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***Cross-Border Cooperation in Tertiary Education: A Case Study of Slovakia, Hungary and Romania***

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**Abstract**

The present study compares two cross-border (CBC) regions between Hungary and Slovakia vs. Hungary and Romania. The frame of reference comes from the literature and from our own earlier findings. According to these, CBC cooperations have two types. (a) Traditional cooperations need the classical forms of higher education with their symbolic values and selective structures. (b) Modern cooperations, on the other hand, involves new forms of higher education including post-compulsory and post-secondary educations with a special stress on vocational education and training. The Romanian-Hungarian comparison (Bihar region) represented a traditional cooperation between regions where the community of the regions is still alive despite the pose of the new state border lines after WWI and WWII. The Slovakian-Hungarian comparison (Kosice-Miskolc region) reflected stagnation and modernization at the same time (monostructural economic region with new investments and mass immigration). Here the restructuring of the traditional higher education systems began and new forms of tertiary education are started in cooperation from both sides of the state border.

**0 Introduction**

*0.1 Traditional forms of cooperation.* Our previous research showed that the population of a cross-border region starts to act as a community, – i.e. engage in joint or complimentary economic, social or cultural activities – if there are traditional ties between the two parts of the region from before the border was drawn. This is what we call the traditional model of cross-border cooperation (CBC). By the analysis of cross-border regions we showed that traditional forms of cooperation require traditional institutions and services (on both sides of the border). These institutions (services) are symbolic; they represent and express regional cohesion. In educational terms this means that the demand for tertiary education in traditional cross-border regions can be met through the cooperation of traditional institutions (e.g. universities working together, helping each other). A typical example of traditional cooperation is the region's classic higher education institution, which by its name and its tasks embodies, and aims to promote regional cohesion. In this case traditional forms of tertiary education are preferred, and its modern forms (such as tertiary vocational training) can be considered dysfunctional from this aspect.

*0.2 Modern forms of cooperation.* The model of modernisation is different, inasmuch as the main motive for cooperation is to satisfy modern needs. The modern economic, social or cultural needs of the region split by the border can be best satisfied within the region. In such cases CBC can mean that thanks to the cooperation of institutions on two sides of the border a relatively full range of training schemes will be available in the region. For modern cooperation a dynamically growing regional centre is needed (at least on one side of the border). Modern forms of tertiary education (tertiary vocational training, short cycle preparatory training, market-oriented post-compulsory education, etc.) indicate and pave the ground for modern cooperation in a given region.

*0.3 Strategies.* "Catch-up strategies" are aspirations of a region to establish a relatively full range of available forms of education, thus serve and retain its population within the boundaries of the region. Such aspiration usually comes from the (economic, political or cultural) elite of a region, but efforts – especially in traditional cooperation – are much wider, and include all layers of regional society (patriotism). There is a common element in these aspirations, namely the commitment to stay, which drives them to jointly develop the whole region. Catch-up strategies and traditional cooperation are concomitant, as our regional studies have shown. Nevertheless, catch-up strategies can also characterise actors of modern cooperation. Modern cooperation and catch-up strategies together would be the perfect combination of regional cooperation.

"Survival strategy" is a public behaviour, when people choose to move to a dynamically growing modern regional centre outside the region. This is also a form of cooperation, that is if we consider it cooperation when people from both sides of a region move to the same centre. The reality is that the inhabitants (certain spatial-social groups) of all parts of all regions do practice survival technique. Catch-up strategies and survival techniques can both be observed in different social groups of regional society: the elite is more interested in catch-up strategies, while marginalized social groups usually choose survival techniques (the same division is more or less true for the younger and older population, and for well-educated and under-educated groups). The question is whether the dynamically growing regional centre lies within the region, or it can be developed, or the region remains without such a city.

Tertiary education is a major mobilising force in all studied regions; it can be transformed into a catch-up strategy (on a regional level) but also into a survival technique (on an individual or micro-communal level). Thus it would be difficult to assess the situation and future of the studied regions. Our study, therefore focuses on possible, rather than probable changes.

## **1 The Miskolc-Kosice region**

*1.1 The force of tradition.* The key finding of the statistical analysis of the Miskolc-Kosice (Miskolc-Kassa) region was that the region's historically traditional role in the division of labour (mining, metallurgy, raw material processing and heavy industry) is still a decisive factor in the educational level, qualifications and even the socio-demographic composition of the population on both sides of the border.

