

Effect of Rurality and Human Capital Resources in the Entrepreneurial Opportunity Identification Process

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Abstract

In this paper, that is a country study of Slovenia, we tried to determine why individuals in rural residential areas are less likely to recognize entrepreneurial opportunities. Our results show that the increase in resources in human capital, consisting of education, skills, knowledge, and experiences in entrepreneurship, has a significant and positive effect on opportunity identification. For policy creators, our results suggest that policies focused on entrepreneurial education—especially education that would enable the acquisition of real-life entrepreneurial experiences and skills—are useful, especially in rural areas.

Keywords: entrepreneurship, human capital, opportunity identification, rural areas

1 Introduction

“Rurality defines a territorially specific entrepreneurial milieu with distinct physical, social and economic characteristics” (Stathopoulou, Psaltopoulos, & Skuras, 2004, p. 404). Rurality viewed as a dynamic entrepreneurial resource is what makes rural entrepreneurship an interesting field of research. This paper focuses on the process of entrepreneurial opportunities recognition. Although entrepreneurship is seen as a means of revitalizing rural areas, we believe that this topic is especially interesting for research because of the constraints and sources that individuals in rural areas are facing in terms of entrepreneurial activity.

According to the entrepreneurship literature, small new start-up entrepreneurial ventures encounter initial resource disadvantages compared to large established firms and, as a result, they need to depend on outside resource suppliers to compensate for their inherent resource disadvantages (Cooper & Folta, 2000; Venkataraman, 1997). In other words, external network partners can help prospective entrepreneurs overcome their inherent resource constraints (Floyd & Wooldridge, 1999; Johannisson, Alexanderson, Nowicki, & Senneseth, 1994; Low & MacMillan, 1988), and this is one of the reasons why the entrepreneurial process can start

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and develop based on repeated interactions with external resource providers (Aldrich & Zimmer, 1986). The social networks needed for new firm creation can be developed and fostered through geographic proximity—namely, new venture locations in urbanized clusters (Cooper & Folta, 2000). However, a rural environment does not provide prospective entrepreneurs with such location-specific advantages, resulting in an uneven distribution of resources for individuals across rural and urban regions. A better understanding of resources and the usage of those resources in the process of opportunity identification for their further exploitation within the entrepreneurial activities could support the creation and improvement of existing public policies for fostering rural entrepreneurship. Opportunities are viewed as a key concept within the entrepreneurial process, and the concept of alertness to profit opportunities is receiving a lot of attention, especially within the contemporary entrepreneurial literature (Kirzner, 2009; Shane, 2003; Shane & Venkataraman, 2000; Short, Ketchen, Shook, & Ireland, 2010). Venkataraman and Sarasvathy (2001) described entrepreneurial opportunity using four components: (i) new ideas or innovation; (ii) either subjectively perceived or objective goals; (iii) beliefs in the possibility of achievements of these goals; and (iv) the implementation of goals through the creation of output within the entrepreneurial-economic activity. This description combines two different elements or steps of the entrepreneurial process, where the opportunity recognition or discovery process precedes the opportunity exploitation process (Bhave, 1994; Shane & Venkataraman, 2000). In this paper, we focus on the first factor—that is, the opportunity recognition process.

2 Theoretical Background

2.1 Rural and urban areas

In 2011, 41% of the population of the European Union (27 member states) lived in urban regions, 35% in intermediate regions, and 23% in rural regions (Eurostat, 2012), with the regions being classified as urban, intermediate, or rural based on an analysis of the population density and total population. The largest shares of the population living in urban regions were recorded in Malta (entire population), the Netherlands and the United Kingdom (both 71%), and Belgium (68%). Luxembourg and Cyprus (each a NUTS 3 region¹) were classified as intermediate. With the exception

of these two member states, the largest proportions of the population living in intermediate regions were observed in Sweden (56%), Estonia (52%), and Bulgaria (45%). The largest shares of the population living in rural areas were registered in Ireland (73%), Slovakia (50%), Estonia (48%), and Hungary (47%). In Slovenia, almost half of the population (43%) lives in rural areas, less than one third (31%) in intermediate, and 26% in urban areas. The average population density in Slovenia is 101.1 inhabitants per square kilometer.

In the EU, the urban–rural typology, as previously described, is based on a classification of grid cells within a square kilometer as either urban or rural (Eurostat, 2012). To be considered as urban, grid cells should fulfill two conditions: a population density of at least 300 inhabitants per square kilometer and a minimum population of 5,000 inhabitants in contiguous cells above the density threshold. The other cells are considered as rural. NUTS 3 regions have been classified into three groups based on the classification of these grid cells:

- predominantly urban region: the population in the grid cells classified as urban makes up more than 80% of the total population
- intermediate region: the population in the grid cells classified as urban makes up between 50% and 80% of the total population (population in rural cells between 20% and 50%)
- predominantly rural region: the population in the grid cells classified as rural makes up 50% or more of the total population.

