SUCCESS FACTORS IN THE CROSS-BORDER REGION – REGIONAL PROJECT AGAIN BRAIN DRAIN

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Abstract:
To be a competitive settlement or region is the largest challenge for the political elite in our days. It is especially right in the border area which is often called as "periphery of peripheries" because of the long distance from the economic-cultural centres, the lack of workplaces, and the failed development in the last decades. To arrange a high standard of quality of life people who had chances moved to bigger cities or the parents suggested their children to try getting on in life better than they and studying and not moving back. After all nowadays the development of the economic-social development of the borderland comes to the front. It based on the innovation of the endogen sources in order to take comparative advantages of the local givens. In this paper we present a research aimed to reveal the potential co-operation fields in a trans-border region and find the relation between the identified co-operation fields and the regional success factors. We introduce a cross-border project which focused on the “brain drain” process and aimed to give a chance for young, well-educated people in the border area to gain competitive knowledge which makes possible to create new jobs for themselves and for the population in their region as well.

Keywords: brain drain, cross-border co-operation, successful region
1. THE "BRAIN DRAIN" PHENOMON

1.1. The concept of brain drain

Human capital flight, more commonly referred to as "brain drain", is the large-scale emigration of a large group of individuals with technical skills and knowledge. The reasons usually include two aspects which respectively come from countries or regions and individuals.

In terms of regions, the reasons may be social environment (in source regions: lack of opportunities, political instability, economic depression, health risks; in host regions: rich opportunities, political stability, developed economy, better living conditions). In terms of individual reasons, there are family influences (overseas relatives, and personal preference: preference for exploring, ambition for an improved career, etc).

Although the term originally referred to technology workers leaving a nation, the meaning has broadened into: the departure of educated or professional people from one country, economic sector, or field for another, usually for better pay or living conditions. Nowadays the “brain drain” term is often used in aspects of regions or city vs. countryside.

Brain drain is usually regarded as an economic cost, since emigrants usually take with them the fraction of value of their training sponsored by the government or other organizations. It is a parallel of capital flight, which refers to the same movement of financial capital. Brain drain is often associated with de-skilling of emigrants in their country of destination, while their country of emigration experiences the draining of skilled individuals.

The term brain drain was coined by the Royal Society to describe the emigration of "scientists and technologists" to North America from post-war Europe. Another source indicates that this term was first used in the United Kingdom to describe the influx of Indian scientist and engineers. The converse phenomenon is "brain gain", which occurs when there is a large-scale immigration of technically qualified persons. There are also relevant phrases called "brain circulation" and "brain waste".

Nowadays we can experience the effects of “brain drain” in the regional level as well. Especially endangered are the border regions, because they are often called as "periphery of peripheries" because of the long distance from the economic-cultural centres, the lack of workplaces, and the failed development in the last decades. To arrange a high standard of quality of life people who had chances moved to bigger cities or the parents suggested their children to try getting on in life better than they and studying and not moving back. Who lives even so in the border area often find job far away from the residence, so they have to commute and makes more difficult the taking part in the world of work. General problem are the one-sided employment structure, the low incomes and there are only a few workplaces for graduated people. After all nowadays the development of the economic-social development of the borderland comes to the front. It based on the innovation of the endogen sources in order to take comparative advantages of the local givens the border area is.

Talents play important roles in helping a region develop. The economy of a region that has a large number of well-educated scientists and technicians can be more innovative than the others that don't. It is essential to formulate policies to compensate poor countries and encourage highly-educated immigrants or students to go back. But here there is no general summary for the measures because different areas and nations have distinct policies to deal with brain drain due to the different national or regional situation. The regions with economic and social problems need the work-power and performance of the well-educated young professionals with strong local identity (Csanády-Személyi, 2006).

