Regional social capital and performance of senior entrepreneurs

Work in progress please do not disseminate

Marcin Rataj*^, Heike Mayer^

*corresponding author

^ Institute of Geography, University Bern

Keywords: entrepreneurship, social capital, aging, regional development

This paper investigates how regional levels of social capital are related to performance of senior entrepreneurs compared to younger entrepreneurial individuals. We use high quality employer - employee linked Swedish register data combined with indicators of local social capital. The results suggest that role of local social capital might not be of universal character, but instead the abundance of regional social capital might favor younger entrepreneurs and be most important in middle-sized cities.

Introduction

This paper examines the benefits of social capital for entrepreneurship in the context of two major societal challenges: population aging and unequal regional development. Population ageing attracts a lot of attention both from researchers and policymakers, but so far, the focus has been on extending working lives of the dependent employees. The formation and performance as well as survival of firms in the context of population ageing are less discussed in the literature. This might be a major oversight, since nascent entrepreneurs affect the economy by creating new jobs in new firms, but even more importantly by inducing productivity growth in existing companies due to increased competition (Parker 2018, p.253). Therefore, particularly under conditions of labor force shrinkage, regional economies might be in need for new companies in order to maintain high productivity.

Contrary to popular beliefs, entrepreneurship is not a domain of youth. In many countries, the relationship between age and propensity for becoming an entrepreneur follows an inverse U-shape pattern where propensity to establish new company starts to decline only around middle age (Parker, 2018). Furthermore, in Sweden, older individuals are increasingly often becoming entrepreneurs around the retirement age and yet at much older age in the rural municipalities (Backman and Karlsson, 2018). Moreover, once older workers establish an own company, they derive more job satisfaction and remain

economically active for a longer period as compared to dependent employees. In addition, starting entrepreneurial career even in senior age might be beneficial for the individual physical and psychological wellbeing (Kautonen et al., 2017; Nikolova, 2019). Therefore, it is crucial to gain more understanding of factors fostering entrepreneurship among older adults.

The focus of this paper are the benefits from local social capital and performance of senior entrepreneurs defined as individuals who are 55 and older in the moment of starting a company (Parker, 2018). The entrepreneurial performance is measured by employment growth and survival of firms. Mechanisms investigated in this paper rely on the particular significance of local social capital for individuals as well as regional economies. As emphasized by Parker (2018) the important feature of social capital is that it might play a substitutional role, i.e. compensate for other missing resources. This is because it facilitates the interaction between people and therefore shrinks the social distances between individuals with relevant knowledge and resources. From this perspective, it might play a different role for entrepreneurs depending on their age group. On the one hand, the life-course perspective stresses that financial and social resources are accumulated over lifetime (Henley 2007). Therefore, it might be of lower importance for older individuals who already managed to accumulate resources and to establish own strong personal networks during the course of their lives. On the other hand, social capital might help senior entrepreneurs to access knowledge and information that would be otherwise available mainly to younger cohorts.

The intensity of population ageing depends on the spatial scale, which also reinfroce already present regional differences to sustain growth and welfare provision. Therefore, there is a need to apply a geographic lens when studying economic activity in aging societies (McCann, 2017). In Sweden it is mainly in the rural and peripheral regions in northern and inland parts of the country that struggle with an aging population (Nordregio 2019). Entrepreneurship in remote and rural regions has own specificities, which are unfortunately disregarded in the mainstream regional development strategies, that tend to take perspective of highly urbanized locations (Westlund et al., 2014). There is thus a stressing need for more nuanced and less metropolis-centered research evidence (Mack and Mayer, 2016).

This paper fills this gap by considering the role of social capital at the local level, building on insights from studies suggesting that the same type of social and economic resources may play a different role depending on regional conditions (Eriksson and Rataj, 2019; Grek et al., 2011; Westlund et al., 2014). Nonmetropolitan regions have their specific advantages, such as lower costs of business locations and

increased protection against labour poaching (Eder and Trippl, 2019), or opportunities for more formal collaborations (Grillitsch and Nilsson, 2015). While there is a growing evidence on the role of social capital for formation and development of new companies (Parker 2018), the missing piece of the puzzle is how diverse is their importance from a regional perspective.

