrast, “folk” societies (Becker and Myers, 1942; Redfield, 1947) are held together by relations that are reinforced by traditions, a sense of history, religious rites, and knowledge of one's neighbors. These societies gravitate toward normative conformity rather than toward the diversity and innovation found in many urban areas. Unless venture creators know how to navigate these tight-knit relations in ways that benefit their enterprise, such relations can effectively suppress entrepreneurship (Chitsike, 2000; Muhammad et al., 2017). The self-efficacy of an entrepreneur cannot be viewed in isolation from the environment in which they operate. ESE measures need to be tailored to the ways that the very meaning of entrepreneurship changes between anonymous transactional and tight-knit relational contexts.

1.4. Development of the ERC construct

We expand on an existing ESE scale by developing a new dimension that quantifies beliefs about ERC. We derived this new construct by drawing from interviews and surveys with established, nascent, and non-entrepreneurs from urban and rural parts of Kentucky. In the following section we describe the scale-development process. In short, we begin with scale items already suggested by the literature. Through a set of interviews with entrepreneurs, we expand this list and then refine it using the feedback from a focus group of regional experts in entrepreneurship. We then administer the resulting scale of 30 items to a large sample of Kentucky residents, which oversamples those engaged in venture creation. Exploratory factor analysis (EFA) is performed on half the dataset, identifying five stable and distinct constructs drawn from 24 scale items; six ESE items are eliminated during this process. Confirmatory factor analysis (CFA) is performed on a holdout half of the dataset, it verifies a five-factor structure of the scale; seven additional items are eliminated. Validation tests are conducted to determine reliability, discriminant validity, known group validity, and nomological validity.

After constructing an enhanced ESE scale, we proceed to test for potential differences in the ESE scale structure and ESE relationship to entrepreneurial propensities (measured by a business risk-taking [BRT] scale) between rural and urban subsamples from our survey data. We find that the enhanced ESE measure and component constructs are valid and reliable in both urban and rural settings. However, we find that the relationships between ESE and BRT are substantively different in rural and urban contexts. This result is seen in two analyses. First, we find that the urban/rural contingency significantly moderates the relationship between an ESE measure that excludes ERC and BRT. This moderation effect is not significant when ERC is included—suggesting that ERC accounts for some of the difference in entrepreneurial motivation between rural and urban respondents. Second, we find differences in relationships between ERC and BRT in urban and rural settings. In urban settings, there is a monotonic relationship between ERC and BRT (individuals with higher ERC are more willing to take risks associated with venture creation). In contrast, in rural areas we find an inverse-U-shaped relationship, suggesting that those with the greatest confidence in their ability to elicit respect from the community may be reluctant to leverage that respect in taking business risks.

Our work demonstrates that ERC is a distinct but integral dimension of ESE that is valid in both urban and rural contexts. Although our enhanced ESE measure incorporates some components of place, we show that other aspects, such as urban/rural contingency, continue to moderate the relationship between ESE and entrepreneurial aptitudes. We conclude with a discussion of the utility of this enhanced measure and avenues for future research. Our results suggest that some common measures of entrepreneurship may be underspecified for small-world, relational environments. Many of these environments have been left behind by uneven development and thus could benefit from a research-based understanding of how to foster diverse, productive entrepreneurial activity and innovation.

2. Scale development

To enhance the ESE scale by adding a new dimension, ERC, we followed established scale-development procedures (Furr, 2011; Hinkin, 1995); details are in Supplementary Appendix 1.

2.1. Initial pool of items

The initial pool of 26 items was drawn from prior studies (Chen et al., 1998; De Noble et al., 1999; McGee et al., 2009). We used neutral wording (Moberg, 2013). As detailed above, the ESE factors were previously grouped into six constructs: (1) Search/Innovation, (2) Planning/Management, (3) Marshalling, (4) Human Resource Management, (5) Financial Literacy, and (6) Managing Uncertainty. The new ERC items were initially derived from semistructured interviews (see below) and then refined based on feedback from a focus group of entrepreneurial experts.