1.2. Intangible borders

As a result of the enlargement of the European Union and the achievement of the Schengen process, there are no more physical obstacles to broadening trans-border co-operations. As an effect of these processes, it can be expected that the previously peripheral border regions briskly start to develop by leaps and bounds both economically and socially, as they are now able to build their relationships within a radius of 360° around themselves, given that the borders are not so much an obstacle as a linking element. Economic and social upswing is supported by the European Union's regional policy also through (financial) resources, as trans-border regions are regarded as "laboratories" where
advancing processes of integration in the EU can be measured and evaluated (Bufon, 1996; Knippenberg, 2004).

In reality, however, the stabilisation of regional differences can be observed, the main reason of which is that intangible assets, such as patents, brands, culture of organisation and networks of relationships have become primary contrary to physical goods, while taking the production of added value come into consideration. Local co-operations and „embeddedness“ rise into prominence in sustenance of competitive advantages of companies. Porter writes that the „more advanced dimensions of competition remain geographically bounded“ (Porter, 1998), that is the sources of permanent competitive advantages of particular industries become localised. For regional participants, it also means that local co-operations become substantial to secure and sustain permanent competitive advantages of companies, the concepts of „locality“ and „space“ have shifted from the former passive position into an active one. According to these, the importance of local cultural and co-operational attitudes and that of human, social relationships grow; besides, those local organisations (e.g.: municipal and non-profit organisations, educational, training and development organisations, trade and professional associations) become determinant that are able to promote the success of companies by shaping local social conditions adequately. (Lengyel – Rechnitzer, 2004).

In our present study, we examine fields in which the trans-border co-operations can be realised in a Hungaro-Austro-Slovenian micro region and how these co-operations can contribute to the success of the region.

In the first part of the study, we summarise the characteristics of the border and borderlands, the motivations of trans-border co-operations, and the two characteristic fields of co-operation (tourism and environmental protection). In the second part, we introduce the results of our empirical research done in the Hungaro-Austro-Slovenian triple border region, the fields of co-operation and the trans-border region’s success - factors, as well as the correlations between them.

The characteristic features of the borders and border regions

The border can work as a fence separating the regions from one another; in this respect, the border throwing obstacles in the way of co-operations. However, the border can also be such a zone of connections and co-operation (Ratti – Reichmann, 1993; Ehlers-Buursink, 2000; Fritsch-Németh, 2003) where those advantages, rising from the common use of economic and cultural resources, prevail that result from the existence of the border. The most opportunities open up for economies in previously peripheral regions to get connected in the case of such open borders. The co-operation of both sides of the border getting increasingly tighter may result in border towns and villages developing, using their comparative advantages, supporting each other and getting rid of their peripheral characteristics (Hardi, 2004).

In this advanced phase of the co-operation of borders and cross-border regions, we can no longer talk about cross-border regions, but trans-border regions (Baranyi, 2007). Martinez defined four types of border regions according to the number, depth and frequency of the interactions between the two sides of the border, (1994) as shown in Figure 1.

**Picture 1:** Interactions in border regions

In case of the possible best scenario the integrated borderlands can come into existence if stability is strong and permanent. The economies of the two countries merge functionally, and the free
movement of people and goods across the borders is not restricted any more. The two countries can be looked upon as a single social system. This high level of relations has not evolved among Hungary and the neighbouring countries yet (Hardi, 2004).

The motivations of trans-border co-operations

The particular trans-border co-operations can be motivated by the rationality of economic advantages and its intrinsic identity-shaping and image-building power that can be used in city marketing.

The economic motivation can be reached above all by using resources jointly. The inclination and readiness for co-operation is extremely important in the case of different investment in infrastructure (e.g.: the cross-border Industrial Park Szentgotthárd – Heiligenkreuz), organising civil protection services (e.g.: setting up joint flood prevention systems), and in the case of projects of education, cultural, religion (e.g.: joint renovation of the church of St.Imre between Rönök – Inzenhof), projects of tourism, or environmental protection and conservation of natural resources (Őrség – Raab – Goričko Natural Park).

The trans-border co-operations can be regarded as a sort of response, too. They can be a response to the regional and “networked” logic of economic activities on the one hand, and on the other hand, a response to the state’s limited opportunities of handling globalisation-related problems and developing geographical peripheries, such as borderlands (Scott, 2001).