Literature review and hypotheses

The importance of social capital for entrepreneurship is widely acknowledged in the literature (Parker 2018). An entrepreneur does not act alone, but his or her social embeddedness provides an opportunity structures and resources that can be utilized in starting and running a company (Kloosterman 2010). Even personal attributes like knowledge are interdependent with the knowledge of other individuals (Rutten (2017). In the Swedish context for example, Westlund et al. (2014), shows that different aspects of social capital related to civil society contribute to the propensity of establishing a new enterprise.

While entrepreneurs are seen as agents of economic change, their capacity to reshape the regional economy also depends on the local context in which entrepreneurial opportunities are embedded. The importance of the local environment has been showed in a number of research articles (Stam, 2010). Relation-oriented perspectives on entrepreneurship highlight that similar to innovation and creativity, entrepreneurship is a social process (Florida et al., 2017). Rutten (2017) for example emphasizes that while knowledge in essence is personal, it is also interdependent with knowledge of other individuals. While human capital concerns personal skills and capabilities, social capital is created through interactions between people (Coleman, 1988).

Social capital consists of obligations, expectations and trustworthiness, information channels and the propensity to conform to social norms. Sandefur and Laumann (1998) identify three main benefits of social capital: information, influence and control, and social solidarity. High social capital allows for trust and cooperation among individuals, and obeying laws and social rules is beneficial to the entire local community. In the case of an entrepreneur, high social capital allows gathering and fulfilling obligations, exchanging information (and therefore saving time and money) and the expectation that the obligations of others will be met on time. A high level of social capital allows trust and cooperation among individuals, and the compliance with laws and social rules is beneficial for the local community. According to Scott and Storper (1995), the regional industrial culture (in terms of mutual trust) is therefore crucial for local economic development. Helliwell and Putnam (1995), as well as Putnam (2007), argue that higher social capital is a main source of the differences in economic growth.

Nevertheless, there is also some evidence of the ambiguous role of social capital. As emphasized by Malecki (2012), a high level of social capital can create too much bonding, which carries the risk of conformity and restricts entrepreneurial initiative and individual freedom. Two examples of the possible negative outcomes of social capital discussed in the literature are the closure of networks and collective blindness (Malecki, 2012; Tura and Harmaakorpi, 2005). According to Westlund and Bolton (2003), social capital can in fact play both an entrepreneurial-facilitating and an entrepreneurial-inhibiting role. While, generally speaking, most human networks act in line with society's interests, some networks, mutual commitments, and loyalties inhibit entrepreneurship rather than facilitating it.

To tackle this ambiguous role of social capital, a more in-depth analysis of its different aspects is needed. Already Granovetter (1973) distinguished between different types of relations: 'strong' ties such as family and friends and 'weak' concerning loose type of relationships such as acquaintances. A more recent distinction is between bonding and bridging aspects of social capital (Putnam, 2001). While bonding social capital represents dense networks of homogeneous groups (such as families), bridging social capital refers to more inclusive heterogeneous networks spanning over different groups within society. From the perspective of the individual entrepreneur, both types of social connections might be relevant when starting and running a business (Parker 2018).

However, although social ties per definition are made between individual actors, the regional aggregate of social capital also influence regional development (Cortinovis et al., 2017). In the case of Sweden, Westlund, Larsson, and Olsson (2014) provide some evidence that different aspects of social capital related to civil society at regional level can contribute positively to the propensity of establishing a new enterprise. An important remark by Westlund (2020) highlights that distinction between bridging and bonding social capital from geographical perspective might be a question of spatial scale – what is considered bridging social capital on lesser geographical scale might be considered bonding social capital on the larger.

Local social capital can be defined as social networks and the values, norms, and attitudes that are distributed through these networks, and whose benefits can be distributed across geographic units (Westlund and Larsson 2020). This concept is particularly useful to study the link between social capital and entrepreneurship from regional perspective since it by and large captures how associations can become local assets for entrepreneur or how local conditions can create obstacles in benefiting from them. Local membership in associations is a relevant indicator for comparing levels of social capital at regional level (Westlund and Adam, 2010). This concept is particularly useful to study the link between

social capital and entrepreneurship from regional perspective since it by and large captures how associations can become local assets for entrepreneur or how local conditions can create obstacles in benefiting from them.

