

THE SOCIAL DETERMINANTS OF ENTREPRENEURIAL ACTIVITY IN RURAL TRANSYLVANIA

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ABSTRACT. The paper offers a multi-perspective analysis of the entrepreneurial activity in rural Transylvania. Aggregated statistical data is used in order to create the “enterprise map” of the region and a cluster of top villages are identified based on their entrepreneurial density. I attempt to explain the identified regional differences using economic, geographic and socio-demographic factors. The modest explanatory power of the regression models and the significant disparity of entrepreneurial activity led us to the conclusion that in Transylvania the locality plays a major role in creating the social conditions for entrepreneurial development. For future research, I propose the elaboration of case studies on either village or micro-regional level, putting the emphasis on the analysis of the local social resources: configuration of social relations, models of economic cooperation, and local entrepreneurial culture.

Keywords: entrepreneurial activity, regional differences, post-socialist transition, Transylvania

Introduction

The spread of small and medium sized enterprises in post-communist Central and Eastern Europe is one of the main topics of analyses carried out in the field of economic sociology, a continuous subject of interest in the last twenty years. The topic is interesting not only because of its economic implications, even if it undoubtedly represents an important indicator in the evaluation of an economy’s viability. In the structural-functionalist sociological tradition, and even more so in the cultural anthropology, entrepreneurship is considered one of the products of economic cooperation that is developed in the course of social co-existence. Compared to the instrumentalist approach of the neoclassical economics, in this case, entrepreneurship is not considered an institutionalised system of economic actions optimised for profit maximization, but a system of social actions exercised in the context of interaction between man and the environment, embedded in a larger system of rules, that of social co-existence.

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Consequently, in this perspective, sociological research emphasizes the social conditions of the establishment and development of enterprises. Built on the substantivist premise of Polányi (1994) – according to which the social determinants of the functioning of economic institutions (their „social embeddedness”) manifest themselves more conspicuously in traditional, premodern social structures – this research tradition is even more evident in the analysis of entrepreneurial activity in rural areas. Although this perspective should be nuanced, especially from the side of the economic sociology², under the light of previous empirical observations related to rural entrepreneurship, we find it adequate to start from this premise (Csata, 2007a; 2007b; 2009). Consequently, we presume that the expansion of entrepreneurship and, in general, the level of economic development in Transylvanian villages are determined by the particularities of the local social relations and of the local culture – which sometimes are not based on economic reasoning – and that in general we can talk about a deeper social embeddedness of economic processes (Granovetter, 1995; Portes, 2005; Szántó, 1994).

This is especially valid for the period immediately following the change of communist regime in Romania, when after the unsuccessful attempts to modernise the socialist economy, so-called “re-feudalisation” processes started in the majority of villages, which recurred to the pre-1945 solutions of economic orientation, regarding both the technology and work organisation. From an evolutionary sociological perspective, this can be considered as a partial rebirth of social organisation patterns characteristic for the traditional agrarian economy. At the same time we presume that this process took place in various ways, depending on the availability of natural, economic, cultural and institutional resources. Differences have thus occurred in the utilisation of traditional or modern practices even in villages from the same ethnographic-historic area. In this context, the establishment of privately held companies after the change of regime proves to be a creative social innovation (Sandu, 1999a; Csata, 2003; Kuczi, 2000). – After 1989 the owners of small and medium enterprises in Romania had to overcome similar types of obstacles as in Central Europe in general, yet much harsher. The most important obstacles were undoubtedly the *lack of capital* and the *instable legal environment* of the entrepreneurial activity.

In the period immediately following the change of regime there were extremely few alternatives to compensate for the *lack of capital*. The participation of owners of small and medium sized enterprises in the process of privatisation

² For example, Mark Granovetter considers that the level of social embeddedness is more reduced in pre-capitalist societies and it is stronger in market economies than Polányi suggests. In his view, the level of the social embeddedness of the economy has not changed fundamentally with the development of capitalism (Szántó, 1994).

was modest (Czakó et al., 1993) and the requirements for a loan imposed by banks were almost impossible to fulfil. Given that the accumulation of capital was not possible during socialism, for the establishment and operation of enterprises, the role of social capital was overvalued. Thus, family, neighbour and fellow worker relationships gained a special role in the accumulation of initial capital (Kuczi, 1997; 2000). Sandu (1999b) calls these small and medium entrepreneurs *innovators* in the Schumpeterian sense – people who distinguish themselves primarily through the creative combination and the original exploitation of the „accumulated relational capital”. Kuczi introduces the term „kreácsolók” (“do it yourself creators”)³ (Kuczi, 2000: 141) to denote people who, besides the creative transformation of their material environment, capitalize their relationships and social resources in an original way. Thus, in an environment lacking financial resources the successful entrepreneurs were those who took advantage of their extended relational networks in an innovative instrumental manner in order to compensate the lack of capital.

The *lack of legal stability* also had as a consequence the practice of forced substitution of personal relationships, leading to an overvaluation of relational networks (Tóth, 2003:142). In the '90s – and especially immediately after the change of regime – there was a general mistrust against the government, the state and the new institutions of the private sphere (especially against banks). Unconventional, highly risky economic activities (pyramid games or the spectacular transfer of public property into private property) multiplied excessively and continued to diminish trust, while the absence of economic discipline and corruption became general. Under these circumstances, the mainstream opinion was that entrepreneurship represents a dishonest and illegitimate activity, a “trickery”, something opposed to honest work. In the majority of rural settlements this path to success was diametrically opposed to the “self-exploiting” hard work characterising traditional peasant work ethics⁴.