2.2. Interviews and a focus group

We conducted semistructured interviews with a small group of (mostly rural) Kentucky residents to learn about their ESE beliefs and the role that their local community and social structure played in the entrepreneurial process. During the interviews, participants repeatedly mentioned the importance of developing community connections and of being seen as a trustworthy, respected member of the community, which enabled them to manage the ever-changing circumstances of establishing a new business in a tight-knit locale (see Supplementary Appendix 1). For example, a man who had successfully changed local liquor laws to accommodate his new vineyard noted, “My family has been here since the late 1800s, and we have been a strong, successful farm family that owned land. ... People know that we have always worked hard and have been successful and treated people well. So that did get me some votes—heck yeah!” In contrast, another rural respondent did not feel confident that he could navigate the local social structure; thus he did not start a new business there. He explained, “It’s far too rural here and we are definitely outsiders ... and votes count! [There] are major roadblocks that are systemic to rural [communities].” Based on our analysis of these interviews, we developed nine items for a new ESE construct, ERC. Our initial pool thus expanded to 35 items (see Fig. S1).

To assess whether our format and framing of items were appropriate (Hinkin, 2005), we conducted a focus group with eight members of a statewide entrepreneurship program. We used their feedback to refine the instrument (see Supplementary Appendix 1), which resulted in an ESE scale consisting of 30 items. Six ERC items sought to measure respondents’ confidence that they could earn a reputation as a reliable and hardworking person, be seen as committed to the community, be respected, and create strong social ties within the community. The resulting scale was included in a large-scale survey; the data were analyzed to determine scale structure, reliability, and validity.

2.3. Large-scale survey

During the period 2013–2014, we sent our survey to 12,000 Kentucky households from 79 of Kentucky’s 120 counties (56 rural farming counties, 12 rural mining counties, and 11 urban counties; counties were classified based on the US Department of Agriculture’s Rural-Urban Continuum Codes). Addresses were obtained from USADATA. The sample included individuals from diverse socioeconomic backgrounds. For each occupation category of interest (self-employed, farming, neither self-employed nor farming), a random address list for the sample area was generated in order to be representative of the distribution of occupation by county. In addition to the ESE items, the survey included a series of questions about entrepreneurial aptitudes and experience. This enabled us to examine the external validity of the enhanced ESE scale and to test whether the structure of the scale, as well as the

relationship between ESE and entrepreneurial behavior, differed across rural and urban contexts. The size and diversity of our sample distinguishes this research from other ESE scale-development endeavors, thus increasing the generalizability of our findings. However, since our data came from a single survey conducted in a poor, rural US state, our results may be subject to a common method bias (Podsakoff et al., 2003).

The completed surveys were returned by 1481 residents (12.3% response rate); 1402 were usable for the planned analyses. Respondents' ages ranged from 14 to 94 years (mean = 55 ± 0.4); 67% were females; 41% lived in rural counties; 54.4% had no business experience, 19.2% had started a business in the past, 22.2% were running a business now, and 4.2% were in the process of starting a new business. Income ranged from less than \$20,000 to more than \$160,000; education ranged from less than high school to a graduate degree. Responses to all 30 ESE items were well distributed in our sample (see Supplementary Appendix 2). To ensure independence of analyses, we conducted EFA on half the sample and CFA on the other half. We matched subsamples for EFA ($N_E = 701$) and CFA ($N_C = 701$) on demographic characteristics.

2.4. Scale construction

2.4.1. Exploratory factor analysis

We used EFA with Principal Axis Factoring and Promax rotation with Kaiser Normalization to determine a factor structure and loadings. Principal Axis Factoring is more effective than Maximum Likelihood Factor in uncovering weaker factors (De Winter and Dodou, 2012) and thus was preferable for this exploratory step. We selected Promax rotation because we expected the ESE constructs to correlate (Tabachnick et al., 2007). We performed EFA on the EFA subsample, with standard diagnostics indicating the suitability

Table 1
Exploratory factor analysis (five-factor model): ESE item loadings.

