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Policy entrepreneurship and entrepreneurial orientation in vulnerable Swedish municipalities

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ABSTRACT

Small- and medium-sized towns (SMSTs) not integrated into expanding metropolitan regions often face industrial decline and depopulation. As a result, many of them lack resilience to change and may be classified as vulnerable. While research holds that a local government's efforts to act in an entrepreneurial way are important for the development of vulnerable SMSTs, entrepreneurship behaviours in the local public sector remain under-investigated. In this paper, we address this gap in the literature by investigating whether and how vulnerable SMSTs differ in their entrepreneurial behaviours. Based on the concepts of policy entrepreneurship and entrepreneurial orientation, we performed a survey of Swedish local communities about their work on strengthening and renewing local business life and improving their own administrations. We analyse factors associated with these activities and examine differences between the policy entrepreneurship of vulnerable and nonvulnerable places, as well as differences within the vulnerable group. Vulnerable places rank low in entrepreneurial orientation, which may contribute to regional lock-in. Cluster analysis reveals that the vulnerable municipalities are a heterogeneous group, which we classify into "entrepreneurs' local innovators", and 'disengaged risktakers'. Regression analysis indicates that local social capital may increase entrepreneurial orientation in vulnerable places by strengthening the focus on innovation.

KEYWORDS

Political entrepreneurship; entrepreneurial orientation; small- and medium-sized towns; vulnerable communities; local governance

JEL

L26; R11; R12; R58

1. Introduction

The transformation from a manufacturing economy to a knowledge economy, in combination with globalization, has meant changed relationships between metropolitan regions and more peripheral regions consisting of small- and medium-sized towns (SMSTs). Peripheral places have generally been characterized as subject to political and industrial decision-making that is *external* to the local economy (Eskelinen and Snickars 1995). SMSTs that have not been integrated into expanding metropolitan regions are in many cases facing severe challenges of industrial decline and depopulation (Westlund 2018). The cause of decline in these SMSTs has most often been cut-backs or shut-downs of local dominating manufacturing industries, and the problems have been aggravated by a lack of commuting opportunities and the absence of entrepreneurial traditions.

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In Sweden, this development has taken place in several waves and in different types of SMSTs. From the 1950s, places dominated by textile industries suffered from increased international competition and plummeting relative prices. In the 1960s, the mechanization of forestry hit peripheral municipalities in north and central Sweden hard, with rapid depopulation as a result. In the 1970s, the industrial crisis meant a hard blow to the traditional manufacturing belt *Bergslagen* in central Sweden and to towns and cities with shipyard industries. Crises in the 1990s and the 2000s have continued to hit SMSTs, often those having a peripheral location or those dominated by manufacturing industries. The metropolitan regions and most regional centres have mainly been unaffected by the crises and have had steady growth.

Local public administration and service in Sweden is organized into 290 municipalities consisting of both urban and rural areas. The municipalities have their own taxation rights and collect approximately 20–25% of individuals' income in taxes. They are responsible for child care, primary and secondary education, elderly care, planning and local infrastructure, and emergency services. In addition to these compulsory tasks, municipalities also engage in business development, support for local culture and sports, etc. In many SMSTs, the municipality is the largest employer. In total, this makes the municipality organization the main actor in most SMSTs in regard to responding to challenges. In addition to the municipality organization, enterprises and local associations are actors that respond to certain challenges, most often jointly with other actors. The third group of actors are organizations that, to varying degrees, address certain challenges. A common approach is to organize new, temporary, local organizations with the sole mission of fighting the specific challenges.

The municipalities have the right to organize their activities in various forms. In principle, we can consider a span of alternatives, from strict local official authority that performs its tasks without involving any external actors to a local government organization that strives to adapt to local conditions, involves other actors and supports initiatives and experiments to improve local public services and development. The latter approach has often been referred to as a kind of policy entrepreneurship or political entrepreneurship (Westlund 2011; Olsson and Westlund 2012). We define policy entrepreneurship as a local government's efforts to promote local development by acting in an entrepreneurial way by using new initiatives, partnerships or other forms of collaborations with other actors and by forming new institutions. While there is a consensus that public entrepreneurs might act as key agents for change at the local level, especially in vulnerable areas (Baumgartner, Pütz, and Seidl 2013, 1111), 'research in European non-core regions have just touched the surface in the area of entrepreneurship in the public sector'. We believe that an important opportunity for expanding this area of research is offered by the literature on entrepreneurial orientation, which represents one area in entrepreneurship research where a cumulative body of knowledge is developing (Rauch et al. 2009). The concept of entrepreneurial orientation (EO) has been used to refer to the behaviours of organizations that engage in entrepreneurial activities and that are characterized by innovativeness, proactiveness and risk-taking (Covin and Slevin 1989; Miller 1983). As such, EO can be considered a subcomponent of policy entrepreneurship. Specifically, local public organizations, such as municipalities, can be viewed as varying in their entrepreneurial orientation based on how many entrepreneurial things they are doing and 'how innovative, risky, and proactive those things tend to be' (Morris and Jones 1999, 73). Thus, important research questions emerge: whether and how do vulnerable SMSTs differ in their entrepreneurial orientation?

Entrepreneurship research has also explored the environmental determinants of entrepreneurial orientation, suggesting that economic, demographic and social conditions are more (or less) conducive to entrepreneurial behaviours by established organizations (Morris and Lewis 1995). However, most of this research has examined these factors at the national or even international level, and a question that remains unanswered concerns the effects of *local* economic, demographic, geographic and social conditions on the entrepreneurial orientation of local public organizations.

In this paper, we address the research questions outlined above by 1) examining possible differences between the entrepreneurial orientation of vulnerable Swedish SMSTs and 2) analysing

the economic, geographic and demographic factors that may influence the different combinations of entrepreneurial orientation.

This paper gives several new contributions to the literature. It is the first comparative study of the policy entrepreneurship and entrepreneurial orientation of a larger set of local public entities ever conducted. Based on a unique dataset for the Swedish municipalities, we are able to map policy entrepreneurship and entrepreneurial orientation and their variations among vulnerable municipalities and analyse to what extent they are associated with local economic, demographic, and geographic factors. [Section 2](#) introduces the concept of vulnerable municipalities. [Section 3](#) gives a background to the concepts of policy entrepreneurship and entrepreneurial orientation and research performed in this field. [Section 4](#) presents the theory and hypotheses, and [Section 5](#) presents the method and data. [Section 6](#) presents the results and interpretations of the analyses, and the last section gives some concluding remarks.