At the beginning of the 2000s the conditions for establishing and operating enterprises somewhat changed: the legislation offered facilities to reduce excessive bureaucracy, the conditions for European Union accession on the whole had positive effects on the legal environment, new fiscal laws have been enforced that were favourable to entrepreneurship (for example the flat-rate income tax), the number of foreign investments grew, European funds became available, banks relaxed their crediting conditions etc. One of the most important evolution was the increase of trust in the relevant institutions and in people in general,

³ The term „kreácsolás” was created by combining the notions of creative action and „do it yourself” and refers to the process through which an individual capitalizes his/her material and social environment in an original way with the objective to establish an enterprise (Kuczi 2000: 142).

⁴ In this region – as we know it from Pál Juhász – this peasant work ethics is part both of the „protestant ethos” and the „catholic ascetism” (Juhász 1986-1987).

which contributed to the increase of economic cooperation. Also, the consumption-based economic growth and the low levels of unemployment in the years of EU accession contributed to a social climate favorable to economic entrepreneurship.

This positive process from 2007-2008 was halted by the onset and extension of the global economic crisis, beginning from 2009. The government reacted with hard austerity measures, some of which (for example the minimum compulsory taxation) have negatively influenced the functioning of enterprises and, indirectly, the entrepreneurial spirit⁵.

Thus, considering the above-mentioned conditions, we can state that, although the institutional conditions of entrepreneurship have been changing continuously in the last twenty years, for rural entrepreneurs the challenges of the period immediately following the change of regime still persist today, more so, with the intensification of competition on markets that are gradually opening, they are faced with new challenges. From the perspective of economic sociology, this means that rural entrepreneurs have to create the resources that are indispensable for the development of enterprises under rapidly changing conditions, and during this process – in the absence of alternative resources – they are forced to rely on the social environment, on family, neighbourhood, workplace, confessional, etc. relationships (structural conditions). On the other hand, in his/her activity, the entrepreneur has to take into account the stereotype indifference and even the opposition⁶ of the social environment and the public space, which is culturally codified, rationalised and continuously reproduced in the context of daily experiences (cultural conditions).

This paper presents a quantitative overview of the entrepreneurial activity in rural Transylvania. First, using local level statistics, we will create the “enterprise map” of Transylvanian villages then we attempt to explain the identified regional differences with the help of economic, geographic, historical and sociological factors. Furthermore, we identify and characterise the cluster of top villages regarding entrepreneurial density. The low predictive power of our regression models and the significant disparity of entrepreneurial density lead us to the conclusion that in Transylvania locality plays an important role in creating the social conditions for entrepreneurial development. Consequently, for future research the elaboration of case studies is recommended on either village or micro-regional level, putting the emphasis on the analysis of the local

⁵ Because the most recent statistics are from 2009, the changes that occurred following the crisis cannot be demonstrated relying on the statistical data.

⁶ We have to emphasize, however, that this aspect is not characteristic to all cases. Regarding the acceptance of the profit-oriented entrepreneurial attitude we presume that there are regional differences, which are based on the particularities of social history. Additionally, it is very probable that people have a differentiated attitude towards enterprises, depending on their profile, work organisation etc. (This issue is unfairly ignored by the literature).

social resources (models of economic cooperation, configuration of social relations, local entrepreneurial culture etc.) which can offer more information than the economic models of competitive advantages do.

The entrepreneurial activity in rural Transylvania - clusters in the geographical distribution of enterprises

In Transylvania in August 2009, 89,610 active rural enterprises were registered at the National Trade Register Office⁷. The density of enterprises were the highest in Harghita, Maramureş, Arad, Cluj and Alba counties where the number of businesses per 1000 inhabitants were more than 25. Based on these data we drew up the annexed entrepreneurial maps, where the localities with a higher entrepreneurial density are marked with dark colours and those with a lower entrepreneurial density with lighter colours (see maps 1 and 2 from the Appendix 1).⁸ These maps refer only to the rural areas and use as the lowest administrative unit the commune ("comuna" in Romanian), which might be comprised of several smaller rural settlements, most typically between 3-5 villages.

If we analyse the maps, we can see at a first glance that a significant part of villages characterized by a high density of enterprises are concentrated in compact units. In the following we will see that this fact is directly related to the comparative advantages arising from the economic and natural resources or from the favourable geographic location of the localities. We can also observe, however, that a significant number of localities that are characterised by an advanced entrepreneurial activity do not belong to these geographically well delimited groups; they are situated far from these and are more dispersed. It seems that in some cases the arguments of neoclassical economics and of economic geography cannot explain adequately the entrepreneurial activity of

⁷ Enterprises without legal personality (authorised natural persons (PFA), family businesses (AF), individual enterprises (ÎI etc) are included in this figure.

⁸ The base population of the analysis is constituted from the communes of the 16 Transylvanian counties; these will be analysed within three separate regions. We delimited these regions because of three considerations: on the one hand, due to the aggregated statistical data the logical solution was to use three development regions, on the other hand, during the analyses we were expressly interested in the ethnic implications of entrepreneurial activity. Consequently, the counties with a high proportion of Hungarian population (Harghita, Covasna and Mureş) were analysed as a distinct region. Therefore, the available data will be presented according to the following regional division: North-Western Transylvania (Satu Mare, Bihor, Sălaj, Cluj, Maramureş and Bistriţa-Năsăud counties), Southern Transylvania and Banat (Arad, Timişoara, Caraş-Severin, Hunedoara, Alba, Sibiu and Braşov counties) and Eastern Transylvania (Harghita, Covasna and Mureş counties). The delimitation of the localities is the one valid at the time of the 2002 census as a significant part of the independent (explicative) variables are from 2002.

higher intensity. In the case of these localities we consider it necessary to conduct a more thorough research of the sociological, anthropological and social history - related particularities.