In the present concepts of the regional, urban and rural development and construction, one can find the tendency to view the development of tourism as a “magic device” to solve social-economic problems overnight. Today, it is firmly intended to develop tourism not in all the regions of countries, but also in trans-border regions. The development of tourism appears as a priority both in the areas hit hard by the structural problems of the agriculture or industry and in places that can be otherwise considered to be developed. The main reason for this being is that it is tourism by which such natural and cultural resources can be utilised that are otherwise not or less effectively exploitable (Lengyel, 2002).

However, it is a commonplace but it is true that environmental pollution does not stop along the borders and thanks to this, environmental issues and preventing and managing the risks are always on the agenda of cross-border projects and programmes. Normally, typical areas of intervention vary from project related ones to joint environmental initiatives and preparations for natural disasters.

2. SUCCESSFUL REGIONS

Measuring the regional competitiveness is an extraordinarily complex task to be described by a great number of variables. Besides this, only certain dimensions of competitiveness (e.g.: competitiveness in innovation or tourism) can be measured. Competitiveness measured only by economic indicators does not give a clear picture of the given geographical unit’s situation compared with its rivals, as it is an important task to reach also environmental and social-political aims besides the economic ones in the case of regional development.

The sixth periodical report of the EU contains those factors that characterise all those regions generally said to be successful and these factors are the high rate of employment in services and the processing industry, a widespread range of innovation-related activities, regional availability, and favourable conditions of accessibility, the qualification of labour force and the high rate of employees with degrees. (EC, 1999).

Imre Lengyel (2000) made his “pyramid model” determining competitiveness, using partly the sixth regional report, partly the factors of success of regions and cities.

At the top of the pyramid, the main aim of a country’s or region’s growth and economic development can be found, that is, the improvement of the “well-being”, living standards and the quality of those living there.

The central category of the regional competitiveness in the pyramid model is income, which measures the economic growth of the economy. The productivity of labour and employment also affect the quality of life of the population.
Of particular importance are programming factors with a direct and short-term influence on economic output, profitability, labour productivity and employment rates.

The range of factors necessary for the success, with an indirect, long-term impact on competitiveness, is extremely complex. Lengyel compiled the factors of success based on Enyedi’s points of view (Enyedi, 1997), the “labyrinth” of urban competitiveness by Begg (1999) (trends of sectors, characteristics of companies, business environment, innovation and education) and on the sixth report of the EU (EC, 1999). These determinants take shape over a longer period of time and their significance reaches beyond economic policy-making.

![Picture 2: The factors determining competitiveness, pyramid of competitiveness](source: Lengyel, 2000.)

3. RESEARCH MODEL AND METHODS OF EXAMINATION

The aim of our research is to discover the possible fields of trans-border cooperation in the micro region of the Hungarian-Austrian-Slovenian triple border area and their contribution to the region’s success. The research indirectly tries to find an answer to the question of whether cooperation with neighbouring borderlands can lead to success in a region’s life with a chance bigger than in the case of co-operating only with domestic neighbouring areas.

The exact questions of the research were aimed at defining the factors of success of trans-border environmental, tourism and commercial cooperation.
In the model of the research, there are three fields of trans-border cooperation: environmental, tourism, as well as economic and commercial cooperation. Defining these three fields of cooperation were carried out based on the history of trans-border cooperation, as well as on the priorities of the 2007-2013 Regional Cooperation Operative Programmes related to the examined border regions. The cooperation in these three fields can best motivate the building of long-term connections of cross-border regions, and these are the fields that also play a role in the everyday lives of those living in cross-border regions. To map the fields of cooperation, we used 87 variables (17 of environmental protection, 52 of tourism, 18 of local economy and trade).

We defined the factors of success in the research model according to the factors defining competitiveness in the long run and making up the pyramidal model of regional competitiveness by Lengyel (economic structure, innovative activity and decision centres, social structure, environment, skills of workforce, social cohesion). We examined the factors determining successful regions with the help of 33 variables.