The EU typology is also used by the Statistical Office of Republic of Slovenia (with some slight modifications); this typology is also adopted in this paper. Urban settlements and settlements within urban areas are determined based on four criteria (Statistical Office of the Republic of Slovenia, 2012): (i) settlements with 3,000 inhabitants or more (formal criterion); (ii) settlements with 2,000–2,999 inhabitants and more workplaces than persons in employment living in these settlements (formal, functional criterion); (iii) settlements that are seats of municipalities and have at least 1,400 inhabitants and a surplus of workplaces or settlements that are seats of municipalities and have at least 2,000 inhabitants (formal, functional criterion); and (iv) suburban settlements that have fewer inhabitants but are gradually being spatially and functionally integrated with an urban settlement with 5,000 inhabitants or more, thereby becoming urban areas; functional criterion linking labor migration is used, while the share of agricultural holdings in the suburban settlement is used as a separation criterion (physiognomic-morphological, functional criterion). Non-urban settlements are all other settlements that do not meet the statistical definition of urban settlements and settlements within urban areas.

¹ The Nomenclature of Territorial Units for Statistics or Nomenclature of Units for Territorial Statistics (NUTS) is a geocode standard for referencing the subdivisions of countries for statistical purposes. The standard is developed and regulated by the European Union and, thus, only covers the member states of the EU in detail.

2.2 Differences in the opportunity recognition process in rural and urban areas

The realization of entrepreneurial activity begins with the identification of an entrepreneurial opportunity (Bhave, 1994). As already pointed out, Kirzner (1979) defined entrepreneurs as individuals who are more likely than others to be alert to the identification and exploitation of profit opportunities. This is why we consider it important to investigate opportunity identification in light of the effect of rural or urban characteristics of living areas.

Opportunities are viewed as a key concept within the entrepreneurial process and have attracted a lot of attention (Eckhardt & Shane, 2003; Short et al., 2010; Venkataraman & Sarasvathy, 2001). Bhave (1994) defined the process of the entrepreneurial venture creation as a linear model, where entrepreneurs proceed from opportunity recognition to selection and the commitment to physical creation; meanwhile, phases ranging from alertness to opportunities, the discovery of opportunities, and action upon discovered opportunities can be stretched over long time periods.

As entrepreneurship is a key tool for stimulating diversified and endogenous growth in rural development policy (OECD, 2004), rural entrepreneurship contributes not only to economic growth but also to social and cultural preservation and development of the rural areas. Business creation retains the local population in rural areas (Bryden, 2007), and the precondition of rural economic development retains the younger generation. In European countries with rural enterprise policies, the emphasis is on strengthening the viability and competitiveness of existing SMEs rather than focusing on the entrepreneurial capacity of peripheral rural areas by, for example, fostering a positive attitude toward entrepreneurship amongst young people and women (North, Smallbone & Vickers, 2001).

Potential entrepreneurs in different stages of entrepreneurial venture creation in rural areas face a unique set of challenges not generally encountered in urban contexts. These challenges derive mainly from the varying degrees of accessibility of rural areas, the small size and low population densities of rural communities, their social and economic composition, and the nature of internal and external linkages (European Commission, Agriculture and Rural Development, European Network for Rural Development, 2011). Specific social composition includes the lack of an entrepreneurial tradition combined with the lack of models for successful business ventures and the rural labor force, which tends to suffer from low skill levels and diversity, as well as a structural mismatch in the local labor market, caused by the emigration of the young and well-educated

(Kulawczuk, 1998). Large distances and low population density cause problems with infrastructure (lack of suitable business premises, less developed transport and communications infrastructure), shortages in essential services (limited access to public services, finance, information, and advice), and limited opportunities for networking and collaboration (less diversification of the rural economies compared to the urban ones, absence of private investors) (Kulawczuk, 1998).

The results of existing literature also suggest that the residential area—whether rural or urban—might affect the cohesiveness of networks in which individuals are embedded; individuals embedded in less cohesive networks (urban areas) are more likely to recognize opportunities than those embedded in more cohesive networks (rural areas) (Arenius & De Clercq, 2005).

