

Article

# Entrepreneurial Governance and Local Growth <sup>†</sup>

Amy Rader Olsson <sup>1</sup>, Hans Westlund <sup>2,3,4,\*</sup> and Johan P. Larsson <sup>3,5,6</sup>

<sup>1</sup> IQ Samhällsbyggnad (The Swedish Centre for Innovation and Quality in the Built Environment), Drottninggatan 33, SE-111 51 Stockholm, Sweden; amy.rader.olsson@iqs.se

<sup>2</sup> KTH Royal Institute of Technology, Teknikringen 10A, SE-111 44 Stockholm, Sweden

<sup>3</sup> Jönköping International Business School, P.O. Box 1026, SE-551 11 Jönköping, Sweden

<sup>4</sup> IRSA (Institute for Developmental and Strategic Analyses), Dunajska cesta 113, SI-1000 Ljubljana, Slovenia

<sup>5</sup> Department of Land Economy, University of Cambridge, 16-21 Silver St, Cambridge CB3 9EP, UK; jpl66@cam.ac.uk

<sup>6</sup> The Swedish Entrepreneurship Forum, Grevgatan 34, SE-114 53 Stockholm, Sweden

\* Correspondence: hanswes@kth.se; Tel.: +46-8-790-9242

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**Abstract:** Do local development policies influence local employment growth? Based on a survey to municipal managers in all Swedish municipalities, this is one of the first studies to empirically assess the relationship between reported local development initiatives (entrepreneurial governance (EG)) and growth of local employment. We find a weak but significant association between EG and employment growth for urban municipalities. This suggests that EG is more effective in larger, growing municipalities than in smaller, declining rural areas. Urban municipalities may of course have more resources for entrepreneurial governance than rural ones as they have grown substantially faster for a long period of time. The result thus indicates that EG and growth are in a positive interplay of interaction. When the EG index was divided into three sub-indexes after the entrepreneurial process (discover or create opportunities, collect resources and exploit opportunities) the analyses also showed positive correspondence between some sub-indexes and employment growth for the rural municipalities, indicating that EG is not solely a phenomenon connected to growth in urban, growing municipalities. In sum, the article indicates several avenues through which entrepreneurial governance at local level might be linked to local growth.

**Keywords:** entrepreneurial governance; municipal entrepreneurship; political entrepreneurship; local growth policy

## 1. Introduction

Though the traditional view of local development maintains that it is largely a function of economic forces at higher levels, local governments are increasingly involved in local development initiatives. We show that many local governments address not only local service provision but also local development in their policies and activities.

Local governments' efforts to actively foster expansion and economic development have been described as entrepreneurial behavior [1]. However, the insights from the entrepreneurship literature have been only weakly integrated with the literature on planning and governance. Therefore, this paper explores the concept of entrepreneurship in relation to development initiatives undertaken by Swedish municipalities. The purpose of this study is twofold:

1. To explore the applicability of knowledge in modern entrepreneurship research in the context of local development initiatives.
2. To analyze the statistical association between development initiatives on the one hand, and employment growth rates on the other, when factors normally associated with employment growth are controlled for.

To explore these issues, we used a questionnaire including both standard questions and the opportunity for open responses. This was our tool to characterize “entrepreneurial governance” and to identify similarities and differences between this collective form of entrepreneurship and traditional form entrepreneurship.

Our first research question is whether we can identify any statistical association between this type of entrepreneurial governance and employment growth in Swedish municipalities. Our second question is whether there are any differences between urban and rural municipalities. If entrepreneurial governance is positively related to local economic development, we should, *ceteris paribus*, see higher employment growth in municipalities with higher entrepreneurial governance scores. As growth has been higher in urban areas, this disparity begs the question of the role of policy and politics in bringing about growth in sparser areas.

The remainder of this section reviews existing conceptualizations of entrepreneurship and relationships between entrepreneurship and various spatial and contextual variables. Section 1 presents definitions and previous approaches to measure political/policy/public-oriented entrepreneurship. Section 2 presents the method, data and model. Section 3 presents the results. Analyses and interpretations are given in Section 4.

### 1.1. Entrepreneurial Governance

The concept of entrepreneurship is most often considered as being the starting of new firms, but it has recently been used more generally as a concept describing activities that discover or create new opportunities and exploit them in various ways. In an article with the title “We Are All Entrepreneurs Now,” Pozen [2] offers a comprehensive overview of the literature on these new interpretations of entrepreneurship. Westlund [3] coined the term “multidimensional entrepreneurship” for these different variants of the entrepreneurship concept.

We label municipal initiatives to promote local development by the use of new types of partnerships and institutions as “entrepreneurial governance,” and consider it as a type of policy-oriented entrepreneurship. The existing literature on this phenomenon uses terms as policy entrepreneurship, public entrepreneurship or political entrepreneurship and employ such diverse definitions that comparisons are difficult. Still, they often have a similar starting point: they focus on individuals, organizations or communities that attempt to capitalize on opportunities to use the political system to implement changes. The bulk of the literature discusses policy entrepreneurship (and its conceptual siblings) as a theoretical concept, often complemented by anecdotal evidence in support of the various theoretical interpretations of political/policy/public entrepreneurship.