2. Vulnerable SMSTs in Sweden

In 2016, the Swedish Agency for Economic and Regional Growth published an extensive report on the vulnerability of Swedish municipalities ('Sårbara kommuner 2016'). The perceived need for this report was motivated by place-bound loss of employment since the industrial crises of the 1970s. The report ranks Sweden's 290 municipalities according to three categories that are assigned equal weights: i) dependence on large corporations; ii) labour market factors, such as local employment ratio and commuting opportunities; iii) business climate and extent of local entrepreneurship. The 100 highest ranked municipalities were classified as 'vulnerable'. A note on the connection between status as vulnerable and status as rural and SMST is in order. Sweden's 290 municipalities are classified by the Swedish Board of Agriculture as 'metropolitan' (46 municipalities), urban (47), rural (164), or sparsely rural (33). Although the vulnerability classification by the Swedish Agency for Economic and Regional Growth does not explicitly consider the urban-rural axis, the outcome of the ranking tells a clear story. Among the 100 vulnerable municipalities, only 1 is classified as 'metropolitan' and 6 as 'urban'. Hence, only 2% of metropolitan municipalities and 13% of urban municipalities are considered vulnerable. For rural municipalities, the corresponding figure is 46% (75 vulnerable), whereas it is 55% (18 vulnerable) in sparsely rural areas. Hence, the Swedish case shows a clear correlation between lack of resilience (vulnerability) and status as rural. Not only are approximately half of the rural and sparsely rural municipalities classified as vulnerable, but almost all (93%) of vulnerable municipalities are in fact rural. Thus, in Sweden, vulnerable municipalities offer an excellent basis for studying SMSTs in rural areas.

3. Conceptual background of policy entrepreneurship

Policy measures of local governments to achieve public or private investments to improve the economic conditions for a place or a region, by lobbying or other means, have a long history. Fights over the location of railways and their stations in the 19th century and of main roads, main airports, universities and other governmentally financed infrastructure in the 20th century are well-known examples across Europe. Additionally, the regional policies for developing lagging regions, which were introduced in the 1950s and 60s in several European countries and are now one of the largest expenditure items of the European Union, have been subjects for strong lobby campaigns from towns, cities and regions to be selected as the locations for new industries and other investments.

In addition to the activities of local governments aiming at letting someone else (wholly or partly) pay for necessary development investments, local governments also take on development initiatives on their own or with partners, using their own resources to increase their attractiveness, improve or rationalize their services, or strengthen the competitiveness of local business life. In the literature, these types of activities have been given somewhat different but related denominations: policy

entrepreneurship (e.g. Pozen 2008; Mintrom and Norman 2009); political entrepreneurship (e.g. Buchanan and Badham 1999; Björkman and Sundgren 2005; Chatterjee and Lakshmanan 2009; Silander and Silander 2016); and public sector entrepreneurship (e.g. Klein et al. 2010; Leyden and Link 2015; Audretsch and Link 2016).

Mintrom (2000, 71) has noted that 'Typically, the terms public entrepreneur, political entrepreneur, and policy entrepreneur are treated as interchangeable.' In Pozen's (2008, 301) words, 'the basic shared understanding of policy entrepreneurs is that they are political actors who promote policy ideas in the hope of effecting change'. Policy/political/public entrepreneurship has been referred to as entrepreneurial activities within the governmental organization (corresponding to the term intrapreneurship (Pinchot 1985) in the private sector) as well as to entrepreneurial action directed towards, or performed together with, external stakeholders or actors (Scheingate 2003). In the following, we disregard the possible nuances between the three concepts and use the term *policy entrepreneurship* for the phenomena we investigate in this paper.

A large part of the policy entrepreneurship literature has thus far had a theoretical and conceptual orientation (see, e.g. Klein et al. 2010; Dhliwayo 2017). The empirical studies that have been performed have almost exclusively been case studies of delimited activities or projects (e.g. Bartlett and Dibben 2002; Zerbinati and Souitaris 2005). Additionally, a large part of the literature has its focus on the macro level and general measures for entrepreneurship and innovation (e.g. Kropp and Zolin 2008; Audretsch and Link 2016). This means that any comparative studies of policy entrepreneurship of a larger set of local public entities and their entrepreneurial orientation, to the best of our knowledge, have not previously been performed.

Parts of the research on policy entrepreneurship have focussed on the policy entrepreneur and his/her actions or characteristics (e.g. Buchanan and Badham 1999; Casson 2003). Our focus in this paper is instead on the local government and measures that can be described as entrepreneurial. Based on Shane and Venkataraman (2000) general criteria of entrepreneurship, we focus on how and to what extent local governments a) identify and evaluate opportunities and b) collect and mobilize resources to c) exploit the opportunities, regarding both the municipal organization and collaboration with external actors.

Entrepreneurship is a process that can occur in organizations of all ages, sizes and types (Davidsson 2003, 2004). As explained by Morris and Jones (1999, 86), 'entrepreneurship is a universal construct and can be applied in public sector organizations. The definition, process nature, and underlying dimensions of entrepreneurship are fundamentally the same regardless of the context'. Entrepreneurship research has long studied the entrepreneurial behaviour of established organizations and investigated their entrepreneurial orientation (EO) (Lumpkin and Dess 1996, 2001). EO refers to an organization's 'strategic orientation, capturing specific entrepreneurial aspects of decision-making styles, methods, and practices' (Wiklund and Shepherd 2003, 1309). As such, EO is important to capture the way local public sector organizations, such as municipalities, are governed – a way that supports the renewal of local business life and administration to meet opportunities and challenges of a global and knowledge-based economy. As an orientation or posture, EO captures how an organization is governed rather than what it does. Thus, in the case of public sector organizations, it is an important feature of policy entrepreneurship.

EO comprises three dimensions: innovativeness, proactiveness and risk-taking (Wiklund and Shepherd 2003). Innovativeness is the orientation towards novelty and creative processes departing from established ways of working. Proactiveness refers to an orientation of anticipating and acting before competitors and other organizations. It is also referred to as a forward-looking rather than backward-looking posture. Risk-taking refers to the willingness to commit to promising yet uncertain projects and actions whose outcomes are unknown.