Entrepreneurial venture creation is undoubtedly embedded in the institutional and cultural context of a country or region; therefore, the reasons behind the degree of involvement in entrepreneurial activities might vary across regions according to the context (Driga, Lafuente, & Vaillant, 2009). The Slovene countryside, as is also the case in many EU countries, is not homogeneous, but encompasses diversified demographic, economic, and social structures. In typical Slovenian rural areas, the aging structure of the rural population indicates that there is still satisfactory reproduction (Istenič & Kveder, 2008). However, 40% of the Slovene territory consists of rural areas characterized by depopulation (Perpar, 2007). Slovenian rural areas face problems such as maintaining schools, kindergartens, ambulances, and other necessary services (Perpar, 2007). This leads to the following research hypothesis:

H1: Rural areas have a negative effect on entrepreneurial opportunities' detection process.

2.3 Individuals' human capital that supports entrepreneurial opportunity identification

Alvarez and Busenitz (2001) applied resource-based theory to their entrepreneurship research, arguing that entrepreneurs have individual-specific resources that facilitate the identification of new opportunities and the assembling of resources for the venture. Thus, an individual's ability to detect and act upon discovered opportunities is supported by easier access to resources (Davidsson & Honig, 2003). Therefore the difference in entrepreneurial activity between rural and urban areas has many causes, one of them being the difference in the amount of resources that people have at their disposal, including social, financial, and human capital resources that might be utilized.

The focus of this paper is the role of human capital resources in the process of perceiving entrepreneurial opportunities. Human capital theory claims that knowledge increases cognitive abilities, leading to more productive and efficient potential activity (Davidsson & Honig, 2003). Knowledge can be acquired as a result of formal education (for example, secondary and university education), non-formal education (for example, adult education), and/or informal education (for example, work experience). In this paper, we measure the amount of human capital by the level of education and prior work experience. Experience and education (Cooper, 1981) are seen as “antecedents” to the decision to start a company.

Individuals with high general as well as specific human capital are more likely to exploit entrepreneurial opportunities (Clausen, 2006). Davidsson and Honig (2003) found that years of education positively influence the chance that a person could identify new opportunities. Dolinsky, Caputo, Pasumathy, and Quanzi (1993) argued that less educated women might face financial or human capital constraints that limit their business pursuits. The relatively low skill and education levels of the rural workforce have an adverse effect on the supply of entrepreneurs, the form and scale of enterprise development, and the quality and chances of success of new enterprises (North & Smallbone, 2006). Thus, to analyze an individual’s human resources importance in opportunity identification process, the following hypothesis was formed:

H2: An individual’s entrepreneurial opportunity identification is influenced by his/her formal education and self-estimated skills, knowledge, and experience needed for entrepreneurship.

3 Methodology

The main data sources for our study were Global Entrepreneurship Monitor surveys of the adult population in Slovenia in 2010, 2011, and 2012.² As entrepreneurial activity does not shift significantly from one year to another (Acs, Arenius, Hay, & Minniti, 2005), a consolidated sample of respondents was formed. The use of a consolidated sample is based on the assumption of the stability of phenomena researched in several consecutive years (Kelley, Brusy, Greene, & Litovsky, 2011). This procedure makes estimates more robust. The consolidated sample consists of $N = 7,031$ respondents. Some characteristics of the sample structure are presented in Table 1.

² The Global Entrepreneurship Monitor research methodology and data are presented in detail in Reynolds et al. (2005).

Table 1: Sample structure

Characteristics	Fi	f%
Residential area:		
Rural	3,343	47.5 %
Urban	3,688	52.5 %
Gender:		
male	3,618	51.5 %
female	3,413	48.5 %
Age:		
18 – 24 years	945	13.4 %
25 – 34 years	1,566	22.3 %
35 – 44 years	1,552	22.1 %
45 – 54 years	1,600	22.7 %
55 – 64 years	1,369	19.5 %

Source: Authors

Computer-assisted telephoning interviews were performed in this survey. A random number generator was used to select the telephone numbers for the interviews and determine whether the selected telephone number refers to a household in a rural or urban residential area (as defined in chapter 2.1). Therefore, the assigned value of the “residential area” variable equaled 1 for rural and 2 for urban residential area of the selected household.

The dependent variable used in testing was “opportunity identification”; respondents were asked if they believed that, in the 6 months following the survey, good business opportunities would exist in the area in which they lived. The variable is a dichotomous nominal, with yes (1) and no (0) answers.

Predictor variables refer to variables describing respondents’ human capital. These variables included:

- **Education:** Respondents were assigned to three categories in terms of their educational level: less than secondary, secondary, or post-secondary degree.
- **Self-confidence in terms of skills, knowledge, and experience in entrepreneurship:** Respondents were asked whether they believed they had the knowledge, skills, and experience required to start a business. The variable is a dichotomous nominal with yes/no answers.