The Miskolc-Kosice region used to be the centre of the Austro-Hungarian Monarchy's heavy industry, and one of the key regions for industrial innovation and modernisation in the Hungarian Kingdom. In 1919 the borders were redrawn, but this region kept its pivotal role in heavy industry both in the new Hungary and in the new Czechoslovakia (Slovakia), which was further reinforced by the forced industrialisation that followed WWII. It was neither the border nor the changes of regime that determined the region's fate, much rather the decline of the heavy industry which neither country could fend off.

The Miskolc-Kosice region is a prime example of how a region will develop irrespective of borders and without any planned or conscious cooperation.

*1.2 Ethnic Composition.* The study of the region also highlighted that ethnic composition has a lesser – practically negligible – effect on regional society than other commonly considered factors (age structure, educational level, qualifications, employment). For specific figures see Tables 1-3. We found the ethnic composition of the population of the Miskolc-Kosice region mixed, where the Roma constituted the youngest, most dynamically growing and determinant (e.g. from the perspective of urbanisation) population group. This, we believe, is an important finding, because the region was relatively undamaged by forced ethnic relocations and free from subsequent national-ethnic conflicts. Ethnicity is a relatively unimportant factor (at least in this region) in modernisation and catching up (including demand for tertiary education). If it has any importance then it is definitely not along traditional fault lines, but rather in the effect of immigration. Ethnic composition of four relevant Slovakian boroughs is illustrated by Maps.

*1.3 Demographic Composition.* Although the region used to be – or lie close to – one of Hungary's population generating regions, it is now characterised by demographic reduction. One of the contributing factors was forced urbanisation (creating cities, which were bigger on the Hungarian side and smaller on the Slovakian side, but played an important role). Another factor was the increasing percentage of elders and the decreasing ratio of youth, which is more expressed on the Hungarian side, but also observable in Slovakia. Our data would allow us to link this observation to ethnicity (the tendency is stronger among Hungarians on both sides of the border), but we will not make that differentiation, because we consider the aforementioned dynamic growth of the Roma population (more so in Slovakia than in Hungary) the key process. This statistic observation suggests that the demographic reduction of Central European societies is manifest in the once population generating regions as well. This public behaviour, which can be considered universal, can only change to an extent that is detectable for demography when there is a mass supply of people (we have described this tendency in previous studies). On a micro-level this foreshadows the demographic dilemma of CEECs and the potential effect of suggested solutions (relocation).

*1.4 Level of Education and Qualifications.* Studying the educational level and qualifications of the population of the Miskolc-Kosice region yielded the interesting fact that – generally speaking – Slovaks are better educated than Hungarians. On the Slovakian side there are fewer "dropouts" i.e. people who fail to finish primary school (although here we have to rely on definitions of educational statistics); on the Hungarian side there are fewer people who only received primary education; more

Slovakians have a secondary school diploma ; although a slightly higher percentage of Hungarians have a college or university degree .

These differences are mainly attributable to the different school systems. In Hungary vocational education gives a secondary level diploma, thus the educational level is higher on the Hungarian side than on the Slovakian one. Slovakian education policy, on the other hand, promoted grammar schools, thus the ratio of people with completed secondary education is somewhat lower on the Slovakian side. But putting these differences aside we can say that people are better educated on the Slovakian side of the region. Before drawing more conclusions from this fact, it is worth considering the region's position within the two countries. Both sides of the region (but especially the Hungarian one) are underdeveloped compared to the rest of the country, but on the average the Slovakian population is better educated. This mainly means primary and/or secondary education; higher education is not yet characteristic. On the Hungarian side the picture is a bit different: secondary-level vocational education is dominant, with slightly more tertiary qualifications. Education is more even in Slovakia, with the top being a bit higher in Hungary.

*1.5 Settlement Structure and Employment.* As we have pointed out differences in education are not primarily determined by national composition (although it does seem to work in the negative sense: Hungarians living on the Slovakian side have lower education than Slovaks on the same side). But if it is not ethnicity or nationality, than what is it? The study showed that it is the place of residence. The educational level in micro-regions characterised predominantly by farmers is usually lower, and on the Slovakian side these localities have the highest Hungarian population. City-dwellers are better educated than village folks on both side of the border (and the educational level in Slovakia is so much higher that the much greater number of Hungarian city people cannot compensate the average). We did find that those who live in cities on the Hungarian side are mainly Hungarians, and on the Slovakian side primarily Slovaks – which is another exception where nationality seems to matter – but the ratio of the Roma among city-dwellers in Slovakia is higher, which indicates that Roma are (also) better educated on the Slovakian side of the region.