Item	Description	Pooled (N = 701)					Urban (N = 744)					Rural (N = 559)				
		ERC	CP	MHR	FL	MU	ERC	CP	MHR	FL	MU	ERC	CP	MHR	FL	MU
27 m	Committed	0.91	0.02	-0.04	-0.04	0.02	0.92	0.09	-0.04	0.02	-0.10	0.91	-0.02	0.08	-0.10	-0.02
34	Reliable	0.82	0.23	-0.16	0.04	-0.05	0.81	0.16	-0.18	0.01	0.06	0.89	0.15	-0.20	0.06	-0.03
35 m	Hardworking	0.74	0.04	-0.04	0.04	0.07	0.79	0.01	-0.03	0.03	0.05	0.73	0.11	-0.18	0.07	0.14
28	Respected	0.70	0.18	-0.02	0.04	0.01	0.63	0.12	-0.03	0.08	0.12	0.79	0.10	0.00	-0.01	-0.02
5a	Creative ways	0.03	0.94	0.06	-0.12	-0.08	0.07	0.80	0.03	-0.14	0.06	0.05	0.86	0.01	-0.07	0.04
5b	Limited resources	0.01	0.91	-0.04	-0.07	-0.02	0.03	0.80	-0.05	-0.06	0.07	0.04	0.87	-0.07	-0.09	0.06
7 m	Goals	0.16	0.62	0.11	0.10	-0.12	0.01	0.74	0.15	0.08	-0.15	0.08	0.60	0.16	0.21	-0.17
8	Design a plan	0.03	0.61	0.10	0.14	-0.01	-0.07	0.72	0.22	0.14	-0.15	-0.03	0.52	0.22	0.30	-0.10
1 m	New ways	-0.02	0.59	0.11	0.05	0.14	0.03	0.47	0.10	-0.05	0.30	-0.01	0.50	0.05	0.19	0.16
12a	Be decisive	0.02	0.52	0.09	-0.02	0.17	0.04	0.44	0.08	0.05	0.17	-0.05	0.40	0.35	-0.10	0.23
3	Think outside the box	0.06	0.48	0.21	-0.12	0.18	-	-	-	-	-	-	-	-	-	-
22 m	Recruit	-0.01	0.11	0.84	0.06	-0.17	0.06	0.05	0.61	0.11	0.03	-0.03	0.01	0.86	0.09	-0.07
25 m	Motivate	0.08	-0.02	0.70	0.01	0.12	0.05	-0.07	0.41	-0.02	0.53	0.10	-0.09	0.38	0.22	0.30
23	Delegate	-0.02	0.17	0.66	-0.04	0.02	0.04	0.11	0.38	0.07	0.22	0.12	0.03	0.66	-0.04	0.04
10	Form partnerships	0.02	0.24	0.66	-0.17	-0.05	-0.01	0.30	0.62	-0.14	-0.05	0.00	0.17	0.73	-0.22	0.04
9	Right team	-0.07	0.16	0.64	0.00	0.14	-0.06	0.18	0.55	0.06	0.18	-0.03	0.05	0.47	0.06	0.33
26	Train	0.05	-0.01	0.64	0.03	0.17	0.07	0.00	0.37	-0.04	0.49	0.15	-0.06	0.27	0.26	0.27
11	Network	0.05	0.11	0.50	0.00	0.09	0.11	0.06	0.40	-0.05	0.23	0.02	0.04	0.61	0.07	-0.04
19	Control costs	0.02	0.03	-0.01	0.88	0.00	0.08	-0.06	-0.08	0.87	0.08	-0.01	0.05	-0.11	0.86	0.07
17	Fin. statements	0.08	-0.16	-0.13	0.86	0.14	0.02	-0.09	-0.05	0.80	0.08	-0.02	-0.06	-0.07	0.81	0.11
20	Estimate budget	-0.09	0.34	0.20	0.62	-0.22	-0.07	0.25	0.13	0.68	-0.12	-0.04	0.26	0.23	0.62	-0.24
15 m	Uncertainty	0.03	0.12	-0.08	0.10	0.77	-0.03	0.09	-0.06	0.10	0.78	-0.02	0.21	-0.09	0.12	0.69
13 m	Change	0.02	-0.02	0.13	-0.01	0.76	-0.02	0.01	0.00	-0.05	0.84	0.02	-0.01	0.02	-0.05	0.88
16	Pressure	0.00	0.09	0.21	0.01	0.54	-0.04	0.19	0.04	0.03	0.59	-0.01	0.09	0.08	0.05	0.68
6 m	Manage time	0.09	0.30	0.20	0.13	0.15	-	-	-	-	-	-	-	-	-	-
31	Social ties	0.64	-0.20	0.44	-0.01	-0.05	0.69	-0.15	0.39	-0.04	-0.06	0.73	-0.11	0.30	-0.05	-0.07
29 m	Involved	0.53	-0.25	0.55	-0.01	0.00	0.62	-0.16	0.49	-0.04	-0.09	0.52	-0.17	0.40	0.00	0.03
24 m	Relationships	-0.05	0.05	0.33	0.32	0.24	0.01	-0.09	0.13	0.14	0.63	0.13	-0.09	0.05	0.48	0.32
18 m	Fin. problems	-0.03	0.40	0.06	0.26	0.12	-	-	-	-	-	-	-	-	-	-
14	Persist	-0.02	0.53	-0.06	-0.04	0.42	0.05	0.48	-0.08	0.00	0.38	-0.01	0.50	0.07	-0.06	0.36
	KMO index	0.96					0.96					0.96				
	Bartlett's test for sphericity															
	χ^2	17,927					16,120.9					13,151.3				
	df	435					378					378				
	p-Value	< 0.001					< 0.001					< 0.001				