As local public organizations such as municipalities may vary along these three dimensions, they can display different types of policy entrepreneurship. In addition, different factors can influence the EO of a municipality. However, as noted by Baumgartner, Pütz, and Seidl (2013), empirical research

on public entrepreneurship, especially in small rural municipalities, has just touched the surface. Based on this we formulate the following research questions:

1. How do the SMSTs perform in entrepreneurial orientation? Are there differences between SMSTs and other types of municipalities, and among various types of SMSTs?
2. Are there differences in the compositions of the various SMST entrepreneurial orientations?
3. To what extent are economic, geographic, demographic and social factors associated with SMSTs' entrepreneurial orientations?

4. Hypotheses

Entrepreneurship research has shown that environmental factors have a strong – if not deterministic – influence on the existence and effectiveness of entrepreneurial activities (Morris and Jones 1999, 73). This view is mirrored in the research on regional and local development. Theories in this field hold that demographic, geographic and economic factors might explain why some locations have more opportunities and resources for entrepreneurship and innovation while others do not (Pe'er, Vertinsky, and King 2008). Municipalities with larger firms can benefit from 'larger, denser and more diverse' environments, which bring important utility gains for both firms and households (Meijers, Burger, and Hoogerbrugge 2016, 183). Furthermore, political entrepreneurs in cities with higher employment share can leverage 'larger input markets, larger labour pools, the presence of better infrastructure, public facilities and more specialized business services, all facilitating better matches between supply and demand'. The growth of local firms is also an important factor. The growth of local firms entails their expansion beyond the region and the transfer of new ideas into the region (Coffey and Polese 1984), which may stimulate innovation and proactive behaviours. New ideas can entail, for example, novel ways to use neglected or under-utilized resources – e.g. local people or buildings – to satisfy unmet local needs (Zerbinati and Souitaris 2005). Geographic factors are also important. Universities and other knowledge institutions are more likely to be found in metropolitan and urban areas – compared to rural and sparsely rural areas – providing a good environment for the innovativeness, proactiveness and risk-taking of local public managers. Given the benefits of demographic, geographic and economic factors for EO, we expect that:

Hypothesis 1: EO – captured by the degree of the innovativeness, proactiveness and risk-taking – will be positively related to the a) local average firm size, b) local employment share, c) growth of local firms and d) urban status of the municipality.

Research also suggests that it is the synergetic combination of demographic, economic and geographic factors that makes local public managers in certain locations better or worse equipped to pursue innovative, proactive and risk-taking projects. Thus, we expect that public entrepreneurs in vulnerable SMSTs will exhibit lower levels of entrepreneurial orientation than their counterparts in other types of municipalities. Indeed, vulnerable SMSTs might lack the synergetic combination of available resources and markets (i.e. economic, geographic and demographic factors) that are available elsewhere. As demonstrated by the research in political science, these are important preconditions that might affect the likelihood of policy entrepreneurs to be found in certain communities (Zerbinati and Souitaris 2005). Schneider and Teske (1992), for example, found that policy entrepreneurs are more likely to be found in communities with slack resources and a demographic and economic makeup that favours the implementation of innovative ideas. Thus, we expect that:

Hypothesis 2: Vulnerable SMSTs will have lower levels of EO – captured by the degree of the innovativeness, proactiveness and risk-taking – compared to other types of municipalities

While many contributions emphasize the role of economic, geographic and demographic factors and their synergetic combination, scholars have also pointed at the role of social factors in local communities (Mayer and Meili 2016; Hamdouch, Demaziere, and Banovac 2017).

For example, the ESPON TOWN project has systematically studied smaller towns in Europe, raising the issue that while these smaller settlements are subject to factors related to their territorial, demographic and economic features, they are also endowed with specific social capabilities (Servillo, Atkinson, and Hamdouch 2017). Particularly relevant for the EO of local public managers is local social capital. This capital can be considered 'networking' capital, which explains why certain vulnerable SMSTs can 'steer their own path' and behave entrepreneurially. Local social capital 'consists of knowledge that is disseminated and exchanged in the social networks, thereby raising the level of human capital; it increases mutual trust between actors, thereby helping to reduce transaction costs; it increases capacity for common action' (Westlund and Roger 2003, 89). As such, it can function as surplus capital that local public managers in vulnerable SMSTs can use to overcome the lack of available resources and markets and to behave as entrepreneurial agents for change. One of the profiles in Hamdouch, Demaziere, and Banovac (2017) study, for example, comprises small towns that build on unique local resources to attract new businesses or develop projects and conditions that are favourable for creative businesses. Thus, we expect that:

Hypothesis 3: EO – captured by the degree of innovativeness, proactiveness and risk-taking – will be positively related to local social capital.

Hypothesis 4: The local social capital will positively moderate the relationship between SMSTs and EO in such a way that SMSTs with higher levels of social capital will exhibit higher levels of EO than SMSTs with lower levels of social capital.

5. Method and data

Sample

In our analyses, we used primary data collected through a survey directed at the municipal directors of all 290 municipalities in Sweden, as well as secondary register data. The contact information of all municipal directors was provided by the Swedish Association of Local Authorities and Regions (SKL). SKL also endorsed the survey and sent a letter to all municipal directors with a brief explanation of the purpose and importance of our research. This has increased the engagement and participation of the municipal directors to the study. The questionnaire was administered via telephone. After two reminders, we received full information for all variables of interest from 222 municipalities, yielding a final response rate of 76%. Additional register data were obtained from Statistics Sweden – the Swedish Bureau of Census.

Measures and classifications

Measures collected using the survey

To measure the three dimensions of entrepreneurial orientation – innovation, proactiveness and risk-taking, we adapted the original scale developed by Covin and Slevin (1989, 1990). The items, rated on a 5-point scale, are reported in the Appendix. This measure is widely used in the entrepreneurship literature. We created three indices by combining the answers with equal weights. Following prior research (cf. Wiklund and Shepherd 2003), we use this index as a measure in subsequent analysis.

To capture the *strategic priorities*, we used three question items. The respondent was introduced to each question as follows: 'Some functions are mandated by law to be part of

a municipality's functions (such as care and schooling), while others are optional. To what extent do you prioritize the following activities?' The municipal director is then asked to rate (1–5 point scale) the priority given to the following three areas: in-migration, cooperation with universities, and attractive habitats for citizens. Each of these three responses are entered as variables and coded from 1–5.