Two control variables were also included to check if hypothesized predictor variables affect the level of opportunity recognition beyond the impact of these variables. These control variables were age (continuous variable, from 18 to 64 years old) and gender (dichotomous variable; males were assigned 0 and females 1).

We formally tested hypotheses H1 and H2 using binomial logistic regression (Hosmer & Lemeshow, 2000) that estimates the probability of an event happening, which in our case was the recognition of opportunities or not. We ran two

binomial logistic regressions. Model I included only control variables; Model II included the predictor variables and control variables. Maximum likelihood estimations were used to estimate the coefficients of the logistic regression function; these denote changes in the log odds of the independent variable. The goodness of fit of the model was assessed using the Model χ^2 -test, the rate of correct classifications, and the Nagelkerke R^2 . In order to test whether the inclusion of predictor variables led to statistically significant improvements of the model, we used the Blok χ^2 -test. In order to test the significance of the regression coefficient, we used the Wald test. The 0.05 (two-tailed) significance level was used.

4 Results

The results from Models I and II are presented in Table 2. Each variable included the maximum likelihood estimates (β), the significance of the estimates, and the estimates of standard errors of estimated coefficients, and both the Wald statistics and the odds ratio ($\text{Exp}(\beta)$) are reported. Table 2 indicates that Model II, which includes both control and

predictor variables, is significant at the 0.001 level (Model $\chi^2 = 263.009$, $p < 0.001$). As Block χ^2 is also significant (Block $\chi^2 = 156.190$, $p < 0.001$), the inclusion of predictor variables in the model leads to the significant improvement of the model compared to Model I.

In Model II, the relationship between the area of living and the identification of entrepreneurial opportunities is significant ($\beta = -0.450$, $p < 0.001$), indicating that those individuals living in rural areas are less likely to perceive entrepreneurial opportunities than those living in urban areas. Thus, we found support for hypothesis H1—namely, that rural areas have a negative effect on the entrepreneurial opportunities detection process.

Model II also provided support for hypothesis H2, showing that an individual's entrepreneurial opportunity identification is influenced by his/her formal education and self-estimated skills, knowledge, and experience needed for entrepreneurship. Individuals who believed that they have the skills, knowledge, and experience for entrepreneurship were more likely to perceive profitable entrepreneurial opportunities than those who did not ($\beta = 0.649$, $p < 0.001$). Those individuals with a secondary degree were less likely

Table 2: Results of Logistic Regressions: Models I and II

Variable	Variable categories	Model I			Model II		
		Coeff. β S.E.	Wald	Exp(β)	Coeff. β S.E.	Wald	Exp(β)
Age		0.019** (0.003)	59.919	0.981	-0.021** (0.003)	67.969	0.979
Gender	0-male 1-female	-0.455** (0.067)	46.553	0.634	-0.355** (0.069)	26.679	0.701
Area	0-urban 1-rural				-0.450** (0.067)	44.824	0.637
Skills, knowledge, and experience	0-no 1-yes				0.649** (0.071)	83.274	1.914
Education	Less than secondary				-0.210* (0.086)	6.039	0.810
	Secondary degree				-0.196* (0.079)	6.118	0.822
	More than secondary (base category)					8.250	
Constant		0.181 (0.142)	1.624	1.199	0.090 (0.173)	0.272	1.094
Model χ^2 (df)		106.818** (2)			263.009** (6)		
Block χ^2 (df)					156.190** (4)		
Nagelkerke R^2		0.030			0.072		
% of correct predictions		77.9			78.0		

Note: ** significant at $p < 0.001$; * significant at $p < 0.05$

Source: Authors

to perceive opportunities than those with more than a secondary degree ($\beta = -0.196, p < 0.05$) or less than a secondary degree ($\beta = -0.210, p < 0.05$).

In terms of control variables, we found both a gender and age effect. Men are more likely than women to perceive entrepreneurial opportunities ($\beta = -0.355, p < 0.001$). Age is also significant, having a negative effect on opportunity identification ($\beta = -0.021, p < 0.001$).

5 Discussion and Conclusion

Opportunity identification activity that represents the most distinctive and fundamental entrepreneurial behavior is not evenly distributed: Individuals in rural areas in Slovenia are much less likely to recognize entrepreneurial opportunities than those in urban areas. On average, 18.6% of the population in rural areas and 26.5% of the population in urban areas expect business opportunities in the near future. Our research results suggest that individuals living in rural areas are on average only 0.6 times as likely to recognize an opportunity as those living in urban environments ($(\text{Exp}(\beta) = 0.637)$).