In **bold** are significant factor loadings; ERC = Eliciting Respect from Community; CP = Creative Planning; MU = Managing Uncertainty; MHR = Marshalling HR; FL = Financial Literacy.

of our data for detection of ESE structure (Bartlett's test for sphericity $\chi^2(435) = 17,927, p < 0.001$; KMO index = 0.96). One Planning item, one Marshalling item, one Financial Literacy item, one Managing Uncertainty item, and two ERC items ("get involved in community activities" and "create strong social ties with community members") were omitted after the first round of analyses because of low or multiple loadings (see Table 1), which left 24 items (see Supplementary Appendix 3 for details).

The EFA results revealed that, as in De Noble et al. (1999) and Moberg (2013), Financial Literacy and Managing Uncertainty are stable and distinct constructs. In contrast to McGee et al. (2009) and De Noble et al. (1999), two Planning/Management items loaded together with the four Searching/Creativity items and one Managing Uncertainty item into a construct that we named Creative Planning. Marshalling and Human Resources items also factored together into a construct that we named Marshalling HR. Four ERC items, as predicted, composed a new, separate construct.

2.4.2. Confirmatory factor analysis

We conducted CFA using AMOS 24 on the second subsample ($N_c = 701$) to validate the factor structure found during EFA (Anderson and Gerbing, 1988; Bollen, 1989). AMOS 24 software provides modification indices that inform how the model may be altered to improve the fit (AIC, χ^2 , CMIN/DF): following those, we excluded four items from Creative Planning and three items from Marshalling HR because they were identified as repetitive or as not exclusively related to the constructs (see Supplementary Appendix 4). CFA resulted in $\chi^2(109) = 375.8$ ($p < 0.001$) and revealed a good model fit (CFI = 0.97, CMIN/DF = 3.45 with $N = 701$, RMSEA = 0.059). The Hoelter's Critical $N = 251$ (at $p = 0.05$) suggested that the sample size was adequate. Fig. 1 depicts the final model that incorporated 17 ESE items into five constructs. All coefficients in CFA were statistically significant at the 0.001 level (two-tailed). The mean loadings of items ranged from 0.74 for the Creative Planning and Marshalling HR constructs to 0.85 for the ERC and Managing Uncertainty constructs (see Table S4b). All constructs significantly were correlated (at $p_s < 0.001$), from $r = 0.58$ for ERC and Managing Uncertainty to $r = 0.91$ for Marshalling HR and Creative Planning (see Table S4c), indicating that all ESE constructs relate to each other sufficiently to be included in the single scale.