In addition, as emphasized by Parker (2018) an important feature of social capital is that it might serve as a substitute for other resources that are otherwise unavailable for local entrepreneurs. In this regard, social capital might help senior entrepreneurs to access knowledge and information that would be otherwise available mainly to younger cohorts, but it might be of lower importance for older individuals who already managed to accumulate resources and to establish own strong personal networks during the course of their lives. From the life-course perspective, this substitute feature of local social capital might be of particular importance for younger individuals who have less time accumulate the necessary resources, such as professional contacts, work experience or financial capital, before starting their own business (Arenius and Minniti, 2005). Therefore, according to the first hypothesis one can expect:

H1: The level of local social capital is more related to better performance of younger entrepreneurs compared to the senior entrepreneurs.

Until present, there is very limited empirical research that investigates different effects of social capital for entrepreneurship in different types of regions. While certain locations might create specific type of opportunity structures or barriers for different types of entrepreneurs, social capital created through associational activities may reduce the disadvantages related to certain locations. In this regard, Eriksson and Rataj (2019) showed that this mechanism might be at work also at the regional level and therefore allows compensation for other missing resources in the local economy.

The substitute feature of social capital might be of particular importance not only for individuals with less accumulated resources, but also for regional economies where other resources are scarce such as rural regions. In case of such for regions, younger individuals less endowed with resources might be particularly reliant on local social capital. In addition, in case of the most urbanized metropolitan regions the local social capital based on civil associations might be too general to connect entrepreneurs to the key stakeholders that are the most important for the success of their companies. Therefore in dense urban networks other types of connections based on professional and not civic associations might be more important for the business success.

Therefore, according to the second hypothesis one can expect:

H2: The relation between regional social capital and the performance of younger entrepreneurs will be the least pronounced in the metropolitan areas.

Methods and data

In order to test the theoretical hypothesis this paper utilizes matched employer-employee data made available by Statistics Sweden. This dataset allows to link data on firms active in Swedish economy with the labor market history and socioeconomic information on individuals (owners and employees) working and managing these companies.

The focus of the present paper is on a cohort of firms that were established by individuals (not new branch plants) between 1996 and 1998. Therefore, the analysis includes all firms that could be linked to the activities of an individual entrepreneur. That is, firms that from the inception phase were owned by one individual and not by other companies. The new firms' performance is followed until 2012, which is the last year for which the information is available.

The performance of the new companies is measured by analysis of firm survival and employment growth. In the analysis of survival, it is investigated if the newly funded company managed to survive a seven-year period after the inception year. The period of approximately seven years is considered in the literature as the most unstable in terms of development of new companies: the majority of new start-ups cease to exist within this period and the employment of surviving companies reach more stable level (Parker 2018). For the companies that survived seven years the annual growth of employment is estimated. It is calculated as percentage change in employment between the first and the last observation year.

The measures of survival and employment are the two most common indicators used in the literature on firm performance (Parker 2018), and applying them together enables a discussion of the potential impact of entrepreneurs' characteristics on development of the regional economy from both a firm population and an employment perspective.

Regarding the analysis of survival, hazard models are particularly suitable. Hazard models allow incorporation of fixed-in-time and time-varying variables. They are also an appropriate analytical tool, because they deal with right censoring. This is an important issue in the present study, as observations are right-censored in the dataset if the exit of a firm is not observed until 2012. The basic time unit used in the study is a year, which means that continuous risk hazard models are not well-suited to this task. Therefore, the hazard rate model is estimated in a discrete time setting using logit function. The models estimated in the paper determine a discrete time hazard that is the conditional probability of experiencing

an event – in this case a firm exit – up to a particular time period, provided that this event has not occurred earlier.

To analyze the performance of new plants in relation to job creation, we use so-called 'hybrid' models (Bell and Jones, 2015). This type of model combines the efficiency of random effects (RE) models and the accuracy of fixed effects (FE) models to avoid the problem of heterogeneity bias. In hybrid models, the unobserved time-constant effect is decomposed into a random effect that is uncorrelated with the explanatory variables and the mean values of the time-varying regressors that, in turn, are expected to be correlated with the individual random effects. As emphasized by Bell and Jones (2015), such a specification allows the RE model to incorporate time-invariant variables and cross-level interactions to explicitly enable modelling variation in effects across space and time. This makes the method highly suitable to our research purpose, as it allows us to analyze the role of time-invariant regressors (such as an individual entrepreneur being born in the region of his economic activity), which is not possible in case of FE models.