*1.6 Depression and Recovery.* Most of the farming land of the region lies on the Slovakian side (this is where the Hungarian minority mostly lives), which directly suggests obvious regional economic cooperation: agricultural labour and agricultural produce. Regional centre cities are concentrated on the Hungarian side of the region, which only makes potential cooperation easier. Correspondingly, the depression of the heavy industry was more expansive on the Hungarian side, and more concentrated on the Slovakian side (the Ironworks in Kosice/Kassa). During the study we developed the opinion that there have been several reasons to the fact that the Hungarian side of the region was worse struck by the depression. Reasons include that being close to the border, the heavy industry is cut off from its former traditional markets and business partners, and also makes cooperation between Diósgyőr and the Kosice/Kassa Ironworks difficult (this cooperation began during the study); the structure of education, characterised by secondary-level vocational education on the Hungarian side while Slovakian city-dwellers tend to have grammar school diplomas; the isolation of agricultural micro-regions from heavy industrial centres (one usually on the Slovakian side, while the other on the Hungarian side); demographic stagnation, mainly in the villages in Slovakia (no similar difference was established on the Hungarian side).

Accordingly, on the basis of our study the following forms of cross-border cooperation and development were suggested:

- promoting cooperation between twin cities (e.g. Miskolc-Kosice) within the region, which could include the use of complementary institutions and services;
- cooperation between agricultural and industrial micro-regions (small supply zones within the region);
- encouraging intra-regional mobility (commuting, migration within the region) in order to compensate the effects of demographic reduction;
- complimentary planning in the labour market and employment.

Some of these (seemingly naïve) proposals have been implemented since the study was concluded, while some are in the pipeline. Although this is not a result of our study, but it shows that regional thinking – despite the border – is strong, important, and increasingly significant, largely due to EU requirements.

*1.7 Cooperation in Tertiary Education.* The region in question practically means two cities and their agglomerations, and cooperation between the two could follow the model of twin cities. In this division of functions Miskolc could be a commercial centre, while Kosice could play the role of an administrative and cultural centre. Yet, we cannot really talk about twin cities, because Kosice was clearly dominant over Miskolc until the region was split in two by the border. We could say that before the map was redrawn the entire region practically meant Kosice and its agglomeration. The regional role of Miskolc developed once the region was torn into two (and immediately diminished in the short periods when the region was reunited).

Following these historical events both cities became marginalized. Miskolc "inherited" an agglomeration which was neither an historical nor a natural region (the situation is much more complex, and its elements hardly form an organic unit). After the World War Kosice lost most of its agglomeration, and had some regions in the North annexed with which there were no traditions of a division of labour. Due to political reasons the proximity of national borders hindered the development of multifunctional links. Today Miskolc and Kosice seem to be a pair of cities that are only prevented by the border from establishing a rational division of functions. The fact is, however, that this division is not happening because the region has become a one-product economy in the past fifty years: the non-heavy industry has left or never developed. The cooperation between Miskolc and Kosice is not based on complementary roles, but rather on similar functions.

The studied region – which did not include Kosice and its immediate agglomeration – would practically be Miskolc and its agglomeration if it weren't for the border, but with the border makes the Slovakian side of the studied region "city-deficient". All these factors (agricultural population, ageing, and a relatively low educational level, especially among the rural Hungarian population) clearly show the picture of a region with a city-deficiency. The Slovakian side of the studied region is not the micro-regional agglomeration of Kosice, but because of the border it does not belong to the Miskolc agglomeration either. It is clear that cooperation with the Hungarian side of the region would be a direct necessity. All the more so, because the Hungarian side of the region would be a closer market for the produce of the Slovakian agricultural micro-region, provided that the border was less of an obstacle.

The above-mentioned factors all hamper regional cooperation, in the field of training and education too. There is, however, another major obstacle to this cooperation: both cities have universities. But tertiary education is mainly technical (agriculture and teacher training being the secondary profile in Kosice and Miskolc, respectively), which is in a way understandable on the basis of the conditions outlined. Educational policy makers might have believed in previous decades that education serves the local labour market best if it is focused on training for the region's heavy industry. This narrow profile has been somewhat extended – a Faculty of Economics was set up in Kosice and a Faculty of Humanities was established at Miskolc University – which is still insufficient to make either university a true centre for tertiary education.