Our understanding of entrepreneurial governance lies in the crossroad of the disciplines of business administration (entrepreneurship) and political science (governance). We take the entrepreneurial starting point in Shane’s and Venkatamaran’s [4] three stages of the entrepreneurial process: (1) identifying and evaluating opportunities; (2) collecting and mobilizing resources, and; (3) exploiting the opportunities (for private or collective utility). Our political science perspective is the focus on transformation of institutions underscored by, among others, Schneider and Teske [5], which, to our knowledge, is the first study to develop measures of political entrepreneurship. We want to measure activities aimed at being productive or developmental, and not for rent-seeking, and we define local entrepreneurial governance as activities that create new institutions for collective action or learning within a municipal governance framework.

In much of the literature, political/policy entrepreneurship is considered to contribute to innovation and renewal of the public sector (or contributing to private rent-seeking) [2]. Björkman

and Sundgren [6] contrast the concept of political entrepreneurship to the dominating (economic) view of entrepreneurship of exploiting market opportunities and view political entrepreneurship as mainly creating and exploiting opportunities within an organization. This organization-internal view on entrepreneurship is strongly connected to the intrapreneurship literature [7]. Stough and Haynes [8] view public sector entrepreneurship as a form of intrapreneurship, but stress that modern governmental organizations often follow an interactive model of governance involving a large number of stakeholders. Other definitions of political entrepreneurship even more explicitly stress the creation of new organizations or new norms and rules (institutions) or activities outside the restrictions of existing institutions [9,10]. These definitions come close to definitions of institutional entrepreneurship, which has been defined as “the endogenous transformation of institutional environments” [11,12].

Using the concept of public entrepreneurship, Klein et al. [13] (p. 2) state that “Public entrepreneurship is manifest in a variety of activities such as changing the institutional environment or rules of the game, establishing new public organizations, creating and managing new public resources, and taking advantage of spillovers by private action for the wider good.” Schneider and Teske [5] define political entrepreneurship as entrepreneurial innovation: “a speculative act of creative recombination that, when successful, transforms the institutional boundaries of authority” which also might involve non-market relations with external agents. Chatterjee and Lakshmanan [14] develop this perspective and describe political entrepreneurs in network terms, as nodes that link social and economic entrepreneurs. These, and many other authors, point out that opportunities for political entrepreneurs to develop new institutions for collective action are created when economic and social change (e.g., economic downturns) make institutional structures instable or obsolete.

One of the unique features of policy-oriented entrepreneurship stressed in the literature is endogenous institutional change. Municipal governments are highly constrained by multi-level institutions of regional or national rules, laws and regulations. Further, local charters often imply severe constraints to innovative actions. Municipalities having land use planning horizons over, say, twelve years—and several other interdependent administrative institutions adapted to this time frame—will have great difficulties to collaborate with municipalities with shorter or longer planning horizons. It might be very problematic to rapidly mobilize local budget funds to co-finance capital investments due to municipal institutions demanding local referenda, harmonization with budget cycles, etc. Thus, entrepreneurial governance involves the creation of new institutions for development, without necessarily changing or reforming existing ones. Our definition of entrepreneurial governance is therefore *new institutions, layered onto an existing institutional framework*. This definition of entrepreneurial governance resembles the definitions of Schneider and Teske [5] and Klein et al. [13] (see above) but we emphasize that the new institutions can be temporary and do not necessarily imply transformation of the underlying institutional framework that governs municipal activities.

### 1.2. Entrepreneurial Governance and Local Growth

The theories on entrepreneurship have been developed for explaining certain aspects of firms' behavior on the market, but as shown above, the entrepreneurship concept has spread to other social spheres. An initial question is to what extent this extension of the entrepreneurship concept can be justified. Firms are active on competitive markets in search of profits; politically governed bodies deal with redistribution of (parts of) the revenues that are realized on the market. As discussed already by Polanyi [15], this is a fundamental difference. However, even if the ultimate aims of entrepreneurship differ between the private and public sector (profit vs. public services), we hypothesize that entrepreneurial behavior can be classified within the same conceptual framework, i.e., to identify and evaluate opportunities, to collect and mobilize resources, and to exploit opportunities [4].

What relationship should we expect between local entrepreneurial governance (EG) and local growth? A simple cause and effect would be highly unrealistic; instead, it is reasonable to assume an iterative interplay between the two variables. We should also expect non-linear relationships. Activities aimed at early stages of the entrepreneurial process, i.e., activities with the purpose of identifying and

evaluating new development opportunities, have a long way to go before they can be expected to result in any growth. Many of the identified opportunities will never be realized, and many of them will be too uncertain to invest further time and resources in. However, EG activities focusing on a later stage in the entrepreneurial process, such as exploiting opportunities, should have a shorter road to results in the form of growth (if the earlier stages of the entrepreneurial process have been properly handled).

We can also assume a reverse causation, i.e., that growth leads to more tax revenues (and other revenues) for local government, which can be used for supporting entrepreneurial activities. The extent to which additional revenues are used for additional entrepreneurial activities or for other purposes (as e.g., increased expenditure on routine activities, or tax reductions) is determined by local political priorities, or expressed in another way: to what degree local authorities are political entrepreneurs. This circumstance gives support to the assumption that it is the policy/political entrepreneurship variable that is the dominating factor in the interplay between local entrepreneurial governance and growth. Nevertheless, it is important to understand that it is an interplay between the two factors; even if a lack of governmental resources might in some cases spur entrepreneurial governance, resource constraints may restrict entrepreneurial activities (EG) as well.