Considering the geographic dispersion of communes, according to the entrepreneurial activity, we succeeded to identify the following four groups⁹:

1. The closeness of the city as a comparative advantage

If we take a glance at the map it is immediately apparent that a large part of the communes that are the most active from the point of view of enterprise establishment are situated in the proximity of cities. It seems that this proximity represents the most important competitive advantage for entrepreneurial activity. Most advantaged are those villages, which are intersected by international roads or national roads with high traffic. In North-Western Transylvania, especially the communes situated in the proximity of Cluj and Oradea prove to be the most attractive for investors because of their geographical position and well developed infrastructure. The situation is similar in Southern Transylvania and Banat, in the area around Timișoara, Brașov, Sibiu and Arad, and in Eastern Transylvania in the area of influence of Târgu Mureș. In the case of other cities similar tendencies are more limited or inexistent.

2. Villages relying upon the touristic potential of the natural environment

In every one of the three regions there are localities close to *natural attractions* or *thermal waters*; these are the most active ones from the perspective of enterprise establishment. Considering the number of their stable residents, these communes were too small to obtain town statute, but there is a high touristic traffic, which generates a significant demand for accommodation and touristic services.

3. Villages close to natural resources

3.1. One of the most eloquent examples regarding the role of natural resources in economic development can be found in Eastern Transylvania, in Harghita county, where the majority of active enterprises were registered in localities surrounded by *important forest areas*. The more intensive economic activity follows the chain of the Călimani and Gurghiu Mountains and, more to the South, the line of the Harghita Mountains, showing a strong correlation between forestry operation and the number of companies registered¹⁰.

⁹ For the list of communes belonging to these groups, see Appendix 2.

¹⁰ Even though we did not find statistics referring to forest areas belonging to communes, the correlation was unequivocally confirmed by our experience on the field. Related to the example of the commune of Joseni (Harghita) see the study of Emilia Palkó and Zsuzsanna Sólyom (Palkó-Sólyom, 2005).

3.2. According to the existing data at a first look we could include among these localities the *mining areas*, which once offered many jobs for the masses, as well as the *industrial settlements* established in the socialist period, but in most of these areas production stopped immediately after the regime change. As these were monoindustrial areas, the majority of jobs disappeared once the mines and plants were closed and the insignificant number of enterprises could not employ the work force made redundant. Through the political decisions designed to stimulate the economy made in the years 1999-2000 the government declared these zones disadvantaged, trying in this manner – through significant fiscal facilities and support directed towards job creation – to place them again on a trajectory of growth. In most cases the attempt was unsuccessful or brought only limited success: in order to diminish fiscal charges, a multitude of „empty” company branches were created, enterprises that existed only „on paper” in the registry of the commune, but which ran their activity elsewhere. Thus, from the perspective of entrepreneurial activity, these communes need to be considered differently.

4 Scattered localities with a strong entrepreneurial density

It seems that the localities with the highest entrepreneurial density do not come from the above-mentioned examples in any of the regions. These are localities in which the comparative advantages deriving from the economic resources do not ensure the necessary empirical coverage to explain the distribution of enterprises.

In *North-Western Transylvania*, for example, the majority of communes with high entrepreneurial activity are those which have an important touristic potential and which are only at a few hours’ distance from cities and are easily accessible. In this category of localities, on the top of the list are the villages that rely on *traditional tourism*. These are situated in compact, territorially concentrated ethnographic regions, the most competitive being those in which, besides the traditional attractions (especially the architectural heritage) traditional handicrafts survived, too (weaving, spinning, wood sculpture, carpentry, pottery etc.) which ensure a living for many small entrepreneurs. This characterisation can be applied especially to the villages from the Țara Călatei (in Hungarian: Kalotaszeg) region with a *majority Hungarian population*. In the *ethnographic regions with Romanian inhabitants in majority* there are similar localities specialized in traditional tourism, although with a more reduced territorial concentration.

These localities represent a separate cluster in *Southern Transylvania* and in *Banat*, too. In Southern Transylvania the Saxon villages form a specific and compact ethnographic region, but we can include in this group other scattered communes, too (for example the village of Lisa near Făgăraș renowned for the spinning of wool).

The comparative advantages that come from the economic resources of these localities do not ensure the empiric coverage necessary to explain the distribution of enterprises. In *Eastern Transylvania* this category also comprises the communes in which the inhabitants *successfully continue to run a traditional economic activity*. In case of the localities that are among the first in what regards the number of enterprises per 1000 inhabitants (Corund, Lupeni or even Ciumani) we could rightly suppose that the wide-spreadedness and economic viability of pottery, charcoal production or carpentry cannot be attributed solely to the existence or absence of natural resources, because such resource structures are present in other areas too, but which do not boast a developed entrepreneurial activity. Consequently, the explanations for the higher entrepreneurial potential have to be searched in the particularities of the transformation of the social environment or in the specificity of the economic organisation models, which are based upon the rules of social co-existence – this demands a diachronic analysis¹¹.