Our study also concluded that the region's population is not yet prepared for mass tertiary education. Short cycle vocational training based on primary rather than secondary education is much better suited to the current educational level. Data show this especially clearly for the Hungarian side, but also reflect the differences in educational policy in the two countries. It is true that the heavy industry and the related energy sector and processing industry needed quantity rather than quality workforce in the past few decades. At the moment unemployment is well over the national average on both sides of the region.

Our interviews showed that technical university education and university lecturers – wanting to maintain a clear profile – for subjective reasons cannot be the catalysts of tertiary education. For them tertiary education embodies everything they reject, everything they object to, and is a path they do not want to follow. Miskolc University on the Hungarian side of the region is doing slightly better than Kosice University. The former's World Bank connection – established with government assistance – promises a key role in the region's tertiary education. University lecturers, however, believe that this is far from the principles of university education, and only good to force them into roles doomed to fail. (Due to this attitude until recently Miskolc University has failed to become the catalyst for the development of the region's tertiary education.

Kosice University is also hindered by infrastructural deficiencies (lagging telecoms development) in organising an expanding tertiary education. Although they have progressed further in distance education than their Miskolc colleagues, but due to a relative technological backlog distance education is reduced to mere training, as it fails to contribute to a regional educational role (at least on the Slovakian side).

There are various alternative ways out of the situation described, which could be combined into a complex solution. Extending general preparatory training, improving the average educational level, reducing vocational training or shifting it to post-secondary training are the educational policy developments that enable the development of tertiary education. Although regional conditions suggest differently, shifting vocational training to a post-secondary status is not the solution, because the region's stagnating heavy industry offers few jobs. Regional cooperation would practically mean linking currently isolated labour markets, which in their present confined form would not be able to provide sufficient vacuum for education.

Although the region's industrial profile would suggest cooperation in tertiary education, cooperation between universities would probably contribute more to the

development of the entire region. But only if one of the universities started general training that would radiate to the other one, and induce similar initiatives at the other university too, or would prompt cooperation and division of functions. In this respect the development that started at Miskolc University about a decade ago is promising, but its effects can hardly be felt in regional cooperation yet.

For the Slovakian side of the studied region it would be vital to have a strong educational vacuum develop on the other side of the border. This is the only chance for the Slovakian Hungarian minority to compensate for the 'city-deficiency' caused by the remoteness of Kosice and the relative backlog in education in Hungarian. These long-term developments will only be functional if they involve the entire region and not only the area (or economic sectors) they are currently focused on. This part of the case study led us to the conclusion that tertiary education can be expected to expand mainly on the Slovakian side of the region. Private educational institutions or SMEs will not fuel expansion; traditional big-scale industries will be the driving force behind it.

The appearance and expansion of tertiary education will depend on whether foreign investment starts flowing to the region and extends its training system to its regional staff. When this happens, a boom in tertiary education can be expected on the Slovakian side, which could be linked to needs on the Hungarian side (especially for FDI). But if it doesn't happen, tertiary education will expand within the framework of the existing agricultural and technical higher education.

The region's future – both in terms of the expansion of tertiary education and of the general level of development – depends on whether it will be an obvious destination for FDI (a motorway could be a boost). We presume that this could have a reinforcing and constructive effect on the region (as indicated by the potential and actual cooperation between Diósgyőr and Kosice).

## **2 The Bihar Region**

*2.1 General Features.* The Bihar region has been split into two by the Hungarian–Romanian border since 1919. Before it used to be the historic Bihar County. The region's administrative and geographical centre used to be Oradea (Nagyvárad), but it now has one and a half centres, insofar as Debrecen, which does not traditionally belong to the region, forms a city pair with Nagyvárad. The Bihar region lies between the Világosi mountains, and the marshland on the north-west. These marshes were not only drained in the 19th century, but also burned. The Bihar region was protected from outside intruders by its secluded location, which also allowed Protestantism to flourish even in the 18th century, when Hungary was finally freed from the Ottoman rule. Otherwise the Bihar region up to the late 19th early 20th century was nothing but vast stretches of unpopulated flatland characterised by extensive livestock farming. The economic upsurge following the compromise of 1867 left agriculture, originally controlled by the middle nobility, practically untouched. In the second half of the 19th century this middle nobility lost its position in the economy and converted its economic and political influence to posts in the public administration sector. The Tisza family from Geszt are a prime example of this trend, who originally belonged to the middle nobility until Lajos Tisza received countship (the equivalent of earlship) for his key role in the reconstruction of Szeged.