During the quantitative research, we made statistical and econometric analyses on the fields of trans-border cooperation, based on the data collected in questionnaires on the trans-border region’s factors of success. As it was necessary to take data in several countries in the empirical survey, we also made the German and Slovenian versions of the final questionnaires.

The data collection by means of questionnaires was introduced in Hungarian, German and Slovenian to the respondents via email and by post and we also took part in municipal meetings where the representatives filled in the forms themselves (with self-filling questionnaire method) after being informed about the aims of the research. Filling in the questionnaires at the site of the municipal meetings largely enhanced their willingness to give answers.

The questionnaire basically included two major fields, out of which the first focused on the fields of trans-border cooperation, that is, the opportunities of environmental protection, tourism, as well as those of the economy and trade, while the other part mapped what factors determine the success of the region that came into existence as a result of trans-border cooperation. The questionnaire contained closed questions where respondents could mark their opinion on a Likert-type scale of 1-7.

We did a complete survey during the research, getting in touch with 39 municipal authorities. Besides this, as there are municipalities of minorities run in Hungary and Slovenia, we also carried out interviewing 6 Slovenian, 3 German, 15 Gypsy minorities’ representatives in Hungary, while 7 Gypsy minority representatives in Slovenia. In that case of a representative being a member of both the municipality’s and a minority’s representative, they filled in only one questionnaire.

The total rate of returning of the questionnaires – related to the number of questionnaires posted – was 52%, out of which 80% of those asked in Hungary replied, 35% of those interviewed in Slovenia, while 32% in Austria.

During the econometric analyses we used factor analysis in order to create factors, which describe the transborder co-operation fields and possibilities. Following the factor analysis first linear regression analysis was applied then correlation analysis in order to study the relationships between the created factors.
Co-ordination factors: The nature and character of relations can be defined by regression analysis, whereas the strength and intensity of relationships can be described by correlation analysis. Regarding the correlation coefficients we completed a significance analysis, in order to reveal whether correlation coefficients with nationality co-operation and success factors are significantly different or not.

Co-operation fields and success factors in a trans-border region

The factor model of the co-operation fields has represented by six factors the variables, because these six factors have preserved 55% from the content of the original 87 indicators.

The co-operation fields in the model compose three good separated groups: the trans-border economic development, tourism development and co-operation in environmental protection field. The “co-operation structure” and the “economic and commercial effects” factors describe the basic conditions of the trans-border co-operation, furthermore the variables of the common economic development as well. The “advantages of tourism development” and the “disadvantages of tourism development” factors include the variables in connection of the effects of tourism, which the decision makers have to weigh up on behalf of the local community. The “environmental co-operation fields” and the “impact fields of environmental co-operation” factors summarize the trans-border environmental protection area.

Table 1: Variables of factors: co-operation fields

<table>
<thead>
<tr>
<th>Economic co-operation</th>
<th>Touristic co-operation</th>
<th>Environmental co-operation</th>
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<tbody>
<tr>
<td>Co-operation structure</td>
<td>Advantages of tourism development</td>
<td>Environmental co-operation fields</td>
</tr>
<tr>
<td>Economic and commercial effects</td>
<td>Disadvantages of tourism development</td>
<td>The impact fields of environmental co-operation</td>
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</tbody>
</table>

In the area of success factors of a trans-border region four factors can be separated according to the analyses. These four factors represented the 73% from the original 33 indicators.

The “social-economic effects” factor includes the variables which take an effect on economic and innovation culture, quality of the environment and labour, furthermore social system. The “management competencies” factor indicates the knowledge and co-operation abilities required from the local economic and political elite. The “local identity” factor includes the variables which describes the attitudes to the region. The “relationship capital” factor illustrates the orientations of relationship building and regarding, which can open new resources for developing.