To measure *learning from businesses*, we used three question items. The respondent was introduced to the questions with the following text: 'Organizations can learn from other organizations. From what other organizations has your municipality learned something important during the past 5 years?' The municipal director was then asked to rate on a 5-point scale to what extent they had learned from 1) businesses in their municipalities, 2) business in their labour market region,¹ 3) businesses outside their region. Each of these three responses are entered as variables and coded from 1–5.

The measure of *Resources for acting entrepreneurial* was based on the respondents' answer (1–5 rating) to the following question: To what extent do you believe that you and your municipality have the competences and resources to act entrepreneurially?

To measure *social capital*, we used Besser and Miller (2013) scale. The items are reported in the appendix. We created an index by combining these answers with equal weights. Prior to the creation of the index, the items were standardized.

Measures and classifications computed using secondary data

The correlation and regression analyses section also contain secondary data to correlate entrepreneurial orientation with the municipality's performance on economic, geographic and demographic variables. These variables are as follows:

Employment share. Fraction of the working age population (20–64 years) registered as employed in 2015.

Mean establishment size. Average number of employed people per work establishment in 2015.

Firm growth. Percent growth in total number of establishments, 2010–15.

Urban hierarchy dummies. Four dummy variables indicating whether the local community is part of a metropolitan area (base category), an urban area, a rural area, or a sparsely rural area. The classifications are made by the Swedish board of agriculture. The classifications are based on the fraction of land classified as urban, as well as on average population density.

Analyzes

The analyses start by answering the question of how vulnerable municipalities perform in terms of entrepreneurial orientation relative to all other municipalities. This question is answered descriptively in a bivariate analysis with t-testing of mean variables across groups.

To identify the profiles of policy entrepreneurship, we used cluster analysis. This is a well-established technique to create typologies from data and has been widely used in entrepreneurship research (Delmar, Davidsson, and Gartner 2003). As a clustering algorithm, we used the 'two-step-cluster' procedure, which 'is an exploratory tool designed to reveal natural groupings (or clusters) within a data set that would otherwise not be apparent' (Ordanini, Micelli, and Di Maria 2004, 285). The algorithm employed by this procedure has several advantageous features, including the possibility of easily comparing the values of a model across different cluster solutions and thereby determining the optimal number of clusters. The first value to consider is the silhouette measure of cohesion and separation. This measure shall be above 0.0 to suggest that 'the within-cluster distance and the between-cluster distance is valid' (Rundle-Thiele et al. 2015, 526–527). The second

validation entails the use of t-tests to identify the importance of each variable in the cluster and to show significant differences among the clusters.

An additional step in cluster analysis is to test the external validity of the cluster by assessing descriptive factors of these clusters, such as their strategic priorities, learning, and access to resources and competences (Delmar, Davidsson, and Gartner 2003). To represent distinct empirical categories, clusters need to differ on such factors. Thus, we used bivariate analysis to assess these contrasts.

To explore the extent to which EO dimensions are associated with local economic, geographic, demographic and social factors, we used multivariate multiple regression analysis.

6. Results and interpretations

Vulnerable municipalities' entrepreneurial orientation

An initial question addressed in this section is whether vulnerable municipalities differ from other municipalities in terms of entrepreneurial orientation. To analyse this, Table 1 presents mean values for the three measures outlined in the preceding section for vulnerable and nonvulnerable municipalities, respectively. This exercise is performed for those 222 (76%) municipalities that responded to the survey.

Although the mean values in all cases are higher in nonvulnerable municipalities than in vulnerable municipalities, the difference is not statistically significant at the 1% level in the case of risk-taking. In proactiveness and innovation, however, the difference meets this criterion. It follows that local communities classified as vulnerable are less prone to proactive and innovative behaviour. We conclude that vulnerable municipalities exhibit significantly lower entrepreneurial orientation in two out of three dimensions.

Entrepreneurial orientation among vulnerable municipalities

A main research question in this article is how vulnerable SMSTs differ in their entrepreneurial orientation. To answer this question, we apply cluster analysis according to the method outlined in the previous section. The three components included in the cluster analysis are our three measures of risk-taking, proactiveness, and innovation. Table 2 displays the outcome of the cluster analysis, and the results suggest that three distinct clusters may be identified from the data. We refer to these clusters as either 'entrepreneurs' (rank higher than all others on all aspects of entrepreneurial orientation), 'local innovators' (rank medium-high in proactiveness and innovation, but low on risk-taking), and 'disinterested risktakers' (low rank in proactiveness and innovation, but medium-high in risk). The table also presents the mean values of the three clustering components (innovativeness, proactiveness and risk-taking) for each cluster.

The sample is divided into three clusters containing 43.6% of vulnerable SMSTs in the first profile, 34.6% in the second profile, and 21.8% in the third profile. This solution has an acceptable silhouette measure of cohesion and separation (0.5). Student's t-tests confirm that the three dimensions of entrepreneurial orientation vary between the three clusters. Specifically, the analysis shows that the three profiles represent entrepreneurial policy orientations that are different in terms of innovativeness, proactiveness and risk-taking.

Table 1. Mean comparison of entrepreneurial orientation between vulnerable and non-vulnerable municipalities.

	Vulnerable	Non-vulnerable	t-test of diff
N	78	144	
Risk taking	3.7	3.9	1.27
Proactiveness	2.8	3.1	3.14*
Innovation	3.4	3.7	3.26*

Note: * $p < 0.01$

Table 2 clearly shows how the larger group, cluster 1, exhibits the highest entrepreneurial orientation. In fact, the municipalities in clusters 2 and 3 show lower levels of entrepreneurial orientation along all three dimensions. Clusters 1 and 2 differ, and the municipalities in cluster 2 display higher innovativeness but somewhat lower inclination towards riskier projects. Interestingly, the municipalities in cluster 3 have a weaker orientation towards innovative and proactive behaviours but a stronger orientation towards risk-taking than municipalities in cluster 2. Hence, there is a large chunk, slightly less than half, of municipalities that are quite different from the other two categories, while the two bottom categories differ internally. Our analysis suggests three different profiles of entrepreneurial SMSTs: the entrepreneurs, the local innovators, and the disengaged risk-takers. How do these profiles of policy entrepreneurship differ in terms of their strategic priorities, whether they learn from other businesses, and the availability of resources for being entrepreneurial? These questions are explored below.