The smaller northern Hungarian part of the region is still easily distinguishable from Békés and Hajdú counties, although they form a common administrative unit. The main divide between once Békés, Hajdúság and Bihar towns and villages is Route 47, the region's main transport corridor. This is even more expressed on the bigger southern Romanian side of the region, where the Bihar character has been preserved and is still almost intact, except for a few cities and their surroundings.

The Bihar region's local society and culture played an important role in the history of both Hungarians and Romanians of the Great Plain. This area (the so-called *Partium*) has always been somewhat of an intermediate buffer zone between the Great Plain and Transylvania on the other side of the mountains. During the 19th century this dual dividing and connecting role became decisive in the development of Hungarian culture (small Hungarian approach, national culture, Protestant political approach) and linked with agricultural socialist movements in Romania in the 19<sup>th</sup> and 20<sup>th</sup> centuries.

*2.2 Demographic Composition.* The Bihar region is surprisingly uniform in terms of various indicators, with certain extreme values in Hajdúság and the southeast of the region. The north-to-south development slope – also mentioned in other relations in this study – can be observed here too, but mainly at the line separating Hajdúság and the former Bihar County. This divide is sometimes even shows up on statistical maps, demonstrating the far-reaching effect of traditions. For more details on Bihor County in Romania and Hajdú-Bihar County in Hungary see maps.

This is especially true for the demographic structure of the population; the relatively high ratio of elders and the relatively low percentage of young people almost precisely follows former county borders (with sharp differences in demographic indicators in Hajdúság localities). The Bihar region is rather depressed demographically, especially in the centre in and around Nagyvárad. (With a population-generating young age structure in Hajdúság in the northeast, and on the eastern periphery near the Világos area.) Suicide statistics reveal that this is a typically suicidal region in Hungary, which holds true for the Bihar population rather than the Hungarian.

*2.3 National and Ethnic Composition.* The northern Hungarian side of the Bihar region is almost completely homogeneously Hungarian (with small Roma and Romanian minorities; while the southern part is rather mixed ethnically. Here the Romanian population is primarily made up of agricultural labourers of the late 19th century, and also of immigrants and citizens relocated after the historic changes. The Hungarian population is still predominant in Salonta (Nagyszalonta) and its surroundings, but the central part and the southeast of Bihar is now inhabited by a Romanian majority.

A more important and more recent development is the considerable immigration of the Roma into the region. The Roma now inhabit demographically depressed micro-regions, and increasingly influence the behaviour of Bihar's population (demography, educational level). Our study found no major difference between Hungarians and Romanians in terms of demographic tendencies (nationality was not an "independent variable"). There was, however, a sharp difference in the demographic tendencies of the Roma and non-Roma (Hungarian and Romanian) population; the relatively high ratio of the youth in the Bihar region is also attributable to the Roma. Roma newcomers – similarly to the Miskolc-Kosice example – will increasingly influence local policy-making.

Since ethnicity was not considered as an independent variable, the Bihar region is unusually homogeneous despite its mixed ethnic composition. This forms the basis for the emergence of some sort of a local identity and local patriotism, especially in those social groups that are able to link their individual histories to the region's. The behaviour of the Roma ethnic minority is rather peculiar in this aspect, as they are the most tradition-keeping ones in a region characterised by respecting and preserving its traditions.

*2.4 Education and Qualifications.* Similarly to the case of the Miskolc-Kosice region the educational level and professional qualifications reflect the differences in educational systems, the age structure and not national/ethnic composition. We found that

- Illiteracy rate was higher on the Romanian side and the ratio of primary school dropouts higher on the Hungarian side (differences are the result of different educational statistics, while comparable age structures yield similarities);
- The percentage of people who have completed vocational education is higher on the Hungarian side (similarly to the Hungarian-Slovakian comparison), with a relatively high level of professional training in and around Oradea and Debrecen (probably attributable to urban educational infrastructure) ;
- Secondary school graduates are concentrated outside the region's traditional centre, closer to Debrecen and on the periphery of Bihar Romania (the average educational level is somewhat higher in Bihar Romania than in Bihar Hungary) ;
- The percentage of people who have completed some kind of higher education is significantly higher on the Hungarian side of the region than anywhere on the Romanian side, even in and around Oradea.

These findings show many similarities with those in the Miskolc-Kosice region. There were, however, certain differences:

- The educational level is more homogeneous in the Bihar region than in the Miskolc-Kosice one (although it was generally higher on the Slovakian side of the latter region);
- Oradea, the regional centre is a key factor in the educational level of Bihar region, while no such determining factors were distinguishable for the Miskolc-Kosice region (with many small cities on the Slovakian side and many mid-size cities on the Hungarian side);
- The educational level was less linked to ethnicity (although the native population was generally slightly better educated than ethnic minorities on both sides of the border).