Undoubtedly, in these cases the theory of diffusion preferred by anthropologists can be applied (Letenyei, 2002, Rogers, 1995). Following our previous experiences, we found plausible the hypothesis of ideational diffusion, according to which specialisation in pottery, carpentry or charcoal production took place by the imitation of models, which had already proved to be functional. The commune of Zetea from Harghita county represents a significant example: it has the most enterprises established per 1000 inhabitants. In this commune several networks of guesthouses were created, which specialize in rural tourism¹². In this case - because we are talking about a recent phenomenon – based on the neighbourhood and family relationships we can easily track the “chain of innovation” (Letenyei, 2000) that attracted the respective households to the institutionalised exploitation of rural tourism.

Due to the fact that in these villages there is a more intense economic activity, we can rightly presume that, besides the appropriate natural resources, the successful models of economic cooperation, which characterise the local society as well as the cultural-normative framework stimulating the following

¹¹ A similar evolutionist conception represented the foundation of István Kinda's and Lehel Peti's study (2004), according to which the establishment of charcoal production enterprises from Lupeni (Harghita) can be attributed, on the one hand, to the natural environment (the absence of adequate agricultural lands) and, on the other hand, to the transformation of the structure of the local society. The most important assertion of the study is that the specific internal stratification of the society generates specific modalities of economic cooperation, which prove to be viable even in the context of global competition. Our experience shows that also in the case of the other two localities mentioned (Corund and Ciumani – the latter showing a powerful resemblance to the neighbouring locality of Joseni), besides the specific structure of natural resources, the wide-spreadedness of enterprises can be explained also by the characteristics of the structure of the society.

¹² In this respect see the study of Edit Gábos (Gábos 2005). Similar observations were made by Kismihály (2009) in his thesis concerning the commune of Sâncraiu.

of these models represent that additional plus from which results an above-average economic viability and prosperity. We identified these two factors as the cultural condition and the historic-structural condition of the spread of enterprises.

The socio-demographic determinants of the spread of enterprises

In the previous section we drew attention to the fact that the distribution of enterprises in the rural areas of Transylvania is markedly influenced by the socio-demographic particularities of villages. While in urban areas the distribution of enterprises in most cases can be explained through the main indicators of economic resources and, implicitly, through the capacity to attract capital, in rural areas the economic model of comparative advantages often fails to determine the differences between the entrepreneurial attitudes of rural localities with identical resources.

The next step is to identify the social, demographic and geographic-economic factors that favour the spread of entrepreneurship at the level of communes. Thus, the dependent variable will be the number of active enterprises per 1000 inhabitants, presented in the previous chapter. The independent variables come from the following data sources:

1. The longitudinal databases at the level of localities from the project „The Social Atlas of Romania” led by Dumitru Sandu (ATSRsate, IDC, IDSL).¹³
2. Locality level data from the study led by Dumitru Sandu „Development Indicators of Romanian villages”.¹⁴
3. The commune level longitudinal data of the 2002 census come from the website of the National Institute of Statistics¹⁵

The effects of independent variables will be analysed according to three broader categories of variables, as follows:

1. *Geographic position and infrastructural endowment*: this group contains the variables which determine the favourable or unfavourable, central or periferic situation of the commune from a geographic perspective (whether there is a European road passing through the commune; the position of the commune at the periphery of the county; the distance between the town and the centre of the commune; the distance between the town situated at a distance of at least 30 km distance and the centre of the commune; the number of villages belonging to

¹³ For a detailed description see <http://sites.google.com/site/dumitrusandu/bazededate>.

¹⁴ For more detail see Sandu (1998). Source: RODA – Romanian Social Data Archive: <http://www.roda.ro/public/RO/template.php?url=17>. During the analysis the longitudinal data at locality level were cumulated into commune level data.

¹⁵ <http://colectaredate.insse.ro/phc/public.do?siteLang=ro>

the commune), the indicators regarding the infrastructural endowment of the commune (the proportion of households connected to the water supply network; the percentage of households connected to the electricity network) as well as household comfort indices (the number of persons per dwelling; the number of persons per room; the habitable space per person; the proportion of houses built of clay).

Our hypotheses regarding this group of variables are related to the experiences of internal analyses carried out on a national level (Sandu, 1999a, Stănculescu, 2001), according to which there is a strong statistical correlation between the level of infrastructural development and the level of economic development expressed through the number of enterprises. Our task consists in the nuancing of these premises, starting from the data registered at commune level.

2. *Demographic indices, ethnic and confessional composition*: we included in this category of variables the demographic evolution (population number; the proportion of the commune's inhabitants who live in its centre; the number of inhabitants of the nearest town; the evolution of the number of inhabitants of the commune following the regime change) and the composition of the population by sex, age group, ethnicity and religion.

3. *Human resources, the potential of the workforce*: the human resources included in this category of variables were measured primarily on the basis of the population's composition by level of qualification. Out of the indicators on the potential of the workforce we used the data regarding the proportion of the employed population and the proportion of people employed in agriculture.

Using the three categories of independent variables presented above, in the case of *Eastern Transylvania* we constituted three models of multilinear regression, which will be applied to the sub-samples at regional and county level. The statistical relationship between the geographic situation, the infrastructural endowment and the relative proportion of commercial organizations are presented in Table 1.

From the data presented in the table we can clearly see the link between infrastructural development, geographic position and the density of enterprises. In the case of Mureş county, the area covered by the water supply network also indicates a higher number of enterprises. Furthermore, the highest number of economic units is characteristic to communes situated in the centre of the county (in Covasna county) or in the immediate proximity of the town (in Harghita and Mureş county).