Table 3 reports the mean values describing how these municipalities rank their strategic priorities in terms of activities that they are not mandated by law to perform. Specifically, in these questions, the municipalities are asked to rank how they prioritize in-migration, university collaborations, and attractive habitats for citizens. As shown in Table 3, the third cluster exhibits lower mean values for all three classes of strategic priorities than the other two clusters.

In Table 4, we present the municipalities' responses to the question about the sources of their important learning efforts in the past 5 years. Specifically, the questions ask the municipalities to rank from 1–5 how important learning from businesses in various locations, namely, businesses in their own municipality, businesses in other municipalities in the same labour market region, and businesses in other locations (i.e. outside the own labour market region).

Predictably, all three types respond that they learn more from businesses in their own municipality. Consistent with the results for the municipalities' strategic priorities, learning from businesses is more pronounced across the board for municipalities in cluster 1: the entrepreneurs.

In Table 5, we present the mean value for the question asking municipalities to self-assess the degree to which they possess the resources and competences to act entrepreneurially.

Perhaps surprisingly, municipalities in the third cluster are more likely to give high marks to their perceived resource capabilities in this regard. In the following, we provide a summarizing description of each cluster based on our observations in the above tables.

Table 3. Mean values of municipalities' strategic priorities, by cluster.

Strategic priorities	In-migration	Collaboration with university	Attractive living environment
Cluster 1: the entrepreneurs	4.29	3.41	4.26
Cluster 2: the local innovators	4.19	3.04	4.48
Cluster 3: the disengaged risk-takers	3.53	2.71	3.76
F	4.15	3.47	4.58
Sig	.020	.036	0.013

Table 4. Mean values of learning from firms in different locations.

Focus on learning from businesses in different locations			
Location	Own municipality	Own region	Other regions
Cluster 1: the entrepreneurs	3.91	3.21	2.53
Cluster 2: the local innovators	3.44	2.63	1.93
Cluster 3: the disengaged risk-takers	3.18	2.59	2.29
F	5.99	4.22	2.95
sig	.004	.018	.058

Table 5. Mean values of resources for behaving entrepreneurial.

Resources for acting entrepreneurial	
Cluster 1: the entrepreneurs	2.21
Cluster 2: the local innovators	2.48
Cluster 3: the disengaged risk-takers	2.65
F	3.32
sig	.041

Cluster 1: the entrepreneurs

The first cluster is the largest and comprises the SMSTs that are most entrepreneurial along all three EO dimensions – innovativeness, proactiveness and risk-taking. These SMSTs typically believe in learning from businesses nearby as well as from businesses in other municipalities and regions. They are also highly engaged in developing different aspects of the municipality, as they consider issues connected to population flow, collaboration with universities and attractive habitats for citizens as important strategic priorities. While they are the most entrepreneurial, they are also the most concerned with their own limitations in terms of resources and competence for acting entrepreneurially.

Cluster 2: the local innovators

The second cluster represents approximately one third of the sample (N = 27, 35%). The entrepreneurial orientation of the SMSTs in this cluster is mainly characterized by a stronger orientation towards innovation. These SMSTs typically believe in learning from businesses, but mainly those nearby – that is, from businesses located in their municipalities. In addition, they consider issues connected to the attractiveness of the living environment as their top strategic priority.

Cluster 3: the disengaged risk-takers

The third cluster is the smallest. The entrepreneurial orientation of the SMSTs in this cluster is mainly characterized by a stronger orientation towards riskier projects, whose outcomes are uncertain. These SMSTs typically believe less in learning from businesses in comparison with the SMSTs in the other clusters. However, compared to the SMSTs in cluster 2, they are more oriented towards learning from businesses outside their own region. In addition, they are somewhat less engaged in activities for developing the municipality as they consider issues connected to population flow, collaboration with university and the living environment as low-to-moderate strategic priorities. Interestingly, these SMSTs believe themselves to be best equipped with resources and competences for dealing with entrepreneurship, at least in comparison with the SMSTs in the other clusters.

Factors associated with entrepreneurial orientation

To what extent is entrepreneurial orientation associated with local economic, geographic, demographic and social factors? We analysed these questions for the full set of municipalities with a special focus on vulnerable SMSTs.

Table 6 presents the means, standard deviations, and pairwise correlations for all the variables in the analysis.

An examination of the correlation coefficients reveals that innovation, proactiveness and risk-taking are positively correlated with social capital. Being a vulnerable municipality is negatively and statistically associated with innovation and proactiveness, but the relationship with risk-taking is not statistically significant. The findings also show a lack of statistically significant associations between several of the demographic, geographic and economic variables and the three dimensions of

Table 6. Summary statistics and correlations.

	Mean	sd	1	2	3	4	5	6	7	8	9	10
1 Innovation	3.58	0.67	-									
2 Proactiveness	3.00	0.88	0.52*	-								
3 Risk-taking	3.81	0.79	0.27*	0.33*	-							
4 Employment share	78.97	4.12	0.02	0.13	0.02	-						
5 Mean establishment size	6.75	2.70	0.10	-0.01	0.02	-0.18*	-					
6 Firm growth	0.16	0.06	0.03	0.11	0.02	0.07	-0.05	-				
7 Rural	0.58	0.50	-0.08	-0.06	-0.05	-0.27*	-0.07	-0.07	-			
8 Sparse rural	0.12	0.33	-0.12	-0.01	0.20*	0.15*	-0.21*	0.29*	-0.43*	-		
9 Urban	0.14	0.35	0.07	-0.04	-0.01	-0.06	0.31*	-0.08	-0.48*	-0.15*	-	
10 Vulnerable	0.35	0.48	-0.21*	-0.21*	-0.09	-0.42*	0.12	0.04	0.25*	0.13	-0.17*	-
11 Social capital	0.00	0.69	0.27*	0.30*	0.07	0.09	-0.12	0.08	0.10	-0.00	-0.04	-0.03

N = 222, *p < 0.05

entrepreneurial orientation (EO). Being a sparsely rural municipality is the only variable that has a meaningfully positive association with risk-taking.