### *1.3. Agglomeration Gains, Entrepreneurship and Regional Growth*

Thick, urban local markets are well positioned to take advantage of shifting comparative advantages. Previous research on agglomeration gains has generally concluded that growth has become increasingly concentrated in dense regions—this holds true for Sweden as well as for other OECD economies [16]. Consumption and production motives to live in dense areas have both increased in importance over recent years. In the Swedish case, the simple correlation between accessibility (region size) in 2008 and growth in employment in 2009–2014 was 0.64, respectively (see the bivariate correlations in Table A3). This trend has been going on for decades [16].

Generally, people seem to exhibit increased preference for dense areas, in part because of higher productivity in such areas, in part because people increasingly appreciate what dense areas have to offer in terms of consumption [17]. Recent growth has benefited places that have experienced high growth historically, as is also evident from Appendix A Tables A1 and A2. The tables show that urban areas have grown more rapidly in all aspects and in all periods employed in this study. These past experiences have led us to analyze urban and rural places separately in the empirical part of this study. An interesting aspect of our article is to open up avenues for discussing whether EG can be a promising tool for lagging places.

Rural areas generally lack agglomeration advantages. Accessibility to markets, customers, suppliers, investment capital, human capital, etc., are most often lower in the countryside compared with cities. However, many rural policy programs focus on the need for entrepreneurship, and a growing research literature is studying rural entrepreneurship [18]. A Swedish study of self-employment has e.g., shown that start-up frequencies are twice as high in rural than in urban areas, but also that the rural start-ups are mainly in declining sectors such as agriculture and forestry, whereas urban start-ups are concentrated to growing service sectors [19].

The relationship between agglomeration and entrepreneurial governance is less obvious. It can be argued that more actors, resources and information in larger agglomerations should spur the emergence of new institutions and new forms of governance. However, it can also be argued that political entrepreneurship and policy innovation are a reaction to market failures, i.e., the thicker, more diverse markets of agglomerations make political/policy entrepreneurship less necessary, while policy entrepreneurship is a more pressing need where the market is weaker.

## 2. Materials and Methods

### 2.1. Data and Model

In contrast to some of the studies on political/policy entrepreneurship referred to above, our survey seeks to measure *collective capacity* for exploiting opportunities for innovation in local government activity rather than *individual capacity* for exploiting opportunities for personal gain within the constraints of local government activity. Expressed in another way, we study the role of local government in promoting and shaping a “local entrepreneurial social capital” [20]. Entrepreneurial governance at the local (municipal) level is a topic that with few exceptions (e.g., [4]) has been ignored by the literature. Sweden has a large share of income taxes accruing to municipalities. (About 20 percent of individuals’ incomes go to municipal taxes. Municipalities have public service responsibilities including childcare, schools, elderly care, local land use planning and local sector development (environment, energy etc.)). Many local services have the potential to benefit from innovative service provision initiatives.

Our study uses empirical data from a survey of Swedish municipalities who responded to open-ended and multiple choice questions about various types of activities (described in more detail below). The survey’s theoretical base was the three stages of the entrepreneurial process summarized by Shane and Venkataraman [15] as: (1) identify and evaluate opportunities; (2) collect and mobilize resources (in order to); (3) exploit opportunities. For each of the three stages, we asked questions on the following type of activities:

**Identifying and evaluating opportunities:** Questions on benchmarking, learning and competence development (8 questions, 0–10 index points).

**Collecting and mobilizing resources:** Questions on cooperation with local industry, co-financing of development projects with local industry, and cooperation with other municipalities (10 questions, 0–13 index points).

**Exploiting opportunities:** Questions on measures for strengthening local business climate, development projects (co-financed by EU and national agencies), and marketing of the municipality (22 questions, 0–30 index points).

Survey responses for each municipality were used as the basis for constructing an *entrepreneurial governance index (EG index)* as well as three sub-indexes for the three stages in the entrepreneurial process.

### 2.2. Survey Data

The survey was addressed to the administrative director of each municipality. The reason for selecting municipal directors as respondents is similar to that of Schneider and Teske [4], viz. that senior civil executives have an overview of municipal activities which makes them credible respondents. The survey was performed in May–June 2009 in the form of booked telephone interviews with the 290 municipal directors in Sweden. The response rate was 82%. The survey contained over thirty questions covering a range of activities outside the scope of compulsory municipal activities. Such activities comprise new forms of cooperation with business and with other municipalities to attract new business or new residents, participation in marketing, tourism and benchmarking initiatives, and participation in European Union projects related to local development.

### 2.3. Entrepreneurial Governance Scores

The replies in each category were first scored and tabulated. In total, the questions gave a potential score range of 0–53 points, an average of 28 points, and a maximum and minimum of 43 and 9 points, respectively.

Results were calculated for each individual municipality, which was categorized in urban and rural municipalities respectively, based on a division developed by the Swedish Board of Agriculture. The descriptive statistics are analyzed in detail below, but from Tables A1 and A2 and the correlation Table A3, some general trends emerge: urban municipalities (in principle, the regional centers) have

the highest EG score while the sparse rural ones have the lowest. This difference mirrors the difference in growth rates, but the latter is much more pronounced.

### 3. Results

#### 3.1. Descriptive Results

Municipality size had a slight negative correlation with the response rate, but a linear probability model indicates that increasing local population by 10,000 people (or about half the mean municipality size in our sample) decreases the probability of taking part in our survey by 1.5 percentage points, while our response rate is at a high 82 percent. This result implies that smaller municipalities are slightly overrepresented among our responses, but it should be noted that not being in the sample is not a meaningful predictor of our dependent or independent variables in the regression analysis. The negative correlation between being in the sample and future and present growth of employment never exceeds 0.1. The only independent variables that exhibit correlations in excess of 0.1 is the share of university educated in the local population (a negative correlation of 0.12) and the relative importance of simple manufacturing (a positive correlation of 0.12).