In the next step of the analysis, we tried to determine why rural individuals are less likely to recognize entrepreneurial opportunities. The data showed that rural areas are marginalized in the process of generating the human capital resources needed for entrepreneurship. The "supply side" of potential entrepreneurs shows many disadvantages of rural areas compared to urban ones in Slovenia. Significant differences were found in terms of the characteristics important for the entrepreneurship creation process between populations in rural and urban areas.

The analysis of human capital resources among the population in rural areas revealed that the level of formal education is significantly different than among the population in urban areas. In rural areas, more than 40% of individuals received less than a secondary education and less than one third pursued post-secondary education; meanwhile, the urban population pursued post-secondary education to a greater extent while only 34.8% reported completing less than a secondary education. A larger proportion of individuals in urban areas (55.6%) possessed skills, knowledge, and experience in entrepreneurship than in rural areas (51.2%).

Our research suggests that individuals who completed a secondary education or less were on average only 0.8 times as likely to recognize a promising entrepreneurial opportunity as those who completed more than a secondary education ($(\text{Exp}(\beta) = 0.822$ and $(\text{Exp}(\beta) = 0.810$, respectively).

Meanwhile, those individuals who believe that they have the skills, knowledge, and education needed for entrepreneurial activity were on average almost twice as likely to perceive business opportunities as those who do not ($(\text{Exp}(\beta) = 1.914)$).

If we further focus on individuals already identified as entrepreneurs (to further illustrate the research results) in early stages of entrepreneurship who are living in urban or rural areas in Slovenia, no significant differences were found, indicating that entrepreneurship is an individual's personal decision, regardless of the urban or rural characteristics of the environment in which he/she lives. The highest proportion of entrepreneurs had post-secondary formal education and lived in both urban and rural areas; a similar pattern was observed in both groups in terms of the proportion of entrepreneurs who believe in self-skills, knowledge, and experience needed for entrepreneurship. Such results support the conclusions of previous surveys suggesting that entrepreneurs in Slovenia would have to endeavor to re-orientate their cultural and social norms and become more proactive in the identification of various opportunities (Korez-Vide, Bobek, Čančer, Perko, & Hauptman, 2010).

In terms of control variables, the significant effect of age and gender reflects the fact that entrepreneurial ventures' creation process is generally more intense among younger individuals than older individuals as well as among males than females. These results were expected as the literature provides evidence of significantly and systematically lower participation of women than men as well as elderly individuals than younger individuals in all phases of entrepreneurial activity (Arenius & Minniti, 2005; van der Zwan, Verheul, & Thurik, 2011). As entrepreneurial activity fuels economic growth, women have been recognized as an untapped source that should use their potential (OECD, 2004).

Driga et al. (2009) mentioned that an important social function of entrepreneurship in rural areas could be to provide women with local career alternatives; however, empirical evidence shows that this does not seem to be the case. Women in rural areas do not have many opportunities for quality employment, so they are often forced to work in low-paying and low-status jobs (European Commission, 2012). Much of today's rural demography in Europe is characterized by an often critical absence of women, which has serious social and demographic repercussions, such as the aging problem faced by many rural populations (Driga et al., 2009). In Spain, young men and women are drawn away from rural life, and from agriculture in particular, because of the difficulties of attracting partners to the rural lifestyle (Regidor, 2000). Chiappe and Flora (1998) wrote about a stereotypical image (held by both men and women)

that rural women are especially well suited for domestic and reproductive activities.

Yet rural women in some European countries are showing the potential to play an important role in the development and sustainability of rural areas. Regarding the new and non-agricultural farm activities, research has shown that the wife is often the one who creates new on-farm business (Clemenzen, Helfenberger, Joris, Rossier, & Wacker, 1995; Högbäck & Siiskonen, 1996; Ilbery, Healy, & Higginbottom, 1997; Pezzini, Ortensi, Mancini, & Baracani, 1997; Toutain, 1995).

The gap between women's shares in the total and in the economically active rural population is noticeable throughout the European Union, although it varies across countries. It is deepest in the rural areas of Italy (9.9% in 2009) whereas the difference is the lowest in the rural areas of Finland (0.7%) (European Commission, 2012). It is interesting that Slovenia has the highest percentage of women in the agricultural population in the new EU-25. However, the potential for women to contribute to agricultural development is, in many respects, less favorable than in other European countries because the great majority of women in Slovenia who own and manage their farms are old, probably already widowed, with poor general and agricultural education and own small farm estates with mixed, less productive output (Istanič, 2006).