The independent variables are regional characteristics as well as the characteristics of the business founder. The explanatory variables on individual level include educational background and sex of the founder. As the focus of this paper is on the differences between older and younger entrepreneurs another binary variable distinguish if the individual was not senior entrepreneur (below 55 year old) when starting accompany. In addition, different types of founder's labor market experience prior to starting a business might influence the performance of a new company. Therefore we control whether the individual has been unemployed, had already entrepreneurial experience, experience in the same sector as the new company or in a related sector (c.f., Svaleryd 2015; Niittykangas and Tervo 2005; Taylor, 1999).

To account for the role of embeddedness of each new firm in the regional industry-mix, measures of both specialization and variety were introduced. Absolute specialization captures the number of workplaces active in the same sector in the region (measured by 4-digit NACE code) and indicates the size of the industry with the highest cognitive proximity to a newly started company. Variety is divided into two different variables: related and unrelated sectors (cf., Frenken et al., 2007). Related sectors measures the number of plants active in the related industries and indicates the size of the industry with some degree of cognitive proximity (Boschma and Frenken, 2009). To identify such sectors we follow Neffke and Henning (2013) and use a labor-flow-based approach in which sectors with higher than expected flows of labor between each other are assumed to share human capital recourses and hence are skill-related. The total number of plants in the region defined as such are then summarized. Unrelated sectors are then defined as the total number of plants excluding those in the same and related industries.

Finally, the size of the company at the inception phase was used as an approximation of the resources invested in the company. These variables represent most of individual characteristics identified in the literature as important for the start-up formation and survival (Beutell, 2007; Gimenez-Nadal et al., 2012; Taylor, 1999).

In this paper, the Local Social Capital is the variable of the main interest on the regional level. As emphasized by (Malecki, 2012; Rutten and Gelissen, 2010), social capital in essence concerns individuals and their social relations and is difficult to empirically operationalize at regional level. This paper follows recommendations of (Westlund and Adam, 2010), who suggest in the context of economic performance, the declared trust in other people and membership in associations are two most commonly applied measures of social capital. According to (Westlund and Adam 2010) the former tends to be more suited for international comparisons, and the latter for comparing levels of social capital on regional level. The membership in associations is also used to capture differences across regions in 'bridging aspect' of social capital how heterogonous and inclusive networks are within society(Crescenzi et al., 2013). Therefore we use the number of associations (per 1000 inhabitants) registered on the municipality level as a proxy for social capital. The data on associational activity are available online via registers of Bolagsverket (Swedish company registration office), which also provide a register of foundations and various types of associations.

Finally, our estimation strategy considers other regional characteristics potentially important to entrepreneurial success. Population size, defined as the number of people living in the FA region during the analyzed period (1996-2012), was introduced to account for regional size. Average regional salary in 100 SEK for the population of productive age (16-64) was also included to account for average regional productivity as well as the regional purchasing power (Andersson and Koster 2010). As a final controller, we also include national GDP growth to account for the change in national demand and the general economic situation.

All regional characteristics were calculated at the level of functional regions (FA regions), where each of the 290 Swedish municipalities is assigned to one of the 72 regions (Tillvaxtanalys, 2013). This geographical division reflects the scale of the labor market in which each individual operates as well as potential business connections, as the functional region reflects most of the commuting opportunities between places of residence and business locations.

For the comparison of different types of Functional regions (FA regions) division developed by the Swedish Agency of Economic and Regional Growth (2011) was used. The 72 FA regions are delimited based on commuting patterns and economic connections between Swedish municipalities. These includes metropolitan (3), urban (19), and rural (50) regions.

Results and discussion

The results of models estimations are presented in Table 1 and 2. The logistic regression models (Models 1-5) measure the performance of the new companies in terms of probability of firm survival during the seven years period after the establishment of the company. For the firms that survived the seven years period, 'hybrid' models (Bell and Jones, 2015) models were estimated (Models 6-10) with average annual job growth rate as dependent variable and with the same explanatory variables as in the logistic regression models.

For both measures of firm performance the first model (Model 1 and 6) present result estimations from the analysis that include a variable indicating the status of entrepreneur as senior (older than 55 at the moment of starting a company), the level of regional social capital and the full set of controlling variables. According to these results, belonging to group of senior entrepreneurs is associated with higher probability of firm survival but lower employment growth. Higher levels of Local Social Capital are significantly related to the employment growth of new companies, but not to their survival.