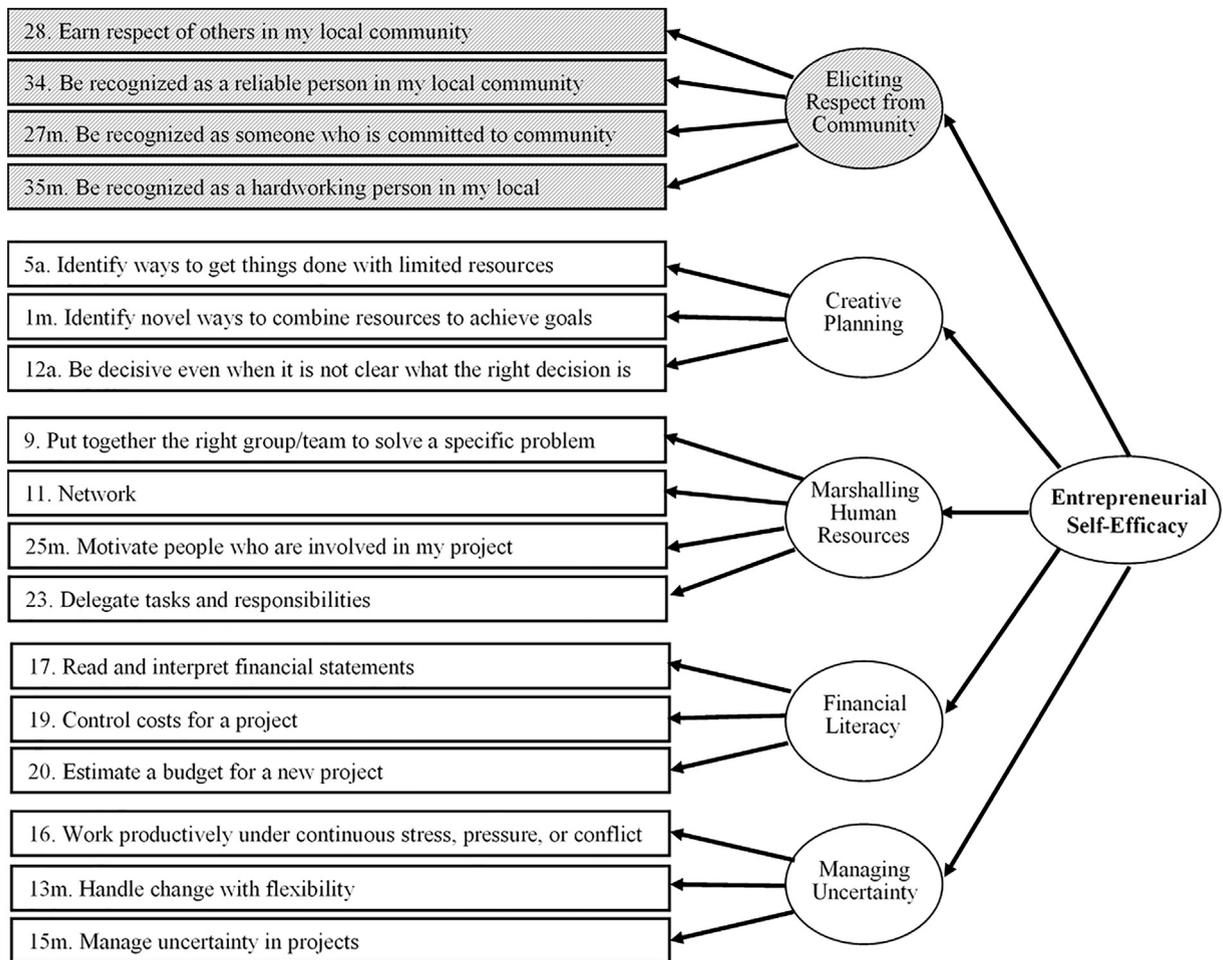


Fig. 1. Confirmatory factor analysis model of ESE constructs ($N = 701$). Shaded are the new ERC construct and ERC items; for more details, see Table S4b and c.

2.5. Scale validation

Using the full sample, we examined the reliability and validity of the enhanced scale.

2.5.1. Reliability

Cronbach's α for the new ESE component, ERC, was 0.91. The remaining four constructs also showed acceptable Cronbach's α (from 0.80 to 0.88; see Table S4a).

2.5.2. Discriminant validity

To test whether the new ERC subscale assesses a distinct construct, we calculated heterotrait-monotrait (HTMT) ratios (Henseler et al., 2015). They ranged from 0.67 to 0.75, suggesting an acceptable discriminant validity (see Table S4a).

2.5.3. Known-groups validity

Mastery experience is one of the critical sources of ESE beliefs (Bandura, 1977); thus, respondents with business experience should score higher on ESE items than respondents lacking such experience. This was confirmed for all four items of the ERC subscale (see Table S2), which implies its reasonable convergent validity (DeVellis, 2016). Similarly, convergent validity was confirmed for the remaining ESE constructs (see Supplementary Appendix 2).

2.5.4. Nomological validity

Individuals with strong ESE beliefs are most likely to engage in risky entrepreneurial activities (Krueger and Dickson, 1994). To test whether our scale detects this relationship, we examined relations between each of the five ESE subscales and a BRT scale (see Table 2). The correlations ranged from $r = 0.10$ for ERC to $r = 0.20$ for Marshalling HR (all significant at the $p < 0.001$ level), confirming the nomological validity of the scale (Cronbach and Meehl, 1955).

3. Testing the properties of the scale across the urban/rural divide

We anticipated that the importance of ERC could depend on the context, such as the urban/rural divide. To examine whether the enhanced ESE scale measures the same constructs in the rural and urban subsamples, we tested for measurement invariance (Van de Schoot et al., 2012) and assessed the reliability and validity of our scale in rural and urban subsamples. Our rural ($N_R = 559$) and urban ($N_U = 744$) subsamples were sufficiently large for these analyses (Hinkin, 2005). We examined whether the relationship between the enhanced ESE measure and BRT is affected by urban/rural contingency.