It may sound surprising, yet the higher number of persons per household also implies a higher number of enterprises. This relationship is equally characteristic to communes from Harghita and Mureş counties. Our opinion in this matter is that this variable can be interpreted rather as a demographic than a comfort

indicator (from this perspective it had to be included in the second group of variables). In the context of lower reproduction¹⁶ characteristic to the rural environment, this variable contributes to the positive relationship¹⁷ with the number of enterprises - through the number of active household members.

Table 1.

**The multilinear regression model regarding the density of enterprises
(Non-standardized regression coefficients with standard errors in brackets)
- geographic position and variables regarding the infrastructure -**

	Eastern Transylvania	Harghita	Covasna	Mureş
The standard error in the estimation of the regression	8.454	9.408	6.004	7.729
Constant	5.593 (5.815)	2.248 (10.455)	27.031 (3.206)	-0.237 (7.265)
The proportion of households connected to the water supply network	0.269*** (0.046)	-	-	0.421*** (0.075)
Number of persons per household	11.073*** (2.442)	9.345* (3.775)	-	8.020** (2.555)
Number of persons per room	-13.584** (4.797)	-	-	-
Periferic position in the county	-3.163* (1.304)	-6.375* (2.732)	-	-4.448* (2.180)
The proportion of agricultural land in the locality	-	-	-	-0.093* (0.041)
Distance from the nearest town	-	-	0.784*** (0.254)	-

* 0.05>p>0.01. ** 0.01>p>0.001. *** p<0.001. Only significant effects presented.

The demographic indicators included in the second model (Table 2) also support the role of population decrease in explaining the spread of enterprises. Thus, the demographic evolution of the communes in the 1977-1992 period shows a strong correlation with the spreading of enterprises in Harghita and Mureş counties: in the localities where we see a growth of the population the frequency

¹⁶ Regarding the natality indices of the counties included in the research see the study of Tamás Kiss (Kiss T., 2004).

¹⁷ The interpretation of the correlation would also be possible through the inclusion of another perspective, that of social history. According to this perspective, due to a higher population density and a lack of natural resources, a significant part of the population is forced to look for other means of existence, including the innovative way of establishing a private enterprise (Venczel, 1988). However, if we consider this hypothesis in more depth, we find that there is no significant correlation between the two independent variables applied in the course of the demonstration (the number of persons per dwelling and the proportion of arable land in the locality). Consequently, we have to reject Venczel's hypothesis in its original form. Still, the problem remains open because the lack of adequate data, considering that the quantity of arable land does not cover the vast content of the concept of natural resources.

of economic units is stronger, too. In Covasna county the fertility indicator shows a similar correlation, while in Mureş county communes with a larger population of active or older people (the proportion of people of 15-59 years of age and of those over 60) also have a higher enterprise density. The results show that the ethnic composition of the communes does not have a direct influence on the spreading of commercial organizations and that confessional affiliation correlates with the number of enterprises per 1000 inhabitants only in Mureş county. In this case the above average proportion of people of Orthodox and neo-Protestant confession favors a stronger entrepreneurial activity¹⁸.

Table 2.

The multilinear regression model regarding the density of enterprises (Non-standardised regression coefficients, with standard errors in brackets). - demographic indices, variables related to ethnic and confessional composition -

	Whole Sample	Harghita	Covasna	Mureş
The standard error in the estimation of the regression	8.466	8.882	6.024	6.951
Constant	42.072 (5.724)	58.603 (13.131)	41.146 (7.783)	-127.812 (29.216)
The relative decrease of the population between 1977 and 1992	39.861*** (6.556)	76.909*** (17.832)	-	33.873** (9.588)
The proportion of inhabitants living in the centre of the commune	5.794* (2.625)	-	-	-
The average number of children in the commune per one woman	-12.474*** (3.204)	-	-13.523** (4.441)	-
The proportion of persons in the commune who are under 14, in 2002	-	-1.446* (0.665)	-	-
The proportion of persons in the commune between 15-59 years of age, in 2002	-	-	-	2.168*** (0.410)
The proportion of people in the commune above 60 years of age, in 2002	-	-	-	1.138*** (0.270)
The proportion of people of Orthodox confession, in 2002	-	-	-	0.077** (0.024)
The proportion of people of neo-Protestant confession, in 2002	-	-	-	0.574* (0.284)

* 0.05>p>0.01. ** 0.01>p>0.001. *** p<0.001. Only significant effects presented.

¹⁸ These statements obviously require further explanations. However, in the absence of appropriate empirical data we cannot address this issue in detail in this paper. In our previous analyses we explained the more intense economic activity of the Adventist residents of localities with above average neo-Protestant population with the fact that they have transformed their geographically extended confessional relationships into competitive economic networks. On this issue see in more detail: Csata et al., 2001. Kiss T., 2003.

Finally, the linear regression model constituted on the basis of human resources and employment variables (Table 3) shows that the entrepreneurial activity is more widespread in localities in which the proportion of employees is above average (Mureş county). Regarding human resources the hypotheses hitherto formulated (Sandu 1999a, Stănculescu 2001)¹⁹, according to which there is a strong correlation between the proportion of qualified population and the spreading of active commercial organisations proved to be well-founded.

Table 3.