Our results demonstrate that the increase in human capital resources consisting of education, skills, knowledge, and experiences for entrepreneurship has had a significant and positive effect on opportunity identification. For the policy creators, our results suggest that the policies focused on entrepreneurial education, especially education that would lead to the acquisition of real-life entrepreneurial experiences and skills (Čančer, 2014; Širec & Rebernik, 2011), are useful—especially in rural areas, where the acquired levels of individuals' human capital are in general lower than those in urban areas of Slovenia. The research results suggest that entrepreneurial training could be important for increasing the self-efficacy and self-confidence in

necessary abilities to start with entrepreneurial activity. Some research results show that the most important sources of entrepreneurial education and training in entrepreneurs' opinions not only include formal education, but also stem from especially informal working trainings and self-studies by observing other people in business or in someone else's business. Such experiences offer the strongest impact for entrepreneurial activity as the training support is reported to have positive effects primarily on individuals' skills related to the identification and capturing of business opportunities, the organization of resources, interpersonal communications and economic negotiations, increased self-confidence, and more achievement-motivated behavior (Petridou & Glaveli, 2008). Trainings that are not of a formal nature and that are aimed at different capacity-building initiatives, especially in terms of entrepreneurial and management skills, could have a positive effect on promoting individuals' entrepreneurial use of resources in the rural environment.

Several extensions of our work are also possible. Applying the assumption of the moderating effect of rurality, future research could analyze whether differences in the opportunity identification and entrepreneurial activity between rural and urban individuals could be explained only by the difference in the amount of human resources that they have or also by the difference in the intensity of the use of those resources for opportunity identification and entrepreneurial activity—in other words, to investigate whether resources have the same supporting effect on opportunity identification and entrepreneurial activity in urban and rural areas. Thus, the question is whether rurality has a moderating effect on the impact of resources on the opportunity identification and entrepreneurial activity. Another possible extension of this work could relate to the gender perspective. The lack of data concerning the prevailing gender system and the levels of gender equality in Slovenian urban and rural locations could be addressed in future qualitative research. Research could also benefit from the investigation of the moderating effect of rurality on opportunity identification and entrepreneurial activity of female and male populations separately. Further studies could also adopt a longitudinal approach as well as include comparisons with other rural areas.

References

1. Acs, Z. J., Arenius, P., Hay, M., & Minniti, M. (2005). *Global Entrepreneurship Monitor 2004 executive report*. London, UK: Babson College and London Business School. Retrieved from <http://www.gemconsortium.org/docs/download/260>
2. Aldrich, H. E., & Zimmer, C. (1986). Entrepreneurship through social networks. In D. L. Sexton & R. W. Smilor (Eds.), *The art and science of entrepreneurship* (pp. 3–23). Cambridge, MA: Ballinger.
3. Alvarez, S. A., & Busenitz, L. W. (2001). The entrepreneurship of resource-based theory. *Journal of Management*, 27, 755–775. <http://dx.doi.org/10.1177/014920630102700609>
4. Arenius, P., & De Clercq, D. (2005). A network-based approach on opportunity recognition. *Small Business Economics*, 24, 249–265. <http://dx.doi.org/10.1007/s11187-005-1988-6>

5. Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233–247. <http://dx.doi.org/10.1007/s11187-005-1984-x>
6. Bhave, M. P. (1994). A process model of entrepreneurial venture creation. *Journal of Business Venturing*, 9(3), 223–242. [http://dx.doi.org/10.1016/0883-9026\(94\)90031-0](http://dx.doi.org/10.1016/0883-9026(94)90031-0)
7. Bryden, J. M. (2007). The role of higher education institutions in rural development. *Education in Rural Areas*, 17(1), 7–16.
8. Chiappe, M. B., & Flora, C. B. (1998). Gendered elements of the alternative agriculture paradigm. *Rural Sociology*, 63(3), 372–393. <http://dx.doi.org/10.1111/j.1549-0831.1998.tb00684.x>
9. Clausen, T. H. (2006). *Who identifies & exploits entrepreneurial opportunities?*. Oslo, Norway: Centre for Technology, Innovation and Culture, University of Oslo. Retrieved from http://www.ccsr.ac.uk/methods/festival/programme/18QM/documents/PaperTommy-Clausen2_000.pdf
10. Clemenz, D., Helfenberger, R., Joris, E., Rossier, R., & Wacker, C. (1995). *Women in Swiss agriculture: A series of portraits*. Zürich: Women in Swiss Agriculture.
11. Cooper, A. C. (1981). Strategic management: New ventures and small businesses. *Long Range Planning*, 14(5), 39–55. [http://dx.doi.org/10.1016/0024-6301\(81\)90006-6](http://dx.doi.org/10.1016/0024-6301(81)90006-6)
12. Cooper, A. C., & Folta, T. (2000). Entrepreneurship and high-technology clusters. In D. L. Sexton & H. Lanstrompp (Eds.), *The Blackwell handbook of entrepreneurship* (pp. 348–367). Oxford, UK: Blackwell.
13. Čančer, V. (2014). Teaching creative problem solving methods to undergraduate economics and business students. *Journal of Further and Higher Education*, 38(4), 485–500. <http://dx.doi.org/10.1080/0309877X.2012.726968>
14. Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331.
15. Dolinsky, A. L., Caputo, R. K., Pasumaty, K., & Quanzi, H. (1993). The effects of education on business ownership: A longitudinal study of women entrepreneurship. *Entrepreneurship Theory and Practice*, 18(1), 43–53.
16. Driga, O., Lafuente, E., & Vaillant, Y. (2009). Reasons for the relatively lower entrepreneurial activity levels of rural women in Spain. *Sociologia Ruralis*, 49(1), 70–95. <http://dx.doi.org/10.1111/j.1467-9523.2008.00475.x>
17. Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333–349. [http://dx.doi.org/10.1016/S0149-2063\(02\)00225-8](http://dx.doi.org/10.1016/S0149-2063(02)00225-8)
18. European Commission. (2012, June). *Women in EU agriculture and rural areas: Hard work, low profile* (Brief No. 7). Retrieved from http://ec.europa.eu/agriculture/agrista/economic-briefs/07_en.pdf
19. European Commission, Agriculture and Rural Development, European Network for Rural Development. (2011). Rural entrepreneurship. *EU Rural Review, The magazine from the European Network for Rural Development*, 10. Retrieved from http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=ED5808AC-994A-47AD-928F-0D3088716910
20. Eurostat. (2012). News release 51/2012. Retrieved from http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/1-30032012-BP/EN/1-30032012-BP-EN.PDF
21. Floyd, S. W., & Wooldridge, B. (1999). Knowledge creation and social networks in corporate entrepreneurship: The renewal of organizational capability. *Entrepreneurship Theory and Practice*, 23(3), 123–143.
22. Högbäck, R., & Siiskonen, P. (1996). Change and continuity in the economic role of rural women. *Finnish Journal of Rural Research and Policy*, 3, 94–108.
23. Hosmer, D. W., & Lemeshow, S. (2000). *Applied logistic regression* (2nd ed.). New York: Wiley. <http://dx.doi.org/10.1002/0471722146>
24. Ilbery, B., Healy, M., & Higginbottom, J. (1997). On and off farm business diversification by farm households in England. In B. Ilbery, Q. Chiotti, & T. Richard (Eds.), *Agricultural restructuring and sustainability, a geographical perspective* (pp. 135–152). Wallingford: CAB International.
25. Istenič, M. Č. (2006). Farm women in Slovenia. In B. B. Bock & S. Shortall (Eds.), *Rural gender relations: Issues and case studies* (pp. 63–96). Oxfordshire: CAB Publishing. <http://dx.doi.org/10.1079/9780851990309.0063>
26. Istenič, M. Č. & Kveder, A. (2008). Urban-rural life setting as the explanatory factor of differences in fertility behaviour in Slovenia. *Informatika*, 32(2), 111–122.
27. Johannisson, B., Alexanderson, O., Nowicki, K., & Senneseth, K. (1994). Beyond anarchy and organization: Entrepreneurs in contextual networks. *Entrepreneurship and Regional Development*, 6(4), 329–356. <http://dx.doi.org/10.1080/08985629400000020>
28. Kelley, D. J., Brush, C. G., Greene, P. G., & Litovsky, Y. (2011). *Global Entrepreneurship Monitor: 2010 women's report*. Babson Park, MA: Global Entrepreneurship Research Association.
29. Kirzner, I. M. (1979). *Perception, opportunity, and profit: Studies in the theory of entrepreneurship*. Chicago: University of Chicago Press.
30. Kirzner, I. M. (2009). The alert and creative entrepreneur: A clarification. *Small Business Economics*, 132(2), 145–152. <http://dx.doi.org/10.1007/s11187-008-9153-7>
31. Korez-Vide, R., Bobek, V., Čančer, V., Perko, I., & Hauptman, L. (2010). The efficiency of entrepreneurship policy support for the internationalisation of SMEs: The case of Slovenia. *European Journal of International Management*, 4(6), 644–664. <http://dx.doi.org/10.1504/EJIM.2010.035593>
32. Kulawczuk, P. (1998). The development of entrepreneurship in rural areas. In J. D. Kimball (Ed.), *The transfer of power: Decentralization in Central and Eastern Europe* (pp. 97–109). Budapest: The Local Government and Service Form Initiative.
33. Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139–161. <http://dx.doi.org/10.1177/014920638801400202>