In summary, we can point out that in terms of educational level the population of Bihar region is relatively homogeneous, characterised more by traditional primary and secondary schooling than by vocational training.

*2.5 Cooperation in Tertiary Education.* Most of the historic Bihar County now belongs to Romania and forms an administrative unit. Its smaller part is divided between Békés and Hajdú-Bihar counties on the Hungarian side. The Romanian part has become one of the most developed areas in the country, while the Hungarian side is one of the country's most underdeveloped micro-regions. While most of Bihar forms the western border region of Romania, the remaining part is a peripheral area in Hungary, where highways (and even road construction) stops, institutions (and monuments) wither, the population migrates due to the lack of employment opportunities. After the historic Bihar County was torn into two, the bigger part of the region started developing, but the

northeast, reminiscent of the glorious past, has missed out and has failed to integrate into the development of the new administrative units.

Cooperation would be vital for the whole of Bihar. It would open a gate to the west for the Romanian side. When (if) Hungary becomes a member of the EU, Bihar will (could) be the western border post of Romania. It would be worth to start developing the procedures, institutions and approach that would allow the region to make the most of the being an immediate neighbour of the EU. This is arguably a huge opportunity for the bigger Romanian part of Bihar, and generates great expectations. All the more so, because neighbouring areas, once the part of the historic Bihar County, do not pose a great threat, only as much as is needed for real competition. There are no big gaps in terms of development, and smaller disparities can be easily levelled. The situation is comparable to that of Hungary's North Transdanubia and Austria's Burgenland, of course on a different level of development. (And also North Transdanubia never formed an integral historic unit with Burgenland (which is only a unit insofar as it was once the *latifundium* of the Eszterházy family).

If cooperation is a challenge and an opportunity for the bigger part of Bihar, it is a vital necessity for those living on the Hungarian side. From the experience of previous eras it is clear that belonging to stagnating administrative units is not the way to development, rather the contrary. Hungarian micro-regions of Bihar are not only dieing because of the stagnation in the southeast of Hungary (which is not quite true anyway), but because they have been marginalized both in economic and political (lobbying) terms. Only a dynamically growing Bihar on the other side of the border could lift them up and out of this peripheral condition.

Relations in the field of tertiary education clearly reflect the situation. On the Hungarian side educational expansion is lagging behind national trends; the expansion of secondary education is still on the agenda, and a solution is sought rather in vocational training than in pre-tertiary education. While in other regions of Hungary vocational education has taken the direction of tertiary education, it is but an alternative for (or sometimes even a reduced and lower-esteem form of) secondary education in the Bihar region. Bihar, Hungary is a typically city-deficient area, where – for objective and subjective reasons – Berettyóújfalu cannot fulfil the role of a regional centre. Statistical figures reveal that the nearest regional centre, Debrecen, is more a centre for Hajdúság than for Bihar (not to mention Debrecen's increasing problems in its links with other major cities).

On the Romanian side of Bihar the educational level – thanks to the general level of development – is, of course, slightly ahead that of the Hungarian side. Modern forms of tertiary education (post-lycée training) are beginning to appear, but Bihar is not making as much progress as dynamically growing industrial regions (such as North Transdanubia). Post-lycée education is more an attempt to try to keep up with the times than the result of a real economic and social necessity, which could create problems in finding employment and maintaining relations. We would also like to note that it also causes difficulties in ethnic education, since education in the official language (Romanian) promotes inward orientation rather than opening to the west. Bilingual education could, obviously, be very helpful from this perspective. These relations are not only rudimentary, but also dysfunctional (like the Hungarian ones before the change of the regime), at least as far as regional development is concerned. If we agree that being on the western frontier is a

unique opportunity for the Bihar region, it is obvious that these relations (including the ones in tertiary education) should be mainly intra-regional. With time they will be, but at the present they are barely symbolic, reflecting the desire of opening to the west rather than realities.

We believe that post-secondary education is not what Bihar needs the most in order to establish new relations and true cooperation in the entire region. What Bihar would need the most is a regional university, which would generate and concentrate scattered– and as we have seen also practically non-existent – tertiary training. A regional university of Bihar would also have a symbolic value: it could clearly represent the region's unity to all, and demonstrate that the population of a traditional unit is ready to face new challenges.