**The linear regression model regarding the density of enterprises
(Non-standardised regression coefficients, with standard errors in brackets)
-variables related to human resources, workforce and workforce potential -**

	Whole sample	Harghita	Covasna	Mureş
The standard error in the estimation of the regression	8.719	9.915	6.342	8.577
Constant	0.152 (3.196)	10.301 (5.884)	28.612 (4.863)	2.356 (3.491)
The proportion of employees in the commune	0.389*** (0.125)	-	-	0.832*** (0.142)
The proportion of technical school graduates in the commune	0.780*** (0.285)	1.303* (0.545)	-	-
The proportion of higher education graduates	5.243** (2.293)	-	-	-
The proportion of primary school graduates	-	-	-0.447* (0.193)	-

* 0.05>p>0.01. ** 0.01>p>0.001. *** p<0.001. Only significant effects presented.

In the course of the analysis we did not yet mention the estimation quality of the regression models²⁰. The coefficients of determination show that the most precise estimation regarding enterprise density – through the variables included in the study – can be obtained in the case of villages from Covasna county²¹. If we

¹⁹ For example, Sandu (1998a) maintains that the main catalyst of enterprise establishment is the cultural capital, beside which risk-taking and adaptation to the conditions of market ideology also play a key role in the formation of entrepreneurial attitude. In Sandu’s conception, the rural entrepreneur distinguishes himself/herself foremost by the accumulated quantity of cultural, material and relational capital, and he/she is ideologically oriented towards privatisation (Csata–Ercsei, 2003).

²⁰ This is represented by the values in the first rows of the tables, related to the standard error in the estimation of the regression.

²¹ At the same time we must draw attention to the fact that the population studied (the number of communes) is most numerous in Mureş county, this is why lower beta coefficients are also considered significant. The larger variance explained can partially be considered as the outcome of a higher fidelity that comes from the larger number of cases.

carry out a comparison of the standard errors per counties in all three tables we can observe that the indicators included in the first (geographic position and infrastructural factors) and second (fertility indices, demographic evolution) categories are those which explain best the differences in entrepreneurial activity. The variables regarding human resources and labour market status generate a model with a weaker estimation capacity²².

In case of the communes from the *North-West Region* these categories of factors were introduced in a single regression model (Table 4). The results show that at regional level the favourable infrastructural endowment (more precisely the proportion of modern dwellings and of the connection to the water supply network) are the variables that follow best the density of enterprises. The demographic potential (especially the proportion of the active population and the size of the locality) and the quality of human resources (the proportion of people hired outside agriculture) also have a significant influence on entrepreneurial density at the level of localities. The causal direction of the relationship between living conditions and entrepreneurial activity is less evident.

Table 4.

**The linear regression model regarding the density of enterprises
(standardised regression coefficients)**

	North-Vest region	Bihor	Bistrița-Năsăud	Cluj	Maramureș	Sălaj	Satu Mare
Geographic position	-0.056	-0.215*	0.156	0.038	-0.128	-0.142	-0.018
Infrastructure	-0.421***	-0.371***	-0.312*	-0.357**	-0.322*	-0.232*	-0.260*
Living conditions	-0.181**	-0.056	0.189	-0.492**	-0.222	-0.072	-0.427**
Demographic potential	0.228**	0.278*	-0.414**	0.504*	0.008	0.556**	0.750***
Human resources	0.126*	0.166	0.539***	-0.089	0.279*	0.116	-0.153
Estimation Quality	24.7	38	26.8	28	10.1	35.0	40.7

* 0.05 > p > 0.01. ** 0.01 > p > 0.001. *** p < 0.001.

Compared to the relationships registered at regional level, the dominant factor in Satu Mare, Cluj and Sălaj counties is the demographic potential. Nevertheless, when explaining the differences in entrepreneurial density we

²² However, we must emphasize the fact that during operationalization we only had the possibility to select from the data that were available; this is why our variables do not cover fully the meaning of the variable category's name. Consequently, our assertions remain only hypothetical.

cannot neglect the role of the ethnic and/or confessional composition of the population. As we can observe on the maps, in the localities with a higher number of Hungarian (and Calvinist) population, the number of economic units per 1000 inhabitants is significantly higher. This is undoubtedly due to the powerful economic vitality of the villages from the region of Țara Călatei and from the region of Șimleul Silvaniei. In Satu Mare a similar positive correlation can be observed in the case of people of Catholic confession. In contrast, in the case of the Greek Catholic population from Bistrița and of the communes with a more numerous Roma population from Bihor county there is a lower entrepreneurial activity.

In Bistrița-Năsăud county the differences in entrepreneurial density at commune level can especially be explained by the quality of human resources. In Bihor and Maramureș counties the same difference can be explained by the lower level of urbanisation and by the level of infrastructural endowment (also, partially, by the favourable geographic position and by the proximity of the town). Due to the fact that, on the basis of our data, we cannot formulate bold conclusions regarding the relationship between the level of urbanisation and economic activity in the contiguous rural areas, it would be interesting to clarify in a future research to what extent can the qualification of the population and employment be the primary determinants of the entrepreneurial activity in the localities with a low level of investment.

Finally, the estimation quality of our models demonstrate the extent to which the factors included in the model are adequate and exhaustive in the explanation of entrepreneurial density (the explained variance of the dependent variable). In this sense, the county level differences are marked especially by government intervention: The cumulated explicative power of the variables included is lower in the regions with more disadvantaged areas (Maramureș, Bistrița-Năsăud). It seems that in these areas the structural organic principles of economic development are inevitably transformed following the artificial stimulation of enterprise establishment.