In the next step (Model 2 and 7) models with the same set of variables were estimated, but additionally the interaction effect between being senior entrepreneur and the level of local social capital was included into the model. The negative and statistically significant value of this interaction in Model 2 indicates that a higher value of local social capital is related to lower probability of survival of senior entrepreneurs compared to non-senior entrepreneurs. Similarly in case of Model 7 the negative and significant value of the interaction indicates that a higher value of local social capital is related to higher employment growth of companies established by non-senior entrepreneurs compared to companies established by senior entrepreneurs. Both these results confirm Hypothesis 1 stating that the level of local social capital is more related to better performance of younger entrepreneurs compared to the senior entrepreneurs.

In the following step (Models 3-5 and Models 8-10) models with the same specification as Models 2 and 7 were estimated, but separately for metropolitan, urban and rural regions. Similarly, to Model 1 and 2 the results of Model 3-5 indicate that local social capital is not significant factor explaining differences in firms´ survival.

However, the estimation results for employment growth (Model 8-10) indicate that only in case of urban and rural regions, but not in case of metropolitan regions higher level of local social capital can be associated with better firm performance. This confirms prediction of Hypothesis 2 stating that the relation between regional social capital and the performance of younger entrepreneurs will be more pronounced in non-metropolitan areas.

The remaining control variables tend to reveal similar associations with the measures of performance across different model specifications. These effects are chiefly either not significant or in line with previous empirical findings. For example being unemployed prior to starting a new company is associated with higher exit rate and lower employment growth. Similar effect can be observed for female entrepreneurs.

The results of this study indicate that the level of local social capital is not universally related to the performance of entrepreneurs. Instead, the abundance of local social capital might favor younger entrepreneurs compared to senior entrepreneurs. At the same time, the performance of senior entrepreneurs seems to be less related to local social capital. Still this relation between entrepreneurship performance and local social capital seems to be less important for metropolitan areas.

Table 1: Probability of survival

	Model 1	Model 2	Model 3	Model 4	Model 5
	All firms	All firms interaction	Firms in metropolitan regions	Firms in urban regions	Firms in rural regions
Local Social Capital	-0.0336	-0.0322	0.430	-0.0684	-0.0469
	(-0.80)	(-0.76)	(1.27)	(-0.54)	(-0.93)
Employment at start	0.220***	0.220***	0.154***	0.268***	0.259***
	(18.64)	(18.64)	(8.76)	(12.85)	(10.09)
Absolute specialization	-0.00000694	-0.00000705	-0.0000802***	0.000795***	0.000794***
	(-0.29)	(-0.29)	(-2.80)	(6.72)	(5.47)
Related variety	-0.0000285***	-0.0000285***	-0.0000307**	-0.0000605*	-0.0000974
	(-4.37)	(-4.37)	(-2.48)	(-1.66)	(-1.61)
Unrelated variety	-0.0000162**	-0.0000162**	-0.0000224*	-0.0000331	0.00000463
	(-2.51)	(-2.51)	(-1.81)	(-0.95)	(0.08)
Firm age (ln)	0.561***	0.561***	0.631***	0.471***	0.474***
	(23.35)	(23.34)	(18.35)	(10.70)	(8.70)
GDP	1.028***	1.032***	1.424***	-0.0161	-0.0142
	(4.44)	(4.45)	(3.23)	(-0.02)	(-0.03)
Population	-0.00000196	-0.00000195	-0.00000243	0.00000110	-0.0000127
	(-0.97)	(-0.97)	(-0.55)	(0.12)	(-0.51)
Average salary	-0.00341***	-0.00342***	-0.00431***	0.000180	-0.000580
	(-5.35)	(-5.36)	(-2.85)	(0.10)	(-0.42)
Female	-0.145***	-0.144***	-0.104***	-0.153***	-0.230***
	(-8.89)	(-8.86)	(-4.51)	(-5.04)	(-6.15)
Higher education	-0.0269	-0.0271	-0.0356	-0.0391	0.0314
	(-1.56)	(-1.57)	(-1.52)	(-1.19)	(0.71)
Senior Entrepreneur	0.106***	0.197***	0.202	0.0599	0.0484
	(4.60)	(3.39)	(0.83)	(0.37)	(0.49)
Unemployed	-0.0992***	-0.0993***	-0.0600	-0.175***	-0.0784
	(-3.64)	(-3.64)	(-1.48)	(-3.71)	(-1.25)
Entrepreneur	0.0968***	0.0973***	0.0857*	0.186***	0.0202
	(3.45)	(3.46)	(1.86)	(3.91)	(0.36)
Experience Same Industry	0.230***	0.230***	0.181***	0.240***	0.309***
	(11.61)	(11.61)	(6.36)	(6.65)	(6.86)
Experience Related industry	0.0787***	0.0787***	0.0736***	0.0600*	0.124***
	(4.50)	(4.50)	(2.99)	(1.84)	(3.03)
Local Social Capital* Senior entrepreneur		-0.0405*	-0.0161	0.0140	-0.0154
		(-1.71)	(-0.13)	(0.19)	(-0.54)
_cons	8.802	8.936	-0.0348	1.877	1.954
	(1.17)	(1.18)	(-0.01)	(.)	(.)
N	279748	279748	139760	80719	58263