Table 2: Variables of factors: success factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variables</th>
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<tbody>
<tr>
<td>Social – economic effects</td>
<td>The number of applied innovation increases</td>
</tr>
<tr>
<td></td>
<td>The spread of innovation become</td>
</tr>
<tr>
<td></td>
<td>Basis of the enterprises in the region</td>
</tr>
<tr>
<td></td>
<td>The number of aesthetic architectural results increases</td>
</tr>
<tr>
<td></td>
<td>Quality of the natural environment get well</td>
</tr>
<tr>
<td></td>
<td>Efficient of educational system is growing</td>
</tr>
<tr>
<td></td>
<td>Strong middle cast in the region</td>
</tr>
<tr>
<td>Management competencies</td>
<td>Marketing</td>
</tr>
<tr>
<td></td>
<td>Strategy construction</td>
</tr>
<tr>
<td></td>
<td>Spatial development</td>
</tr>
<tr>
<td></td>
<td>Management</td>
</tr>
<tr>
<td></td>
<td>Co-operation with opinion – shapers</td>
</tr>
<tr>
<td></td>
<td>Co-operation with enterprises</td>
</tr>
<tr>
<td>Local identity</td>
<td>The new values are important for the local people</td>
</tr>
<tr>
<td></td>
<td>Flare the possibilities for spending leisure time</td>
</tr>
<tr>
<td>Relationship capital</td>
<td>Members of the parliament, Members of the European Parliament</td>
</tr>
<tr>
<td></td>
<td>Governments organisation</td>
</tr>
</tbody>
</table>
The identified factors show that in the studied border region the success is affected first of all by human factors, competencies. These 3 factors (management competencies, local identity, and relationship capital) belong to the “soft” component of success, because they give the unique points of a region which come from the historic, cultural, environmental and social determinants.

Relationships between co-operation fields and success factors

In the course of the study the relationships between the co-operation fields and success factors are investigated in order to reveal which factors play an important role in the building a successful trans-border region. To study the relations between the created factors correlation and regression analysis were applied. The nature and character of connections between variables can be defined by regression analysis, whereas the strength and intensity of relationships can be described by correlation analysis. Estimating the intensity of relationships we define the correlation coefficient (r) under ±0,3 as a small effect, the correlation coefficient between ±0,3 and ±0,5 as a medium large effect, whereas the correlation coefficient over ±0,5 as a large effect. If the value of correlation coefficient is zero there is no linear connection between variables. (Field, 2005)

The strongest relationship can be shown between the “economic and commercial effects” and the “social-economic structure” as success factor. The development of the local economy, the strengthening of the economic actors (f.e. training, qualification) has a strong effect on the elements which define the economic success, the power and development ability of the trans-border region the trans-border region.

According to the results of regression and correlation analysis the three “soft” success factors can be connected to more co-operation fields’ factors.

The “management competencies” relates to the co-operation fields; the “co-operation structure”, the “advantages of tourism development” and the “environmental co-operations fields” have a medium large effect to the factor written the human and qualification requirements of the local elite.

Only the „impact fields of environmental co-operation” factor shows a medium large effect to the „local identity”, as success factor. Taking the content of this factor it is important to remark, that the people in this border region want to generate new values, but the clean and aboriginal nature should mean the
basis of the quality of life. The cross-border environmental pollutions are a danger to the everyday life and the economic, medical and social safety of the local population, enterprises and the tourists.

The „relationship capital” factor relates to the development of trans-border economic fields, namely the „co-operation structure” and „economic and commercial effects” factors.

4. CASE STUDY OF THE “DEVELOPMENT ACADEMY” PROJECT

The results of the research introduced above were the base of a Croatian-Hungarian cross-border project which aimed the development of the cross-border human resources. Our experience shows that the research results can be utilized in other border areas as well.

A serious problem of the towns and villages in the Croatian-Hungarian border region, making up the area of the programme, is that well-qualified young people do not return or leave their home towns, after finishing their studies, as a result of the lack of jobs related to their qualifications and in the hope of getting on well in life. The negative effects of the demographic processes above are enhanced by economic crisis, as well as by major job-giving companies’ (e.g.: GE Hungary) plans to move out of the region.