A problem in evaluating the responses is that an activity can be related to several stages of the entrepreneurial process and comparable replies can refer to quite different actions. One example is actions to strengthen local business climate, for which replies span from making information leaflets, to the creation of business councils, to municipal administrative reforms to speed up the handling of business-related permits. Therefore, we analyzed the correlations between the replies. The correlation analysis showed highly significant correlations (at the 0.01 significance level) between benchmarking and marketing activities (0.633), both of which were also strongly correlated with the amount of development projects financed by external sources (over 0.4 each). Activities for strengthening the business climate were strongly correlated with “cooperating with local industry” (0.509). Cooperation with other municipalities was most highly correlated with marketing activities (0.435), a finding that also was supported by the text answers; and municipalities often cooperated on common marketing of the region.

Some descriptive results from the survey have earlier been presented by Olsson et al. [21]. Below, the most important results are summarized:

- 76% of municipalities invest in surveys and related activities that measure local opinion among residents or businesses and/or benchmark results against that of other municipalities. 66% organize surveys among municipal employees or use other forms to stimulate ideas “from the floor”.
- Over 80 percent of municipalities report common projects with industry, and many of these projects have necessitated the creation of new organizations and institutions of governance such as commonly owned business development corporations. Half report that they develop local business policy in close dialogue with business leaders.
- Almost 50% of municipalities report investing in business incubators and a quarter invest in science parks.
- Only 1% of the municipalities did not participate in any EU projects, but as many as 29% did not have any projects financed by national sources. 57% of municipalities report having a dedicated coordinator for European proposals and programs.
- Almost all municipalities (94%) cooperate with neighboring municipalities to attract visitors and in-migrants.
- 96% of the municipalities cooperate with other municipalities within the same administrative region (county), but only 3% with municipalities outside their own region.
- Over 90% had undertaken specific initiatives to enhance the attractiveness of the municipality between 2006 and 2009, and one third reported having established a marketing company.

### 3.2. Model Specification and Quantitative Results

The model, using the growth rate of employment for municipality  $i$  ( $EmpGr_i$ ) in a cross-section between 2009 and 2014 is specified as:

$$EmpGr_{i,2009-2014} = \alpha + \delta index_i + X'_{i,2008}\beta + \gamma EmpGr_{i,2003-2008} + \varepsilon \quad (1)$$

The municipality variables, contained in  $X_i$ , on the right-hand side are generally from 2008, i.e., the year before the survey was performed. Previous growth of employment five years before the reporting period is included as an overall control variable. As our survey is conducted at one point in time, the empirical context precludes us from estimating the model with municipality fixed effects on the left-hand side. This issue implies that municipality-specific fixed effects may conflate the index variable, to the extent that they are correlated. We alleviate this problem by including previous growth on the right-hand side. This approach assumes that unobserved factors are reasonably time-invariant, and that what added to growth in the five years before the survey, did so in the five years following the survey as well. This variable, of course, also controls for other missing variables that contribute to growth, both in the past and in the present. Further, a long tradition in regional economics and quantitative economic history posits that ‘growth begets growth’; that growth is a cumulative process where historically gained increasing returns contribute to future growth (e.g., [22–24]).

The variables contained in the  $X_i$  matrix are:

- Regional attractiveness and agglomeration controls. The first set of controls contain controls for agglomeration economies, human capital, and regional attractiveness.
  - *Share high education*: Number of university-educated people (at least three years) relative to the total population. This variable acts as a proxy for the regional level of human capital and is standard in regional growth analyses [25]. Highly educated people may bring about faster growth through endogenous growth at the regional level [26].
  - *Average wage*: Following Frenken et al. [25], we include average wage. The average yearly wage among the employed population acts as a proxy for regional attractiveness as well as a further control for human capital over and above education. Further people of higher incomes can afford better man-made amenities and better afford to maintain natural amenities.
  - *Accessibility*: Time-distance discounted market potential (accessibility to wage sums) within Sweden. Since our level of observation is not functional (there may be dozens of municipalities in one labor market region), standard density measures are insufficient as controls for the density of economic activity, as there is too much interaction across municipality borders. The accessibility measure accounts for economic activity (discounted by travel times) in the municipality, in the region, and in the rest of the country (for a detailed discussion of the measure and its role as a proxy for agglomeration gains, see Klaesson et al. [27]). The accessibility measure is a ‘catch-all’ type variable that contains agglomeration gains even in the absence of a functionally defined region and has been previously employed by Andersson et al. [28] in the analysis of Swedish agglomeration economies.
- Labor market and industry characteristics. The second set of controls relate to the municipality’s labor market characteristics, as well as variables indicating the structure of local industry. Local industry structure has historically been linked to growth in the urban economics literature (e.g., [29,30]). Further, in recent decades, Swedish growth has heavily favored services (For instance, compare the growth figures in the top four rows of Tables A1 and A2 to the corresponding services shares per group of regions).