In Southern Transylvania and Banat we used a single model of linear regression. The data included in Table 6 show that in this case the higher quantity of human resources (especially the higher proportion of employees and the lower proportion of workers in the field of agriculture) influences most the differences regarding the number of enterprises at locality level. This is followed by the indicators regarding living conditions (especially the size of the habitable space), then by the demographic potential (especially the proportion of active workers, the size of the locality and the size of the closest town) and, finally, the geographic conditions of the locality (whether it is intersected by an international road). It seems that in this region the state of the communal infrastructure (the proportion of households connected to the water supply network, the percentage of households connected to the electricity network) does not have a significant influence on entrepreneurial activity.

Tabel 5.

**The linear regression model regarding the density of enterprises
(standardised beta coefficients)**

	Southern Transylvania, Banat	Timiș	Brașov	Sibiu	Arad	Hune- doara	Alba	Caraș Severin
Geographic position	-0.110*	-0.441***	0.264*	-0.260	-0.069	-0.184	0.068	0.042
Infrastruture	-0.035	-0.004	0.290*	0.171	0.310*	0.089	-0.244	0.131
Living conditions	-0.190***	-0.366***	0.032	-0.060	-0.216	0.283	0.419**	-0.543***
Demographic potential	-0.133**	0.063	-0.301*	-0.172	-0.430**	-0.320*	0.052	-0.004
Human resources	0.375***	0.397***	0.477**	0.055	0.403**	0.079	0.058	0.135
Quality of the estimation	12.2	41.1	48.9	10.3	21.9	6.9	30.3	34.3

* 0.05 > p > 0.01. ** 0.01 > p > 0.001. *** p < 0.001.

The county level data show that in Arad and Hunedoara counties *the demographic potential* has a more important role in the explanation of entrepreneurial density (within the category it is the proportion of working-age population that indicates the a direct correlation with the higher number of enterprises). As in the case of the *North-West* region the ethnic and/or religious composition of the population also has a more significant role in the explanation of differences in entrepreneurial density. In Caraș-Severin county the proportion of economic units per 1000 inhabitants is above average in the communes with a higher number of Hungarian (and Calvinist) population. In Alba, Brașov and Sibiu counties this proportion is higher in case of a higher proportion of Romanian population (and a lower proportion of Roma population). According to the confessional criteria, the higher proportion of Orthodox population in Alba and Sibiu counties correlates with a greater spreading of enterprises. In Timiș, Arad and Brașov counties *the quality of human resources* (the higher qualification of the population, the lower proportion of people employed in agriculture and the higher proportion of people employed in other sectors) contributes the most to explaining the differences in entrepreneurial density at commune level.

Finally, based on the coefficients of determination we can draw the conclusion that in this region there are too large differences between counties in what regards the predictability of entrepreneurial activity at the level of localities – if we use our groups of variables. These values are the lowest in Sibiu, Arad and Hunedoara counties, which means that the listed socio-demographic factors influence to a lower degree the propensity for establishing an enterprise.

Conclusions

The comparative analysis of the regression models shows that when trying to explain entrepreneurial activity in rural areas, the information we can gain from regional level analyses is too little, and at county level it is inconstant and inconclusive. We can therefore state that in the explanation of entrepreneurial activity in villages from Transylvania, it is recommended to use smaller scale research methods at the level of micro-regions or localities. We know many localities where, according to the statistics, the value of the entrepreneurial inclination is extremely high compared to the regional average and to the neighboring communes – this cannot be explained adequately neither through the economic model of comparative advantages, nor through the inequalities of the natural resources or the socio-demographic particularities presented above.

This is why we agree with Dénes Kiss's claim (2005), considering that the social relevance of the „local” in rural areas is still rather strong in Transylvania and that, compared to western countries, the traditional structure of these villages desintegrated to a smaller degree. This means that the dimensions applied by Kuczi (2000) (values formed in the past, family and relatives, localism etc.) seem to form a better approach of the social resources that can be efficiently used in the establishment of enterprises in the Transylvanian villages. Given that these resources vary from one locality to the other, it is rather difficult to elaborate a single proxy of the „social capital” and a multi-dimensional approach deserves more analytic credit.

This fact, in turn, shows the limits of the macro level analysis in the study of correlations between the social resources and the entrepreneurial activity. Hence, the more segmented the rural society is and the more differentiated social possibilities are between villages, the more important localism becomes in the creation of the social conditions necessary for entrepreneurship. The reduced propensity for territorial mobility in Transylvanian villages, the greater social relevance of rural residence, prompt us to discover and define unique, smaller scale solutions in the study of the expansion of enterprises, which could serve as a model for the ways in which some communities succeed in using their social resources - mainly of local origin – in the development of entrepreneurship. Consequently, in the future we should analyse those forms of organisation and local networks – initially established for non-economic purposes – employed to foster efficient economic cooperation in these villages.