t statistics in parentheses, * p<0.10, ** p<0.05, *** p<0.01

Table 2: Employment growth

	Model 6	Model 7	Model 8	Model 9	Model 10
	All firms	All firms interaction	Firms in metropolitan regions	Firms in urban regions	Firms in rural regions
Local Social Capital	0.0458*** (2.86)	0.0692*** (4.28)	0.162 (1.46)	0.169*** (3.32)	0.0443** (2.37)
Employment at start	0.124*** (12.72)	0.127*** (12.93)	0.272*** (18.82)	0.0326** (2.01)	-0.111*** (-5.79)
Absolute specialization	-0.0000623*** (-8.06)	-0.0000610*** (-7.90)	-0.0000900*** (-9.92)	-0.0000637 (-1.40)	0.0000725 (1.42)
Related variety	0.00000983*** (4.48)	0.0000100*** (4.58)	0.00000663* (1.66)	0.0000784*** (5.04)	-0.0000246 (-1.08)
Unrelated variety	0.00000846*** (3.88)	0.00000861*** (3.95)	-0.00000141 (-0.35)	0.0000207 (1.50)	-0.0000572*** (-2.88)
Firm age (ln)	0.337*** (15.90)	0.337*** (15.87)	0.287*** (10.31)	0.318*** (7.24)	0.422*** (9.47)
GDP	-0.794*** (-7.54)	-0.786*** (-7.46)	-0.567*** (-3.06)	-1.560*** (-5.08)	-1.117*** (-5.32)
Population	-0.00000314*** (-4.58)	-0.00000318*** (-4.64)	0.000000746 (0.53)	-0.0000106*** (-2.73)	-0.0000115 (-1.31)
Average salary	0.00106*** (4.23)	0.00104*** (4.18)	0.000312 (0.59)	0.00308*** (3.88)	0.00154*** (3.23)
Female	-0.237*** (-6.27)	-0.235*** (-6.22)	-0.268*** (-5.06)	-0.274*** (-4.12)	-0.00125 (-0.02)
Higher education	0.0386 (0.89)	0.0349 (0.81)	0.0912 (1.60)	-0.0651 (-0.84)	0.0457 (0.47)
Senior Entrepreneur	-0.347*** (-6.47)	0.483*** (5.23)	1.234*** (6.65)	0.704*** (3.06)	0.335** (2.03)
Unemployed	-0.333*** (-4.26)	-0.330*** (-4.23)	-0.302*** (-2.73)	-0.422*** (-3.29)	-0.151 (-0.95)
Entrepreneur	-0.263*** (-4.65)	-0.262*** (-4.64)	-0.366*** (-4.10)	-0.231*** (-2.63)	-0.205** (-1.96)
Experience Same Industry	-0.0452 (-1.55)	-0.0474 (-1.63)	-0.0565 (-1.38)	-0.133** (-2.41)	0.0832 (1.40)
Experience Related industry	-0.110*** (-4.55)	-0.112*** (-4.61)	-0.119*** (-3.57)	-0.168*** (-3.49)	0.0585 (1.13)
Local Social Capital* Senior entrepreneur		-0.364*** (-11.04)	-0.720*** (-8.92)	-0.493*** (-4.97)	-0.275*** (-6.36)
_cons	-0.749 (-0.04)	-0.604 (-0.04)	0 (.)	0 (.)	1.118 (0.07)
N	210684	210684	104173	60942	45569

References

Arenius P, Minniti M, 2005, "Perceptual Variables and Nascent Entrepreneurship" *Small Business Economics* **24**(3) 233–247