The main, directly benefiting target group of the project is the potential students of the training, who besides their professional knowledge can acquire strategic and project approach, they can try to work in groups with different culture, which makes them able to generate and implement new projects in the borderland. The top benefits for the local enterprises are: professionals in project management with excellent English, international contacts. This work power can help them to be able to join into the international economy, because they are able to win financial and professional sources due to their innovation and development capacities. For the municipalities this project helps to create new workplaces, through the civil projects the live standards will increase and the image of the region can be developed. The population is benefiting from this project as well. Thanks to the work of the students the quality of life will be increasing (new workplaces, better image etc.).

This project is based on the findings of previous transnational collaboration projects that are dealing with the problem of 'brain drain' and 'brain gain' processes. Here, we are proposing a working solution that will raise the number of returning talented locals to our border region thus contributing to the economic and social development of the overall HU-HR IPA Programme Area. On both sides of the border there were numerous local and regional initiations aiming at the same objectives. This shows that there is a strong political will to solve the problem of brain drain processes. Our project was revived by this commonly phrased desire: to demonstrate a truly working methodology for the easing of this problem.

The overall objectives of the project are to facilitate that well-educated young people finding work and their living in order to come back to their homeland (reduce the migration) and to contribute to the increasing of competitiveness and attractiveness of the border region. The training affords knowledge and innovative approach which can help the students to generate and work out future–orientated proposals towards the development of the region. The Business-Academy Network (BAN) will be initiative based on common interest between the business and academic spheres. Our program with the enhancement of the development capacities contribute to the increasing of the competitiveness and development abilities of enterprises and hereby of the welfare as well. The worked out e-curricula can contribute to the use of the tools of the information society. Due to the revealing and harmonizing of the local complementary and competitive advantages the local identity can be strengthen, too.

To achieve the aim of the project, young people involved in the programme took part in a ten–month training of project management in the form of a correspondence course in English. During the 352-hour training, general, strategic, and human and project management related to generating, planning and realizing projects were taught. Besides the lectures, case studies, discussions, role plays and teamwork were played a major role. While the education lasted, an e-learning curriculum in English was created too.
Table 3: Successful project proposals prepared by the EU project manager students

<table>
<thead>
<tr>
<th>Project acronym</th>
<th>Project budget</th>
<th>Project partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 132</td>
<td>966,00 €</td>
<td>2 (University of Pannonia, Krizevci College of Agriculture)</td>
</tr>
<tr>
<td>CAMPUS</td>
<td>138 026,53 €</td>
<td>2 (City of Koprivnica, University of Pannonia)</td>
</tr>
<tr>
<td>4 TOWERS</td>
<td>341 703,43 €</td>
<td>5 (Municipality of Nagykanizsa, Tourist board of Koprivnica, Municipality of Kaposvar, Tourist Association of Municipality of Cakovec, University of Pannonia)</td>
</tr>
<tr>
<td>CYCLE IN A NETWORK</td>
<td>1 999 230,00 €</td>
<td>4 (Municipality of Nagykanizsa, City of Koprivnica, Tourist board of Međimurje County, Municipality of Zalakaros)</td>
</tr>
</tbody>
</table>

Source: http://www.hu-hr-ipa.com/hu, 2014.03.15.

As the result of the project, both the Croatian and Hungarian participating regions will have 15 highly qualified project managers capable of dealing with the preparation and elaboration of international collaboration projects that serve the well-being of local inhabitants through the development of the local economies. The aim is to keep sharing our experience gained during the project, with the economic and political decision-makers of towns and villages, enterprises and investors who are struggling with the same problems as Nagykanizsa and the county of the Croatian project partner.

The region’s biggest benefit is that young people will find attractive the borderland to work and to live there. These young people will work on projects which contribute to the prosperity of enterprises and the region. Thanks to the new projects the number and types of workplaces will increase, so the income of the population, enterprises and municipalities can grow as well. After that the local identity will grow, so it can tremendous energy mobilize in the regions.

REFERENCE LIST