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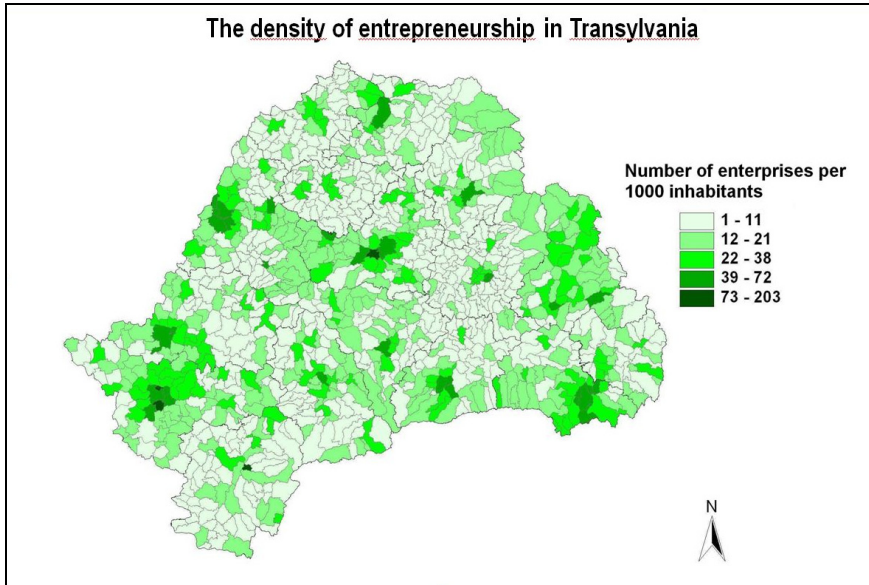
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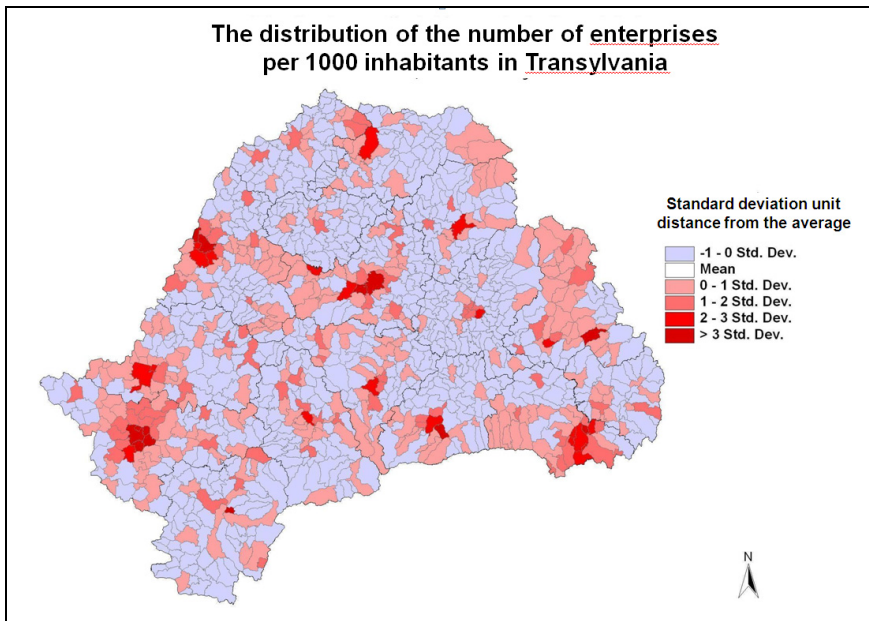
Appendix 1.

Graph A1.



Source: National Trade Register Office, 2009.

Graph A2.



Source: National Trade Register Office, 2009.

Appendix 2.

List of Transylvanian communes with a higher level of entrepreneurial density

1. *The closeness of the city as a comparative advantage*

Communes with high entrepreneurial activity situated in the proximity of:

- Cluj Napoca: Florești, Gilău, Săvădisla, Apahida;
- Oradea: Borș, Biharia, Oșorhei, Sântandrei, Nojorid;
- Timișoara: Dumbrăvița, Ghiroda, Moșnița Nouă, Giarmata, Sănandrei, Bechicerecu Mare, Șag;
- Brașov: Cristian, Bod;
- Sibiu: Șelimbăr, Șura Mică;
- Arad: Livada, Fântânele;
- Târgu Mureș: Sâncraiu de Mureș, Sântana de Mureș, Sângeorgiu de Mureș, Livezeni, Ungheni, Acățari

2. *Villages relying upon the touristic potential of the natural environment*

In *North-Western Transylvania* we should mention the village of Vârciorog (with 58 enterprises per 1000 inhabitants), which holds the first place on the list in Bihor county, the locality and balneotherapeutic resort Băile Felix, known for its thermal waters, Sânmartin (56 enterprises) or the commune of Beliș (33 enterprises) situated on the shore of Lake Beliș-Fântânele from Cluj county etc. In the region of *Southern Transylvania* this category is made up by the communes of Bran and Moieciu (near to Bran Castle), in the *Banat* region by the village of Iablanița (near to Băile Herculane balneotherapeutic resort), in Arad county by Moneasa etc.

3. *Villages close to natural resources*

Socialist industrial settlements: Sângeorz-Băi, Rodna, Șanț (Bistrița Năsăud county), Băiuț, Tăuții-Măgheraș, Șișești (Maramureș), Șarmășag (Sălaj) and Drăgănești (Bihor) from the *North-West* region; Nădrag from Timiș county, in the *Banat* region; and in *Southern Transylvania* Teliucu Inferior from Hunedoara county.

4. *Scattered localities with a strong entrepreneurial density*

In the Hungarian ethnographic region, Țara Călatei: Izvoru Crișului (140 enterprises per 1000 inhabitants) and Sâncraiu (73 enterprises) and Mănăstireni (53) are among the first ten localities of the region.

Ethnographically significant communes with high entrepreneurial activity are also situated in Maramureș, in Valea Izei (the most important ones are: Vadu Izei with 58 enterprises, Poienile Izei with 40 enterprises) and in the environs of Sighetu Marmației (Giulești with 37, Desești with 34 and Sarasău with 32 enterprises).