- *Employment share*: Share of employed people of total work force (20–64 years of age). This indicator informs about the general state of the labor market. A very low share at the beginning of the period may also provide some indication of ‘room to improve’.
- *Workplace shares*: Six variables describing the Eurostat definition of local workplaces (plants) in high-tech, medium-high, medium-low, and low-tech manufacturing, respectively, as well as the share of business services and other services. These variables account for that places with certain industry compositions may have been benefited over the time period. The literature that characterized future growth and entrepreneurship as contingent on historical industry structure dates at least back to Chinitz [29].
- *Average workplace size*: Average number of employees per local workplace. May indicate local entrepreneurship as well as minimum efficient scale in production [31]. Glaeser et al. [30] and Lee [32] have demonstrated a causal negative link between average workplace size and subsequent growth.

The final term on the right ( $\epsilon$ ) is a random, white-noise error term.

All variables are summarized in Table 1. Tables divided by urban and rural classifications are available in the Appendix A Tables A1 and A2. Bivariate correlations are found in Appendix A Table A3.

**Table 1.** Descriptive statistics for all municipalities.

Variable	Mean	Std. Dev.	Min	Max
Population growth 2009–2014	−0.9	3.9	−10.4	12.4
Employment growth 2009–2014	2.1	4.0	−8.4	15.9
Population growth 2003–2008	0.0	3.4	−8.0	13.6
Employment growth 2003–2008	0.0	6.2	−20.3	22.1
Entrepreneurial Governance (EG) index	28.1	6.5	9.0	43.0
Sub-index identify	4.8	1.4	0.0	7.0
Sub-index collect	8.7	2.1	2.0	13.0
Sub-index exploit	14.6	4.6	4.0	25.0
Higher education share	14.6	4.6	8.5	39.6
Accessibility (wage sums, SEK, log)	22.9	1.1	19.7	25.5
Employment share	0.79	0.04	0.63	0.87
Workplaces: Manufacturing: high-tech	0.00	0.00	0.00	0.01
Workplaces: Manufacturing: medium-high	0.01	0.01	0.00	0.05
Workplaces: Manufacturing: medium-low	0.04	0.02	0.01	0.24
Workplaces: Manufacturing: low-tech	0.03	0.01	0.01	0.11
Workplaces: Business services	0.25	0.07	0.12	0.60
Workplaces: Other services	0.3	0.0	0.2	0.5
Average workplace size (employees, log)	6.8	2.2	3.1	16.0

Note: N = 238.

Employment growth has been positive, on average. The Appendix A tables show that this development is almost entirely driven by urban municipalities, whereas rural municipalities have shown weak growth. There are also important urban-rural differences in education and industry structure.

From the correlation Table A3, it is evident that the accessibility (regional size) measure (row 10) exhibits high correlations with all growth variables, consistent with rather strong agglomeration effects in growth over the period.

Growth of employment has been heavily predicated on industry structure, where places high in services, particularly business services, have outgrown places heavy in manufacturing and simpler services along all growth definitions and time periods. The exceptions are places high in high-tech manufacturing, where growth is clearly positive but still lower than in places dominated by services. As may be seen from Tables A1 and A2, this difference may also be appreciated as an urban-rural issue.

While manufacturing is more prevalent in rural areas, services of all types, but particularly business services, are more common in urban areas.

Table A3 also shows the simple correlations between Entrepreneurial Governance (EG) and its sub-indexes, and employment growth in the periods before and after the year of the EG index. The correlations are weak for the overall index. However, the correlation matrix informs that some sub-index components (mainly identification of opportunities) are positively correlated with growth, while others (collecting and mobilizing resources) exhibit negative correlations.

The main results of the full entrepreneurial governance (EG) index and control variables with employment change are presented in Table 2. As a single factor, the EG index is not statistically significant but together with the control variables, it shows significance for all municipalities as well as for the urban ones, even though the coefficients are low.

The analysis is further developed in Table 3, which shows the covariations of the sub-indexes and other variables with growth of employment. As a single factor, the sub-index for activities for identifying and evaluating opportunities shows clear significance for the dependent variable in all categories of municipalities. This covariation remains significant in relation to employment growth when the control variables are added, even if the coefficients' values are reduced. The sub-index for collecting resources is mainly insignificant, both as a single variable and with control variables. However, in some cases, the sub-index is significantly negative when it is analyzed as a single factor.

The third sub-index, actions for exploiting opportunities, is as a single factor significant in one case (employment growth in urban municipalities), but together with the control variables, it is significant also when all municipalities are included.