3.1. Testing for measurement invariance

3.1.1. Configural invariance

The EFA loadings were nearly identical in both subsamples (see Table 1). The CFA converged to the same factor structure in both subsamples (see Table S4b). This implies that the new ERC construct emerges as a unique and important dimension of ESE in both rural and urban settings.

3.1.2. Metric invariance

To examine whether the ESE constructs measure the same traits in both rural and urban settings (i.e., metric invariance), we tested a series of models. We first allowed item factor loadings for all constructs to be modulated by the context (unconstrained model) and then progressively introduced equality constraints on loading parameters, intercepts, covariances, and residuals. A model that assumes equal loadings on ESE factors between rural and urban settings could not be rejected ($\chi^2(12) = 18.71, p = 0.10$), which suggests metric (or weak) invariance. Models that assume equality of intercepts ($\chi^2(17) = 60.07$), covariances ($\chi^2(32) = 96.93$), and residuals ($\chi^2(49) = 140.77$) were rejected ($p < 0.001$ for each of three models), suggesting the absence of scalar and strict

Table 2

Business risk-taking (BRT) scale.

Imagine that you have a great idea for a new for-profit business, and please indicate the likelihood of engaging in the following activity or behavior, using the following scale:

1 = very unlikely, 2 = unlikely, 3 = not sure, 4 = likely, 5 = very likely

BRT1. Borrowing 20% of your annual income from a bank to invest in your own business

BRT2. Quitting a job that pays you \$60,000 a year to start your own business

BRT3. Taking an equity loan on your main residence to invest money in your own business

BRT4. Starting a new business alone

BRT5. Starting a new business with a family member

BRT6. Starting a new business with a partner(s) other than family members

BRT7. Starting a new business when other employment opportunities are not available

BRT8. Starting a new business while maintaining other employment

Total BRT score is the average of eight items.

invariance. This indicated that although our scale measures the same traits in rural and urban settings, there are systemic differences in the average levels of our constructs across the urban/rural divide. Follow-up analyses revealed that the overall ESE beliefs were higher among urban residents ($F = 5.96$ $p = 0.015$). This difference was driven by the Marshalling HR ($F = 17.48$ $p < 0.001$) and Managing Uncertainty ($F = 3.62$ $p = 0.057$) constructs. Unexpectedly, the average of ERC did not differ across contexts ($F = 1.5$ $p = 0.22$), although the relationship to BRT differed across these contexts (see the next section).

3.1.3. Reliability and validity

Cronbach's α s and HTMT ratios for all ESE constructs were similar for the rural and urban subsamples, suggesting their robust reliability and discriminant validity (see Table S4a). Respondents with business experience scored higher than respondents lacking it on all ESE constructs in both rural and urban subsamples, suggesting robust convergent validity (see Supplementary Appendix 2). Unexpectedly, these findings suggest that the enhanced ESE scale is reliable and valid for use across the urban/rural divide. However, our data were collected in a largely rural state, where counties that fit the urban designation (such as those that are home to Versailles, Elizabethtown, or Lexington) remain quite relational. Thus, our results could be biased and should be verified in more metropolitan settings.

3.2. Examining relations between ESE and BRT

To examine whether the importance of the enhanced ESE measure for BRT is context-dependent, we employed a stepwise linear regression (see Table 3 and Supplementary Appendix 5).

This analysis revealed positive *monotonic* relations between ESE constructs and BRT in both rural and urban settings, which confirmed the nomological validity of the scale across contexts. When we included only the original ESE items in the analysis (step 1), we found that a positive *linear* relation between the original ESE scale and BRT in an urban setting not only weakened in a rural setting but also became *curvilinear*. We found in rural, but not urban settings, that an additional increase in self-efficacy for individuals with higher ESE had less effect on BRT than for individuals with lower ESE. However, when we included both original ESE and a new ERC construct in the regression analysis (step 2), we found that a linear relation between the original ESE and BRT was robust across contexts; the negative curvilinear effect of a rural setting on the relationship between ESE and BRT was fully absorbed by the new ERC component. These findings suggest that our new ERC construct not only internalizes place-based effects on the self-perception of one's entrepreneurial capabilities but also may be particularly important in capturing a place's moderating effect on relations between ESE and BRT.