A regional university of Bihar, we would like to stress, would have to serve the unity of the entire region now and in the future. Thus it would have to be multicultural, to represent the peaceful coexistence of various ethnic groups in Bihar. General training is better suited for this than clear-profile training, so when the idea of such a university arises, what we mainly have in mind is preparatory and general education, and humanities. Its regional function would mean that it could lift tertiary education on either side of the border and link it to higher education, which will hopefully soon begin expanding.

Unfortunately, so far there has been only one, Hungarian initiative pointing in this direction (Sulyok István College), which is a typical minority institution, and wants to provide an alternative for Transylvanian Hungarians. These problems are, undoubtedly, still unsolved in Romania and a number of other Eastern European countries, including Hungary. But the role that a regional university could play in the life of Bihar cannot be taken over. As long as these issues are unresolved, regional development is delayed. That is why we argue that establishing traditional forms of higher education in the Bihar region is necessary to serve the needs of the entire population (not only certain groups) and boost development on both sides of the border.

*2.7 Traditional Forms of Cooperation and Relevant Strategy.* Our study of the Bihar region is a classic example of what we defined as a traditional form of cooperation. The basis for this cooperation is mainly provided by traditions dating back to times when the border was redrawn. CBC goes as far in the Bihar region as local patriotism (the '*partium* identity') takes it.

Traditional forms of cooperation are accompanied by 'catch-up strategies', Sulyok István College and the so-called Partium University are typical examples. These institutions primarily do not provide professional training, but try to strengthen the above-mentioned local identity. These are more traditional forms of tertiary education than in the case of the Miskolc-Kosice region. The relatively homogeneous educational level and these traditional forms of training (backed up by traditional forms of cooperation from the other side of the border) are a good model of how traditional forms of cooperation and the so-called catch-up strategies usually go along together.

### **3 Conclusions**

Placing our findings in the theoretical framework described in the introduction (traditional v. modern forms of cooperation, catch-up strategies v. survival techniques) we can arrive at the following synthetic conclusions.

*3.1 Conclusion I.* In regions characterised by traditional cooperation politics usually employs a catch-up strategy. The aim is to keep the population in the region by regional development measures, for which traditional forms of training, including traditional higher educational institutions, are chosen. This is reflected in the Bihar region by the Oradea–Debrecen cooperation and the idea of the Partium University. Main supporters of such efforts are social groups with an average educational level, who maintain and cherish traditional values.

*3.2 Conclusion II.* Traditionally marginalised groups of the region's society (e.g. national or ethnic minorities) choose 'survival techniques', become mobile, move individually and prepare for assimilation outside the region through tertiary education. Mainly young and educated groups are capable of doing so. This survival technique was observable in all studied regions, but especially in Tirol and the Miskolc-Kosice region. For the latter the only real chance is to develop cooperation between the traditional city pair of Miskolc and Kosice. Innsbruck and Bozen do not function as twin cities, while Debrecen and Oradea are a real pair, but with a relatively low level of mobility.

*3.3 Conclusion III.* Regions characterised by modern forms of cooperation statistically opt for survival techniques, as it was revealed by the study of the Tirol region (regional centre outside the region, with Innsbruck unable to attract the population of South-Tirol). Survival techniques would be even more expressed in the Miskolc-Kosice region if there were real cooperation on and between the two sides of the border. From these two regions Tirol is more likely to be the scene of modern regional cooperation accompanied by a catch-up strategy (i.e. the regional elite trying to keep the population with supply cooperation). We will have to wait and see whether the Bosen-Bolzano "Free University" will be able to tie down its graduates or mobilise them by providing modern training.

*3.4 Conclusion IV.* Tertiary education has a key role both in traditional and modern forms of cooperation: it reinforces identity or prepares for 'making it to the big city'. Accordingly, modern forms of tertiary education can evolve in regional cooperation where the population is relatively young, well-educated and regional policy is determined more by the needs of foreign investment than by the region's elite. We expect the Miskolc-Kosice region to be an example of this, provided that its economy can rebound from the current depression in the foreseeable future.