**Table 2.** Full index regressions for urban and rural municipalities. Growth in terms of population and employment.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Municipality Selection	ALL		Urban		Rural		ALL		Urban		Rural	
Outcome (2009–2014)	Employment Growth (%)						Population Growth (%)					
Entrepreneurial Governance Index	0.030 (0.040)	0.052 * (0.029)	0.094 (0.057)	0.104 * (0.053)	0.022 (0.040)	0.036 (0.037)	0.022 (0.039)	0.043 * (0.024)	0.040 (0.056)	0.172 *** (0.046)	0.039 (0.039)	0.006 (0.029)
Share: University education		0.067 (0.075)		−0.228 ** (0.102)		0.274 ** (0.124)		−0.043 (0.064)		−0.347 *** (0.086)		0.192 * (0.100)
Accessibility to wage sums (ln)		1.384 *** (0.253)		1.370 ** (0.677)		1.114 *** (0.339)		1.335 *** (0.234)		1.276 ** (0.571)		0.990 *** (0.303)
Employment share		5.865 (5.577)		1.815 (10.015)		5.632 (7.317)		9.311 ** (4.566)		5.393 (8.055)		6.093 (5.842)
Share of plants: Manufacturing: high-tech		242.661 ** (107.269)		691.716 ** (277.091)		157.748 (123.105)		112.720 (89.685)		877.778 *** (230.763)		−4.577 (97.706)
Share of plants: Manufacturing: medium-high		−37.503 (34.187)		−125.108 (82.446)		−26.029 (40.001)		−0.360 (28.524)		−81.909 (66.190)		4.158 (31.418)
Share of plants: Manufacturing: medium-low		−24.001 ** (10.253)		−65.889 ** (29.311)		−11.445 (11.860)		−22.564 *** (8.580)		−53.303 ** (24.260)		−12.269 (9.416)
Share of plants: Manufacturing: low-tech		3.068 (15.773)		−14.261 (44.567)		14.264 (18.482)		−2.425 (13.153)		−91.476 ** (37.128)		16.502 (14.689)
Share of plants: Business services		1.699 (4.279)		−3.955 (5.903)		0.106 (7.031)		4.651 (3.635)		2.168 (4.889)		−4.160 (5.636)
Share of plants: Other services		19.224 *** (5.027)		0.782 (9.907)		21.087 *** (7.380)		9.050 ** (4.220)		−5.396 (8.093)		13.017 ** (5.961)
Average workplace size (employees, log)		0.116 (0.173)		0.333 (0.246)		−0.013 (0.266)		0.151 (0.143)		0.168 (0.206)		0.246 (0.211)
Average wage (ln)		2.707 (3.773)		8.297 (5.219)		1.224 (5.613)		5.841 * (3.151)		10.308 ** (4.317)		3.806 (4.449)
Employment growth (2003–08, ln)		0.106 *** (0.031)		0.146 *** (0.047)		0.078* (0.040)						
Population growth (2003–08, ln)								0.353 *** (0.058)		0.381 *** (0.088)		0.451 *** (0.077)
Constant	1.519 (1.171)	−76.839 * (43.473)	3.044 * (1.651)	−129.416 ** (57.439)	−0.109 (1.146)	−54.995 (64.960)	−1.303 (1.144)	−115.762 *** (36.264)	1.410 (1.623)	−156.056 *** (47.271)	−3.581 *** (1.135)	−83.298 (51.548)
Observations	238	238	74	74	164	164	238	238	74	74	164	164
R-squared	0.013	0.609	0.038	0.660	0.002	0.323	0.011	0.715	0.007	0.754	0.006	0.567

\*, \*\* and \*\*\* refers to significance at 10%, 5% and 1% levels respectively.

**Table 3.** Sub-index regressions for urban and rural municipalities. Growth in terms of employment.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Municipality Selection	All			Urban									Rural					
Sub-index: Identify	0.802 *** (0.185)			0.371 *** (0.128)			0.660 ** (0.327)			0.438 * (0.259)			0.494 *** (0.170)			0.382 ** (0.153)		
Sub-index: Collect		−0.297 ** (0.121)			−0.007 (0.084)			0.028 (0.191)			0.148 (0.137)			−0.182 (0.115)			−0.099 (0.105)	
Sub-index: Exploit			0.053 (0.056)			0.072 * (0.042)			0.129 * (0.077)			0.134 * (0.078)			0.042 (0.056)			0.058 (0.054)
Share: University education				0.076 (0.073)	0.091 (0.074)	0.065 (0.075)				−0.199 * (0.101)	−0.180 * (0.102)	−0.238 ** (0.105)				0.272 ** (0.122)	0.290 ** (0.124)	0.270 ** (0.125)
Accessibility to wage sums (ln)				1.291 *** (0.252)	1.374 *** (0.256)	1.385 *** (0.253)				1.377 ** (0.687)	1.081 (0.684)	1.416 ** (0.691)				1.004 *** (0.336)	1.101 *** (0.340)	1.114 *** (0.339)
Employment share				5.567 (5.515)	5.958 (5.620)	6.055 (5.581)				0.339 (10.055)	1.207 (10.263)	1.059 (10.066)				5.176 (7.165)	7.266 (7.325)	5.821 (7.289)
Share of plants: Manufacturing: high-tech				251.461 ** (105.699)	214.783 ** (106.947)	243.856 ** (107.570)				565.935 ** (269.879)	618.687 ** (281.103)	663.240 ** (277.565)				180.405 (121.058)	145.620 (122.281)	162.211 (123.400)
Share of plants: Manufacturing: medium-high				−34.163 (33.690)	−32.392 (34.327)	−38.340 (34.269)				−130.330 (83.399)	−116.021 (84.211)	−124.394 (83.073)				−22.445 (39.250)	−22.570 (39.955)	−27.005 (40.023)
Share of plants: Manufacturing: medium-low				−23.156 ** (10.126)	−25.987 ** (10.315)	−24.633 ** (10.232)				−65.926 ** (29.847)	−73.689 ** (29.651)	−71.928 ** (29.022)				−10.676 (11.638)	−13.339 (11.860)	−11.652 (11.832)
Share of plants: Manufacturing: low-tech				7.893 (15.373)	7.913 (15.703)	2.245 (15.900)				−2.301 (44.475)	−6.989 (45.374)	−12.740 (44.904)				18.630 (18.095)	16.675 (18.395)	13.058 (18.592)
Share of plants: Business services				1.777 (4.229)	1.319 (4.309)	1.592 (4.280)				−4.112 (5.959)	−3.363 (6.032)	−4.013 (5.950)				0.896 (6.920)	−0.196 (7.037)	−0.114 (7.028)
Share of plants: Other services				18.203 *** (4.975)	18.956 *** (5.061)	19.431 *** (5.036)				0.208 (10.213)	6.405 (9.787)	0.635 (10.108)				20.498 *** (7.225)	20.574 *** (7.354)	21.545 *** (7.417)
Average workplace size (employees, log)				0.168 (0.165)	0.199 (0.169)	0.105 (0.176)				0.464 * (0.251)	0.360 (0.251)	0.318 (0.250)				−0.002 (0.256)	0.065 (0.261)	−0.027 (0.268)
Average wage (ln)				1.845 (3.642)	1.154 (3.735)	2.737 (3.790)				5.845 (5.206)	7.415 (5.319)	8.241 (5.274)				1.302 (5.391)	−0.891 (5.524)	1.321 (5.604)
Employment growth (2003–08, ln)				0.107 *** (0.030)	0.103 *** (0.031)	0.105 *** (0.031)				0.169 *** (0.047)	0.153 *** (0.048)	0.146 *** (0.048)				0.075 * (0.039)	0.070 * (0.040)	0.078 * (0.040)
Constant	−1.450 (0.928)	4.941 *** (1.089)	1.589 * (0.875)	−64.558 (41.702)	−56.885 (42.972)	−76.835* (43.645)	2.293 (1.724)	5.420 *** (1.633)	3.781 *** (1.200)	−98.758 * (56.116)	−112.664 * (57.874)	−127.719 ** (58.130)	−1.508 * (0.829)	2.386 ** (1.064)	0.144 (0.869)	−54.159 (62.163)	−28.653 (63.931)	−56.075 (64.823)
Observations	238	238	238	238	238	238	74	74	74	74	74	74	164	164	164	164	164	164
R-squared	0.083	0.035	0.014	0.618	0.604	0.609	0.055	0.002	0.040	0.654	0.644	0.655	0.068	0.034	0.022	0.346	0.323	0.324