34. North, D., Smallbone, D., & Vickers, I. (2001). Public support policy for innovative SMEs. *Small Business Economics*, 16(4), 303–317. <http://dx.doi.org/10.1023/A:1011164801073>
35. OECD. (2004). *Women's entrepreneurship: Issues and policies*. Paper presented by F. Delmar and C. Holmquist at the 2nd OECD Conference of Ministers Responsible for SMEs, Promoting entrepreneurship and innovative SMEs in a global economy. Istanbul, June 3–5.
36. Perpar, A. (2007). Characteristics of rural areas in Slovenia: Advantages, weaknesses and possibilities for improvement of present situation from viewpoint of sustainable rural development. *Journal of Central European Agriculture*, 8(2), 229–236.
37. Pezzini, M. N., Ortensi, P., Mancini, M. P., & Baracani, N. (1997). *Doppia presenza, tradizione e innovazione in agricoltura: Una ricerca sulle conduttrici di aziende agricole in provincia di Livorno*. Livorno: Pacini Editore.
38. Regidor, J. (2000). *El futuro del medio rural en España*. Madrid: Consejo Económico y Social.
39. Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., ... Chin, N. (2005). Global Entrepreneurship Monitor: Data collection design and implementation 1998–2003. *Small Business Economics*, 24(3), 205–231. <http://dx.doi.org/10.1007/s11187-005-1980-1>
40. Shane, S. A. (2003). *A general theory of entrepreneurship: The individual opportunity nexus*. Cheltenham, UK: Edward Elgar.
41. Shane, S. A., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217–226. <http://dx.doi.org/10.5465/AMR.2000.2791611>
42. Short, J. C., Ketchen, D. J., Shook, C. L., & Ireland, R. D. (2010). The concept of opportunity in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management*, 36, 40–65. <http://dx.doi.org/10.1177/0149206309342746>
43. Stathopoulou, S., Psaltopoulos, D., & Skuras, D. (2004). Rural entrepreneurship in Europe: A research framework and agenda. *International Journal of Entrepreneurial Behaviour & Research*, 10, 404–425. <http://dx.doi.org/10.1108/13552550410564725>
44. Statistical Office of the Republic of Slovenia. (2012). *Statistical yearbook of Slovenia 2012*. Retrieved from <http://www.stat.si/letopis/LetopisPrvaStran.aspx?lang=en>
45. Širec, K., & Rebernik, M., (2011). Izobraževanje za podjetnost in podjetništvo. *Pedagoška obzorja*, 26(4), 129–145.
46. Toutain, X. (1995). *Femmes en milieu rural: Des initiatives pour l'animation, le développement des service et l'emploi*. Paris: Ministère des affaires sociales, de la santé et de la ville, Service de droits de femmes with SEGESA.
47. Van der Zwan, P., Verheul, I., & Thurik, A. R. (2011). The entrepreneurial ladder, gender, and regional development. *Small Business Economics*, 39(3), 627–643. <http://dx.doi.org/10.1007/s11187-011-9334-7>
48. Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. In J. Katz & R. Brockhaus (Eds.), *Advances in entrepreneurship, firm emergence, and growth* (pp. 119–138). Greenwich, CT: JAI Press.
49. Venkataraman, S., & Sarasvathy, S. D. (2001). *Strategy and entrepreneurship: Outlines of an untold story*. Darden Business School Working Paper No. 01–06. <http://dx.doi.org/10.2139/ssrn.275186>

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Vpliv ruralnega okolja in človeškega kapitala v procesu zaznavanja podjetniških priložnosti

Izvleček

V prispevku, v katerem je predstavljena študija na primeru Slovenije, smo želeli odgovoriti na vprašanje, zakaj posamezniki iz ruralnih okolij v svojem okolju manj pogosto razpoznavajo poslovne priložnosti. Naši podatki kažejo, da ima povečanje virov človeškega kapitala, sestavljenega iz izobrazbe, znanja, izkušenj in sposobnosti za podjetništvo, pomemben in pozitiven vpliv na identificiranje poslovnih priložnosti. Za oblikovalce ukrepov ekonomske politike so naši rezultati pomembni, saj nakazujejo, da so politike, usmerjene v podjetniško izobraževanje (predvsem tisto, ki vključuje pridobivanje izkušenj in veščin v realnem podjetniškem okolju), koristne, in to predvsem na ruralnih območjih.

Ključne besede: človeški kapital, podjetniško izobraževanje, razpoznavanje poslovnih priložnosti, ruralno okolje