When we examined the relationships between ERC and BRT using an SPSS 24 curve estimation module (SM5), we found that in an urban setting it had both a linear component ($\beta_1 = 0.21$, $p < 0.01$; $F(1,692) = 24.8$, $R^2 = 0.04$) and a quadratic component ($\beta_1 = 1.24$ $\beta_2 = -0.14$, $p < 0.01$; $F(1,691) = 19.6$, $R^2 = 0.05$), indicating a positive relation with a diminishing marginal effect. In a rural setting, only a quadratic component was significant (linear: $\beta_1 = 0.07$ $p = 0.16$; $F(1,508) = 2.0$ $R^2 = 0.004$; quadratic: $\beta_1 = 0.65$ $\beta_2 = -0.08$, $p = 0.05$; $F(2,507) = 3.0$, $R^2 = 0.01$), suggesting an inverse-U-shaped relation.

Table 3

Relations between ESE in eliciting respect from community and BRT.

Predictors	β	S.E.	t	p
Step 1				
(Intercept)	3.54	0.09	38.57	< 0.001
Age	-0.02	0.00	-11.90	< 0.001
ESE-4	0.20	0.04	5.52	< 0.001
(ESE-4) ²	-0.02	0.02	-1.18	0.24
ESE-4 \times rural	-0.08	0.05	-1.63	0.10
(ESE-4) ² \times rural	-0.05	0.03	-2.10	0.04
R ²	0.175			
Adjusted R ²	0.171			
Step 2				
(Intercept)	3.56	0.09	38.22	< 0.001
Age	-0.02	0.00	-11.81	< 0.001
ESE-4	0.17	0.04	3.74	< 0.001
(ESE-4) ²	-0.03	0.02	-1.16	0.24
ESE-4 \times rural	0.00	0.06	-0.07	0.95
(ESE-4) ² \times rural	-0.02	0.03	-0.52	0.60
ESE-ERC	0.04	0.04	1.07	0.29
(ESE-ERC) ²	0.00	0.02	-0.18	0.86
ESE-ERC \times rural	-0.13	0.06	-2.14	0.03
(ESE-ERC) ² \times rural	-0.06	0.03	-1.86	0.06
R ²	0.181			
Adjusted R ²	0.175			

Dependent variable = Business Risk-Taking; ERC = Elicit Respect from Community; ESE-4 = average of scores on Creative Planning, Marshalling HR, Financial Literacy, and Managing Uncertainty constructs; ERC and ESE-4 were standardized.

4. Discussion and conclusion

As Bandura (1982: 122) stated, “Efficacy in dealing with one’s environment is not a fixed act or simply a matter of knowing what to do ... it is concerned with judgments of how well one can execute courses of action required to deal with prospective situations.” In the particular match between an individual and their environment, certain things make it more or less likely that they will feel a sense of agency and believe they can bring a new business idea to fruition. Clearly, certain general skills and tasks (planning, dealing with uncertainty, etc.) must be mastered if one is to become a successful entrepreneur, and current ESE scales measure whether individuals believe they can perform these skills and tasks. We argue that such place-agnostic approaches, however, provide only an incomplete picture.

Place-based entrepreneurship research highlights the critical role of the local community in shaping what entrepreneurs can accomplish. In many environments—particularly in tight-knit, relational communities with often rigid social norms—the ability to become socially embedded is a critical resource that can significantly enable entrepreneurial activity. Earning a positive reputation is integral to being an entrepreneur in such environments, and to proceed with a new business idea, people need to have faith in their ability to navigate the complexity of social networks and to be seen as a reputable member of the community. Therefore, we argue for the inclusion of this place-based component, which we call the ability to elicit respect in the community (ERC), in the ESE scale. We developed a construct extension of ESE that includes this new dimension. The proposed extension represents only the partial internalization of place into an individual-level measure; there are other aspects of place that do not belong in an ESE scale but that mediate relationships of interest. For instance, we expected that our enhanced measure would be more relevant in rural contexts than in urban contexts.

As predicted, our analyses revealed that ERC is a distinct but integral dimension of ESE. Furthermore, we found that the enhanced ESE scale converged to the same structure in both rural and urban subsamples, which indicates that ERC is a unique dimension of ESE in both settings. We further examined whether the influence of ERC on entrepreneurial aptitudes (in this case, BRT) was moderated by spatial context and found that, in urban areas, the relationship between ERC and BRT was positively monotonic but in rural areas the relationship was an inverse U-shape.