\*, \*\* and \*\*\* refers to significance at 10%, 5% and 1% levels respectively.

#### 4. Discussion

This paper has investigated correspondence between municipal growth initiatives, which we summarize under the caption of entrepreneurial governance (EG), and the development goals these new initiatives are meant to support. As noted, the relationship may well go in both directions; EG may affect local employment (if not, it would be a waste of municipal resources) but the propensity and ability to develop and perform EG activities is also a reflection of municipal conditions such as general economic development and demographic and spatial factors.

The analysis showed that entrepreneurial governance (EG) and employment growth was weakly but significantly correlated when control variables were included. When the municipalities were divided in an urban and a rural group, the EG index remained statistically significant in urban, but not rural, municipalities. One interpretation is that EG is more effective in bigger, growing municipalities than in smaller, declining ones. However, urban municipalities should, on average, have more resources for EG than rural ones as they have grown substantially faster for a long period of time. The result, thus, gives some support to the interpretation that EG and growth are in a positive interplay of interaction.

The sub-index “collecting resources” showed a negative, significant sign for municipalities as a whole, but lacked significance when the municipalities were divided in an urban and rural group. Instead, the sub-index “identifying opportunities” turned out to be significant for both municipality groups. The sub-index “exploiting opportunities” showed significance for all municipalities and (when divided) for the urban ones. This gives support to the same interpretations as above.

This study contributes to the still limited literature on political/policy entrepreneurship. The survey results show that entrepreneurial governance is a well established phenomenon in Swedish municipalities and that a large number of new institutions have been created to stimulate municipal development. These institutions consist of both projects or other formal agreements with private actors or other municipalities, but also of informal arrangements for knowledge exchange and learning. Municipalities are units of government and many of their institutions cannot be changed in a short or medium time perspective. This may explain our finding that much of the entrepreneurial governance takes place in cooperative projects organized outside the municipal organization. Many of these new institutions were temporary and formed to administer certain projects. Our interpretation is that these kind of solutions may have given municipalities more freedom to test new ideas and methods without risk for conflicts with procedural institutions and the transaction costs connected with it.

In sum, we find that municipal development initiatives can be interpreted in an entrepreneurial governance framework because they include making use of opportunities for reaching policy goals by gathering resources for forming new institutions that can evaluate and learn from own and others' experiences, foster new ideas and support experimentation. Thus, the types of municipal development initiatives we have studied can be considered a form of entrepreneurial governance and related to other forms of entrepreneurship.

The relationship between entrepreneurial governance and growth at the municipality level continues to be complex; entrepreneurial governance cannot be assumed to be completely independent of other local and regional factors, including growth trends. Our results call for further, more in-depth studies of policy entrepreneurship, its determinants and preconditions and its effects in various types of regions. Such studies should not only focus on “growth” but also on other objective and subjective welfare aspects.

To what extent might the results of this study be of relevance for other countries with a smaller public sector? Countries with smaller local government may have fewer resources for entrepreneurial activities. However, local governments in “small government” countries, at the same time, have fewer compulsory services to provide but are under a similar pressure to rationalize and innovate to handle taxpayers' money efficiently. One factor that might constitute significant differences between local governments' ability to act entrepreneurially is, of course, the institutional framework, i.e., to what

extent legislation allows local government to engage in the activities we analyze in this study and other types of political/policy entrepreneurship. This is a question for further studies as well.

Our definition of entrepreneurial governance—and the metrics used to define it—are still at an exploratory stage. We wish to stress that this is a single exploratory case study and that the results and their interpretations should be valued accordingly. Still, the results call for further studies of entrepreneurial governance in other countries and, perhaps also at other spatial levels.