Beutell N J, 2007, "Self-Employment, Work-Family Conflict and Work-Family Synergy: Antecedents and Consequences" *Journal of Small Business & Entrepreneurship* **20**(4) 325–334

Borggren J, Eriksson R H, Lindgren U, 2016, "Knowledge flows in high-impact firms: How does relatedness influence survival, acquisition and exit?" *Journal of Economic Geography* **16**(3) 637–665

Casadesus G, Shukitt-Hale B, Joseph J A, 2001, "Automated measurement of age-related changes in the locomotor response to environmental novelty and home-cage activity" *Mechanisms of Ageing and Development* **122**(15) 1887–1897

Coleman J S, 1988, "Social capital in the creation of human capital" *The American Journal of Sociology* **94**

Cortinovis N, Xiao J, Boschma R, van Oort F G, 2017, "Quality of government and social capital as drivers of regional diversification in Europe" *Journal of Economic Geography* **17**(6) 1179–1208

Crescenzi R, Gagliardi L, Percoco M, 2013, "The 'Bright' Side of Social Capital: How 'Bridging' Makes Italian Provinces More Innovative", in *Geography, Institutions and Regional Economic Performance* Advances in Spatial Science (Springer, Berlin, Heidelberg), pp 143–164, https://link.springer.com/chapter/10.1007/978-3-642-33395-8_8

Eriksson R, Rataj M, 2019, "The geography of starts-ups in Sweden. The role of human capital, social capital and agglomeration" *Entrepreneurship & Regional Development* 1–20

Florida R, Adler P, Mellander C, 2017, "The city as innovation machine" *Regional Studies* **51**(1) 86–96

Gimenez-Nadal J I, Molina J A, Ortega R, 2012, "Self-employed mothers and the work-family conflict" *Applied Economics* **44**(17) 2133–2147

Granovetter M S, 1973, "The Strength of Weak Ties" *American Journal of Sociology* **78**(6) 1360–1380

Helliwell J F, Putnam R D, 1995, "Economic growth and social capital in Italy" *Eastern Economic Journal* 295–307

Malecki E J, 2012, "Regional social capital: why it matters" *Regional Studies* **46**(8) 1023–1039

Mayer H, Leick B, 2019, "Entrepreneurship and ageing: exploring an economic geography perspective" *Handbook of Research on Entrepreneurship and Aging*, https://www.elgaronline.com/abstract/edcoll/9781788116206/9781788116206.00009.xml

Parker S C, 2018 *The economics of entrepreneurship* (Cambridge University Press)

Putnam R D, 2001 *Bowling alone: The collapse and revival of American community* (Simon and Schuster)

Putnam R D, 2007, "E Pluribus Unum: Diversity and Community in the Twenty-first Century The 2006 Johan Skytte Prize Lecture" *Scandinavian Political Studies* **30**(2) 137–174

Robinson O C, 2012, "Values and adult age: findings from two cohorts of the European Social Survey" *European Journal of Ageing* **10**(1) 11–23

Rutten R, 2017, "Beyond proximities: The socio-spatial dynamics of knowledge creation" *Progress in Human Geography* **41**(2) 159–177

Rutten R, Gelissen J, 2010, "Social Values and the Economic Development of Regions" *European Planning Studies* **18**(6) 921–939

Scott A J, Storper M, 1995, "The wealth of regions: Market forces and policy imperatives in local and global context" *Futures* **27**(5) 505–526

Stam E, 2010 *Entrepreneurship, evolution and geography. Boschma, RA & Martin, RL (eds.) The Handbook of Evolutionary Economic Geography, 139–161* (Cheltenham: Edward Elgar)

Taylor M P, 1999, "Survival of the Fittest? An Analysis of Self-Employment Duration in Britain" *The Economic Journal* **109**(454) 140–155

Tura T, Harmaakorpi V, 2005, "Social capital in building regional innovative capability" *Regional Studies* **39**(8) 1111–1125

Westlund H, Adam F, 2010, "Social Capital and Economic Performance: A Meta-analysis of 65 Studies" *European Planning Studies* **18**(6) 893–919

Westlund H, Bolton R, 2003, "Local Social Capital and Entrepreneurship" *Small Business Economics* **21**(2) 77–113

Westlund H, Larsson J P, Olsson A R, 2014, "Start-ups and Local Entrepreneurial Social Capital in the Municipalities of Sweden" *Regional Studies* **48**(6) 974–994