This result deviated somewhat from our expectations. First, we did not predict that this relation would be strong in an urban setting. However, as noted in Section 3.1.3, our survey was conducted in Kentucky, a largely rural state where even urban areas retain many features of small-town America, including a relational context with rigid social norms. The positive relation that emerged may not be recapitulated in larger and wealthier urban centers, which should be tested by future research. Second, the inverse-U-shaped relations in the rural setting suggested a more nuanced relationship than we expected. This result is consistent with the problem of over-embedding: whereas people who are embedded in their rural communities may be more likely to pursue and succeed at entrepreneurship (Balfour, 2017; Hoang and Antoncic, 2003; Kim and Aldrich, 2005), an extremely high level of community embeddedness could also discourage venture creation. As network ties begin to drift toward “strong tie” relationships, the informational and innovation benefits of the network diminish, leading to stagnation and institutional lock-in (Granovetter, 1985). Our enhanced ESE measure may show particular promise in elucidating the consequential social dynamics in tight-knit communities.

Further research is required to determine the specific characteristics of place that make ERC relevant. Our exercise has been one step in reconsidering the relationship between an individual and place and how this relationship influences entrepreneurship. Such interactions may be relevant to a wide variety of constructs within the entrepreneurship literature. For example, individual motivation to succeed may depend on the strength of the individual relationships within the community.

The concept of individual fit to ecosystem has application outside of rural communities. We have hypothesized that ERC is most relevant in tight-knit and relational communities defined by social hierarchies, where individuals with social status can use social resources to benefit their business. This may apply to island communities, or to other isolated groups. Some relational and reputation-driven communities may not be location-specific; thus, having a connection to any one location may not be important (e.g., cyber industries or academic consulting). Examining ERC’s relevance in such non-location-based communities may be important. Another line for future research may focus on how individuals earn a good reputation within small, tight-knit communities: Is this process similar in urban and rural areas, or in developing nations or declining neighborhoods? Does gender affect this process? What resources might the entrepreneur gain access to through social embedding? How important might this effect be across industries? Answering these questions may help improve entrepreneurial education and support programs that target the development of small communities.

Lyons et al. (2012) boldly stated that community is the next frontier in entrepreneurship research; eight years later, however, the literature is just beginning to grapple with the complex ways that community and entrepreneurship interact. Much more than just institutions, organizations, amenities, or networks, communities contain overlapping webs of complex relations that are likely to look different in a variety of settings. Scholars have invested considerable energy to exploring high-growth entrepreneurs and well-oiled ecosystems. In rural areas, developing regions, and declining neighborhoods in the urban core, and in other communities that operate according to different cultural principles than those espoused in “high-performance” entrepreneurial ecosystems, one is likely to find a very different set of motivations and practices for launching a business. In such resource-constrained environments, entrepreneurs may be the last, best hope for revitalization, and their greatest entrepreneurial resource could very well be their reputation within their community (Sarvasathy, 2008).

CRediT authorship contribution statement

Helen Pushkarskaya: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology,

Project administration, Resources, Software, Supervision, Validation, Visualization, Writing - original draft, Writing - review & editing. **Michael W.-P. Fortunato:** Conceptualization, Writing - original draft, Writing - review & editing. **Nicole Breazeale:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Writing - original draft, Writing - review & editing. **David R. Just:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Resources, Supervision, Validation, Visualization, Writing - original draft, Writing - review & editing.

Acknowledgements

We wish to thank *JBV* editor, Oana Branzei, for her incredible feedback and guidance, and three anonymous reviewers for their insightful and constructive comments on earlier versions of this paper. We would also like to thank Dr. Christopher Pittenger at Yale University for editorial work on the manuscript. The authors extend sincere thanks to key members of the research team who were essential to the completion of this study, especially to Drs. Alison Davis, Ellen Usher, and Ron Hustedde at the University of Kentucky. Critical graduate student support was provided by Cami Bush at Western Kentucky University (WKU) and Shaheer Burney of CEDIK. WKU undergraduates Spencer Walters and Stephen Gibbons also contributed to this project. We also wish to thank participants of the Kentucky Entrepreneurial Coaches Institute for their significant guidance.

The USDA National Institute of Food and Agriculture (NIFA) [2011-68006-30807] funded the survey on Entrepreneurship and Innovation in Kentucky following the Tobacco Transition Payment Program. The Community and Economic Development Initiative of Kentucky (CEDIK) supported this project throughout all its stages.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jbusvent.2020.106004>.

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