To further examine the determinants of the three EO dimensions, we conducted a multivariate regression analysis based on these variables. The estimated coefficients from this analysis are summarized in Table 7.

Hypothesis 1 predicts that the degree of innovativeness, proactiveness and risk-taking of local public managers will be positively related to a) average firm size, b) employment share, c) growth of local firms, and d) the urban status of a municipality. However, Model 1 in Table 7 shows no statistically significant effects on the orientation towards innovativeness, proactiveness or risk-taking. This surprising result warrants a careful interpretation.

First, we should note that the significant vulnerability variable captures three groups of environmental factors: i) dependence on large corporations; ii) labour market factors; and iii) business climate and extent of local entrepreneurship. That is, these three factor groups combined in an index have a statistically significant negative relationship with the three dimensions of EO. The environmental factors of Hypothesis 1 are tested separately, and it is possible that each factor, taken *alone*, does not provide the necessary preconditions or the milieu for stimulating the EO of public local managers. If we consider, for example, firm size, the presence of larger firms alone might not necessarily be conducive to the type of markets and labour pools that stimulate or induce entrepreneurial behaviour of local public organizations.

Second, we have shown that the concept of EO, originally developed to describe characteristics of firms, can also be used to label seminal features of public sector organizations, in this case municipalities. However, even if EO in firms and municipalities can be described in the same terms, its contents may be different.

Firms act on the market in a competitive environment that stimulates them to develop certain entrepreneurial features. Public sector bodies are of course not isolated from these forces, but the mission of the public sector is, to a large extent, to compensate for various types of market failures by redistribution of resources. A redistributive organization is governed by different principles than a firm on a market is. This means that the EO of firms and that of municipalities might be affected by different determinants. Whereas there is theoretical support that Hypothesis 1 should be valid for the EO of firms, the hypothesis might be erroneous for at least certain types of public sector bodies.

This leads to a third possible explanation of the failure of Hypothesis 1: it cannot be excluded that for certain types of municipalities there exists a reverse causality. An indication of this is the relatively high level of risk-taking in the 'disengaged' municipality group and the significant relationship between being sparsely rural and risk-taking. It is also possible that municipalities in regions with expanding business life and high employment levels will perceive less pressure from the environment to be entrepreneurial because 'everything is going well'. In a heterogeneous group such as the municipalities of Sweden, it is not unlikely that a reverse causality might be found for certain types of municipalities that we have not been able to identify in this study. If this is the case, the lack of

Table 7. Regression results for the three components of entrepreneurial orientation: innovation, proactiveness and risk-taking.

	Model 1			Model 2			Model 3		
	Inn	Pro	Risk	Inn	Pro	Risk	Inn	Pro	Risk
Mean establishment size	0.0267 (0.0179)	0.0148 (0.0237)	0.0304 (0.0211)	0.0342* (0.0171)	0.0248 (0.0227)	0.0326 (0.0212)	0.0347* (0.0169)	0.0249 (0.0228)	0.0326 (0.0212)
Employment share	-0.0116 (0.0124)	0.00636 (0.0165)	-0.00695 (0.0146)	-0.0177 (0.0119)	-0.00175 (0.0158)	-0.00872 (0.0147)	-0.0139 (0.0118)	-0.000896 (0.0159)	-0.00905 (0.0149)
Firm growth	0.818 (0.800)	1.908 (1.061)	-0.675 (0.943)	0.533 (0.765)	1.529 (1.014)	-0.758 (0.945)	0.785 (0.759)	1.586 (1.023)	-0.780 (0.954)
Rural	-0.169 (0.135)	-0.162 (0.179)	0.256 (0.159)	-0.254 (0.130)	-0.274 (0.172)	0.231 (0.160)	-0.227 (0.128)	-0.268 (0.173)	0.229 (0.161)
Sparse rural	-0.289 (0.184)	-0.213 (0.243)	0.829*** (0.216)	-0.315 (0.175)	-0.249 (0.232)	0.821*** (0.216)	-0.290 (0.173)	-0.243 (0.233)	0.819*** (0.217)
Urban	-0.149 (0.167)	-0.315 (0.222)	0.112 (0.197)	-0.211 (0.160)	-0.397 (0.212)	0.0940 (0.198)	-0.181 (0.158)	-0.390 (0.213)	0.0914 (0.199)
Vulnerable	-0.312** (0.109)	-0.355* (0.145)	-0.309** (0.129)	-0.310** (0.104)	-0.352* (0.138)	-0.308* (0.128)	-0.300** (0.102)	-0.350* (0.138)	-0.309* (0.129)
Social capital				0.295*** (0.0619)	0.391*** (0.0820)	0.0857 (0.0765)	0.151 (0.0798)	0.359** (0.108)	0.0982 (0.100)
Vulnerable*Social Capital							0.345** (0.124)	0.0780 (0.167)	-0.0300 (0.155)
Constant	4.450*** (1.041)	2.388 (1.380)	4.101*** (1.227)	4.987*** (0.998)	3.101* (1.323)	4.257*** (1.234)	4.622*** (0.992)	3.018* (1.337)	4.289*** (1.248)
R-squared	0.083	0.073	0.079	0.169	0.160	0.085	0.198	0.161	0.085

N = 222, Standard errors in parentheses, *** p < 0.001, ** p < 0.01, * p < 0.05

statistical significance is a result of the fact that various municipalities react on environmental factors in very different ways.

Turning to urban status (Model 2 Table 7), we found that being a sparsely rural municipality is the only variable with a positive effect on orientation towards risk-taking. This result suggests that compared to metropolitan municipalities, the municipalities in sparsely rural areas are more likely to undertake projects and activities that have an uncertain outcome. This is counter to our hypothesis, as we predicted that urban status would have been positively related to all three dimensions of EO, including risk-taking. It should be further noted that this statistical association is strong, as being sparsely rural is associated with over one standard deviation higher risk-taking. One interpretation – based on prospect theory reasoning – could be that sparsely rural municipalities are more risk-seeking than their metropolitan counterparts because they are in a less advantageous position and thus might be more willing to ‘gamble’ on uncertain projects in the hope that they have a positive return for their municipality (Singh 1986). This would be an expression of reverse causality.