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## Appendix A

**Table A1.** Descriptive statistics urban municipalities.

Variable	Mean	Std. Dev.	Min	Max
Population growth 2009–2014	2.5	3.4	−5.4	12.4
Employment growth 2009–2014	5.7	3.5	−2.7	15.9
Population growth 2003–2008	2.7	3.0	−4.3	13.6
Employment growth 2003–2008	3.1	6.3	−12.4	22.1
Entrepreneurial Governance (EG) index	27.6	7.1	9.0	43.0
Sub-index identify	5.1	1.2	1.0	7.0
Sub-index collect	8.1	2.2	3.0	13.0
Sub-index exploit	14.4	5.3	4.0	24.0
Higher education share	18.9	5.5	11.2	39.6
Accessibility (wage sums, SEK, log)	24.1	0.8	22.6	25.5
Employment share	0.79	0.04	0.69	0.86
Workplaces: Manufacturing: high-tech	0.002	0.002	0.000	0.008
Workplaces: Manufacturing: medium-high	0.011	0.004	0.001	0.025
Workplaces: Manufacturing: medium-low	0.030	0.012	0.005	0.072
Workplaces: Manufacturing: low-tech	0.024	0.007	0.009	0.048
Workplaces: Business services	0.309	0.082	0.137	0.598
Workplaces: Other services	0.37	0.05	0.26	0.50
Average workplace size (employees, log)	7.3	2.9	3.4	16.0

Note: N = 74.

**Table A2.** Descriptive statistics rural municipalities.

Variable	Mean	Std. Dev.	Min	Max
Population growth 2009–2014	−2.5	3.1	−10.4	7.1
Employment growth 2009–2014	0.5	3.1	−8.4	8.1
Population growth 2003–2008	−1.3	2.9	−8.0	8.8
Employment growth 2003–2008	−1.4	5.7	−20.3	14.5
Entrepreneurial Governance (EG) index	28.3	6.2	15.0	41.0
Sub-index identify	4.6	1.4	0.0	7.0
Sub-index collect	8.9	2.1	2.0	13.0
Sub-index exploit	14.8	4.3	5.0	25.0
Higher education share	12.6	2.4	8.5	20.1
Accessibility (wage sums, SEK, log)	22.4	0.8	19.7	24.2
Employment share	0.79	0.03	0.63	0.87
Workplaces: Manufacturing: high-tech	0.002	0.002	0.000	0.009
Workplaces: Manufacturing: medium-high	0.013	0.007	0.000	0.046
Workplaces: Manufacturing: medium-low	0.042	0.024	0.011	0.244
Workplaces: Manufacturing: low-tech	0.035	0.013	0.011	0.113
Workplaces: Business services	0.219	0.042	0.125	0.348
Workplaces: Other services	0.33	0.04	0.23	0.46
Average workplace size (employees, log)	6.5	1.8	3.1	11.8

Note: N = 164.

**Table A3.** Correlation matrix.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	Population growth 2009–2014	1.00																		
2	Employment growth 2009–2014	0.90	1.00																	
3	Population growth 2003–2008	0.68	0.62	1.00																
4	Employment growth 2003–2008	0.43	0.42	0.49	1.00															
5	Entrepreneurial Governance (EG) index	0.03	0.05	0.00	−0.04	1.00														
6	Sub-index identify	0.24	0.27	0.22	0.06	0.54	1.00													
7	Sub-index collect	−0.19	−0.16	−0.17	−0.09	0.66	0.15	1.00												
8	Sub-index exploit	0.06	0.06	0.02	−0.03	0.93	0.39	0.41	1.00											
9	Higher education share	0.60	0.60	0.51	0.32	0.07	0.18	−0.13	0.10	1.00										
10	Accessibility (wage sums, SEK, log)	0.74	0.64	0.64	0.35	−0.12	0.18	−0.25	−0.10	0.62	1.00									
11	Employment share	0.13	0.03	0.17	0.24	−0.08	−0.01	−0.03	−0.09	−0.04	0.18	1.00								
12	Workplaces: Manufacturing: high-tech	0.23	0.27	0.12	0.09	−0.18	−0.06	−0.11	−0.18	0.32	0.27	−0.04	1.00							
13	Workplaces: Manufacturing: medium-high	−0.01	−0.09	−0.08	−0.10	0.03	−0.03	−0.04	0.06	−0.17	0.07	0.06	0.04	1.00						
14	Workplaces: Manufacturing: medium-low	−0.22	−0.27	−0.22	−0.15	−0.05	−0.13	−0.06	0.00	−0.37	−0.08	0.12	−0.11	0.46	1.00					
15	Workplaces: Manufacturing: low-tech	−0.34	−0.34	−0.25	−0.19	0.17	−0.09	0.17	0.18	−0.46	−0.39	0.13	−0.20	0.13	0.21	1.00				
16	Workplaces: Business services	0.54	0.56	0.35	0.30	−0.02	0.13	−0.16	0.01	0.78	0.53	0.02	0.33	−0.24	−0.30	−0.44	1.00			
17	Workplaces: Other services	0.38	0.45	0.18	0.11	0.06	0.14	−0.07	0.08	0.25	0.23	−0.35	0.06	0.01	−0.14	−0.27	0.36	1.00		
18	Average workplace size (employees, log)	0.35	0.34	0.09	0.12	0.20	0.10	−0.07	0.28	0.32	0.19	−0.21	−0.01	0.21	0.17	−0.15	0.30	0.57	1.00	

N = 238.

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