Hypothesis 2 predicts that vulnerable SMSTs will have lower levels of EO – captured by the degree of innovativeness, proactiveness and risk-taking – compared to other types of municipalities. To assess whether this hypothesis is confirmed, we examined the effects of the vulnerability condition in Model 3 (Table 7). The results suggest that the vulnerability condition of the municipality has a negative and statistically significant effect on all three dimensions of EO: innovativeness, proactiveness and risk-taking. Thus, being a vulnerable municipality means a lower level of entrepreneurial orientation compared to that of other municipalities. This supports Hypothesis 2 and may point in the direction of regional lock-in and a cumulative negative development path.

Hypothesis 3 predicts that EO – captured by the degree of innovativeness, proactiveness and risk-taking – will be positively related to the perceived level of local social capital in the municipality. To assess whether this hypothesis is confirmed, we examined the direct effect of perceived social capital in the municipality in Model 3 (Table 7). This variable has a positive and significant effect on both innovativeness and proactiveness but not on risk-taking. Thus, we only find partial support for Hypothesis 3. This finding suggests that social networks and local cohesion are key resources that

might support innovativeness and proactiveness, but at least for the municipalities taken as a whole, they are not relevant for decisions concerning projects and activities that have more uncertain outcomes. As discussed above, risk-taking might in certain municipalities be an effect of negative environmental conditions instead of the expected positive relation.

Hypothesis 4 predicts that local social capital will positively moderate the relationship between SMSTs and EO in such a way that SMSTs with higher levels of social capital will exhibit higher levels of EO than SMSTs with lower levels of social capital. To assess whether this hypothesis is supported, we checked for the interaction effect of the vulnerability condition of the municipality and its perceived level of social capital. In Model 4 (Table 7), we added the interaction term to the models. The coefficient for the interaction between vulnerability of the municipality and social capital is positive and significant in the regression estimating innovativeness. Interestingly, the positive effect of social capital on innovativeness disappears as we add the interaction term, while it is largely unchanged for the proactiveness outcome (where the coefficient of the interaction term is close to zero). This means that the perceived social capital in the municipality does not necessarily exert a direct effect on innovativeness. Rather, its function is to mitigate the negative effects associated with being a vulnerable municipality. In fact, the previously noted robust and negative effect of being a vulnerable municipality on all three outcomes is retained in this model. Hence, our results suggest that being a vulnerable municipality is a consistently negative condition for the outcomes but also that this negative condition can be mitigated by strong local social capital for the case of innovativeness. To better interpret this finding, we used the margins command in STATA to plot the interaction in Figure 1.

As Figure 1 shows, we found that for vulnerable municipalities, higher levels of social capital in the municipality are increasingly more important for innovativeness than they are for nonvulnerable municipalities. Thus, we find support for Hypothesis 4. Specifically, while social capital is important for the entrepreneurial orientation of vulnerable and nonvulnerable municipalities alike, increasing levels of social capital are associated with higher levels of innovativeness in vulnerable

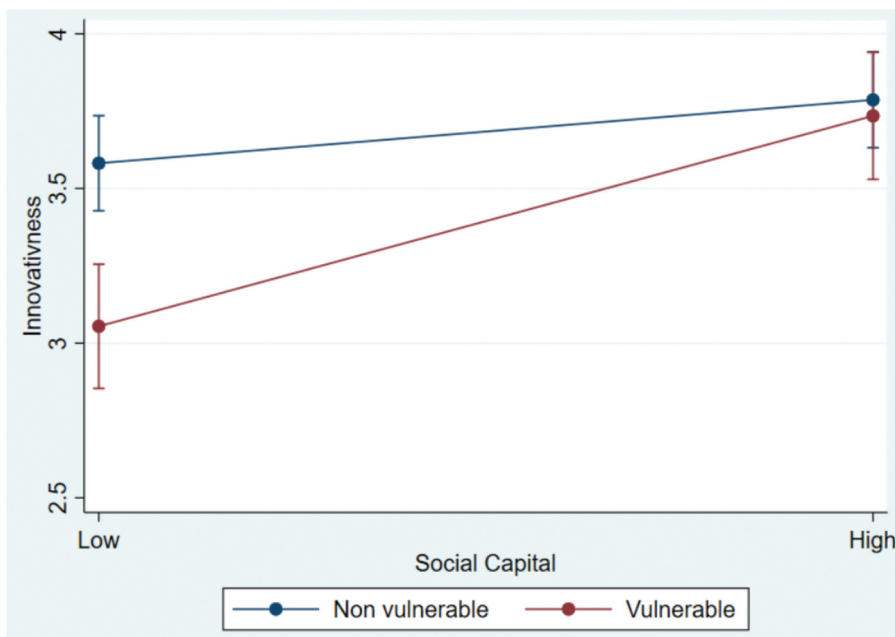


Figure 1. Interaction of vulnerability of the municipality and social capital.

municipalities. In fact, the performance of those vulnerable municipalities with high levels of social capital is indistinguishable from nonvulnerable municipalities.

Summary of results

In summary, we conclude that the group of vulnerable municipalities – a group that exhibits low resilience to change and that almost exclusively consists of SMSTs – has lower entrepreneurial orientation than other communities. We base this conclusion on their self-rated performance in our survey, which measures entrepreneurial orientation along three dimensions: risk-taking, proactiveness and innovation. In other words, the local governance of vulnerable places is less prone to find new and innovative ways of dealing with their problems, e.g. in offering services to their citizens and businesses. In the worst case, such low entrepreneurial orientation could contribute to regional lock-in and to negative path dependency.

However, when the vulnerable group is disaggregated, the results suggest that it is a quite heterogeneous group. Our data show that vulnerable places can be sorted into three broad clusters, each of which exhibit different levels of entrepreneurial orientations. The regression analyses further indicate that being a remote, sparsely rural, local community is a strong predictor of risk-taking.

When we include a dummy variable indicating the ‘vulnerable’ municipalities in the regression analyses while keeping other factors constant, we conclude that exhibiting this condition is indeed a negative predictor of all three types of entrepreneurial orientation. Further investigation reveals that this effect is to some extent dependent on the functioning of the local social capital, as vulnerable communities with strong local social capital perform much like other municipalities in terms of innovation. Hence, we conclude that our results are consistent with a role for strong local social capital in building resilience in vulnerable communities and urge for more research on this topic.

A further striking (non)finding from our study is that net of the vulnerability condition, economic and demographic factors are poor predictors of innovativeness, proactiveness, and risk-taking orientation of municipalities. Even discounting the fact that some economic conditions are implied by being vulnerable, we find this lack of a statistical association noteworthy. One interpretation of this result is that there is no ‘one size fits all’ description of ‘a vulnerable local community’. Further inquiries into this field may want to take this condition into account in further developing refined statistical measures.

7. Concluding remarks

In large parts of the world, small- and medium-sized towns, located outside the influence spheres of growing metropolitan areas, are facing severe challenges of deindustrialization, unemployment and depopulation. Sweden is no exception. In this paper, we have focussed on 100 municipalities (towns) that have been identified as vulnerable, the vast majority of them being classified as rural or sparsely rural. Based on the concept of policy entrepreneurship, we investigated their entrepreneurial orientation and its components. We found that, among other things, the vulnerable municipalities had a lower entrepreneurial orientation than other municipalities and that social capital was one of the few variables that had a positive association with the two components innovativeness and proactiveness. These findings underscore the difficulties that vulnerable municipalities face, but they show one variable that is positively correlated with aspects of their entrepreneurial orientation: local social capital.

The connection between policy entrepreneurship (in this study measured by its subcomponent entrepreneurial orientation) and social capital can be interpreted in several ways. On the one hand, it might be claimed that if these variables mutually influence each other, vulnerable municipalities have the possibility to take action to simultaneously strengthen their policy entrepreneurship and their social cohesion and decrease their vulnerability. On the other hand, it can

be argued that the association between policy entrepreneurship and social capital points to a long-term lock-in if the two variables are sluggish and cannot be changed much in the short run. Nevertheless, low levels of entrepreneurship in the traditional Swedish manufacturing belt *Bergslagen* over 40 years after the crisis of the 1970s indicate that this might be the case. A third interpretation, based on the fact that the vulnerable municipalities could be divided into three clusters with different levels of entrepreneurial orientation, could be that the cluster with the highest entrepreneurial orientation has better prerequisites to take action in comparison with the other two that are more characterized by lock-ins. Regional policies were introduced in Sweden 1965, but they have been unable to reverse the negative trend for many of the municipalities that today are identified as vulnerable.

The lack of connection between several common environmental factors and entrepreneurial orientation might, as noted above, be interpreted as evidence that municipalities react differently on external factors and that a reverse causality may exist in certain cases. This must be a subject of further research, but if it is correct, it means new challenges for the national regional policies. The results of this study do not give much guidance for the contents of such new policies, but if municipalities' entrepreneurial orientations are affected not only by their status as vulnerable but also by various external factors, this means that the 'one-size-fits-all' perspective, which still governs national regional policies should be abandoned and that policies should be much more tailor-made for the local level.

It should be noted that even if a new regional policy is able to adapt to local conditions and be based on innovative learning from experiments, it must also be founded on an understanding that small, peripheral and vulnerable places are totally dependent on the world outside them. The fact that the only peripheral municipalities in Sweden that show growth are those that satisfy a sufficiently strong metropolitan demand indicates that policies geared only towards the endogenous growth of such areas are doomed to fail and that the relative isolation of these areas is a main obstacle that must be handled by a supportive national policy for unique local solutions (Westlund 2018).

This study has shown that, for municipalities, the labels 'vulnerable', 'rural' and 'peripheral' often coincide. We have investigated their challenges and opportunities from a new policy entrepreneurship perspective and come up with some conclusions. Based on these conclusions, a number of new questions for future research can be formulated: What is the relationship between local policy entrepreneurship and external environmental factors, and do these relationships differ between various types of municipalities? To what extent does policy entrepreneurship pay off in the form of economic development? Does the pay-off differ between various types of municipalities and if that is the case, which factors contribute to the pay-off? Through which mechanisms are local social capital and policy entrepreneurship connected? What is the role of nonlocal, bridging social capital for local policy entrepreneurship?

The fact that current regional policies are insufficient for supporting vulnerable municipalities suggests that new policies should be developed and tested. In such a process of developing new policies, research on vulnerable areas' potentials and problems in the knowledge economy are indeed highly necessary.

Finally, the nature of the analysis, as it is built on broad questions and stated preferences, implies that our results should not necessarily be thought of as 'causal' but rather as exploratory in nature. A lack of reliable instruments means that there is certainly some risk of reverse causality in our estimates, as many variables covary, e.g. with region size. We stress here the 'big picture' nature of our results. We leave as an interesting avenue for future research to exploit, for instance, quasi-natural experiments to elucidate these issues while noting that such research will likely need to be much narrower in its approach. In addition, the multiple items we used to measure entrepreneurial orientation and social capital are Likert scales with five response categories. Although in entrepreneurship and management research (Wiklund and Shepherd 2003), as well as in other social sciences, the predominant view is that scales that are created by adding or averaging multiple items – with

five or more response categories – would result in approximately continuous variables (Hair et al. 2014), these variables might be ‘technically’ considered as discrete variables and – as such – they call for additional modelling techniques, such as ordinal logistic regression analysis. In addition, future research could profitably develop new instruments for a more refined analysis of entrepreneurial behaviours and social capital.

Note

1. Labour market regions consist of an aggregation of several municipalities.

Disclosure statement

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Appendix

Items of *entrepreneurial orientation*

(Rated on a 5-point scale)

Innovativeness

- (a) In our municipality, we focus on innovative activities.
- (b) In our municipality, we have introduced new products or services during the past five years.
- (c) There are several examples of how we have improved the municipality's offering of services to our citizens.

Proactiveness

- (a) Our municipality is often the first to do something new, which other municipalities attempt to replicate.
- (b) Our municipality is often the first to introduce new ways of operating.

Risk-taking

- (a) We are interested in projects that have not been attempted before but that may give valuable results.
- (b) Considering the state of the surrounding world, it is important to be bold to achieve the municipality's goals.
- (c) In the face of an unproven project, we act proactively to reap the benefits of the opportunities offered by the project.

Items for *perceived social capital*

(Rated on a 5-point scale)

- (1) Being a resident in our municipality is similar to living in a group of close friends.
- (2) In our municipality, people take care of each other.
- (3) When something needs to be done in our municipality, the whole community gets behind it.
- (4) Community clubs and organizations are interested in what is best for the municipality.
- (5) Please rate the friendliness of your municipality.
- (6) How would you rate your municipality on trust?