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*Table 1.*  
Summary of data of 3 Hungarian counties and 4 Slovakian boroughs, 1990-91

		3 Hungarian counties altogether	Borsod-A-Z. A.-Z.	Borsod-A-Z. Miskolc not inc.	Heves	Nógrád	4 Slovakian boroughs altogether	Losonc	Nagykürtös	Rimaszombat	
1990-91	fő	1323690	762001	565552	334509	227180	224947	54848	34115	79611	5
	%	13,0	13,7	14,4	11,9	12,2	15,8	15,2	15,8	16,1	1
	%	18,4	17,4	17,7	20,1	19,3	15,7	16,2	15,5	16,3	1
illiterate	%	1,5	1,51	1,79	1,46	1,41	0,9	0,7	0,9	1,2	0
unknown	%	--	--	--	--	--	0,9	0,7	1,0	1,0	0
unknown	%	1,5	1,51	1,79	1,46	1,41	1,8	1,4	1,9	2,1	1
des*	%	36,1	36,7	37,4	34,2	36,6	46,4	45,6	47,6	49,7	4
completed	%	35,8	34,8	38,0	37,1	37,4	--	--	--	--	--
	%	16,9	17,1	18,2	16,8	16,3	28,7	26,9	29,9	26,9	3
school only	%	19,4	20,2	16,4	19,0	17,4	24,5	26,7	22,1	23,1	2
university graduate	%	7,6	7,9	5,5	7,8	6,7	6,3	6,9	5,7	5,6	6
school +	%	26,8	27,8	21,8	26,6	23,9	30,1	32,9	27,2	28,1	3
in industry	%	44,7	45,3	46,0	42,1	46,8	36,9	43,0	36,0	27,7	4
in agriculture	%	13,5	12,8	16,7	14,6	14,0	21,0	12,1	27,1	30,5	1
in other sector	%	41,8	41,9	37,4	43,3	39,3	42,1	44,9	36,9	41,8	4

\* primary schooling for Slovakian data.

data for 189 localities in 4 Slovakian boroughs (only if there is a Hungarian minority population)

Table 2.  
Summary of Hungarian data

	3 Hungarian counties altogether	Borsod- A.-Z.	Borsod-A- Z. Miskolc not incl.	Heves	Nógrád
population 80	1400079	809468	601365	350360	240251
population 90	1323690	762001	565552	334509	227180
population change	-3175	8485	6994	-8466	-3194
population change %	-0,2	1,0	1,2	-2,4	-1,3
lakosság sz. változása 1990-80	-76389	-47467	-35813	-15851	-13071
lakosság sz. vált. 1990-80 %	-5,5	-5,9	-6,0	-4,5	-5,4
migration	-73214	-55952	-42807	-7385	-9877
migration %	-5,2	-6,9	-7,1	-2,1	-4,1
0-9 yrs.	172166	104602	81246	39880	27684
0-9 yrs. %	13,0	13,7	14,4	11,9	12,2
10-13 yrs.	86345	50984	37790	21127	14234
14-17 yrs.	84942	50246	34686	21099	13597
18-24 yrs.	118383	70238	50910	28446	19699
25-39 yrs.	283029	164312	122493	70258	48459
40-59 yrs.	334882	188946	138425	86304	59632
over 14 yrs.	1064997	606377	446485	273401	185219
over 20 yrs.	946231	536063	397253	244175	165994
over 25 yrs.	861672	485893	360889	223856	151923
over 60 yrs.	243761	132635	99971	67294	43832
over 60 yrs.%	18,4	17,4	17,7	20,1	19,3
functional illiterate	17013	9906	8686	4294	2813
functional illiterate %	1,5	1,51	1,79	1,46	1,41
max. 8 grades	783643	455355	320720	195928	132360
max. 8 grades %	73,6	75,1	71,8	71,7	71,5
min. secondary school	253571	148857	86496	64978	39736
min. secondary school %	26,8	27,8	21,8	26,6	23,9
college/university graduate	65806	38230	20021	17388	10188
college/university graduate %	7,6	7,9	5,5	7,8	6,7
max. 1-7 grades	381257	210727	169808	101330	69200
max. 1-7 grades %	35,8	34,8	38,0	37,1	37,4
8 grades	384082	222783	167137	93535	67764
8 grades %	37,1	37,7	38,4	35,2	37,7
vocational	159895	91750	72313	41032	27113
vocational %	16,9	17,1	18,2	16,8	16,3
secondary school	183757	108307	64973	46511	28939
secondary school %	19,4	20,2	16,4	19,0	17,4
active worker	557757	317346	231087	142537	97874
employed in industry	249478	143679	106241	60017	45782
employed in industry %	44,7	45,3	46,0	42,1	46,8
employed in agriculture	75131	40727	38491	84820	13661
employed in agriculture %	13,5	12,8	16,7	14,6	14,0

employed in other sector	233148	132940	86355	61777	38431
employed in other sector %	41,8	41,9	37,4	43,3	39,3
blue collar worker	391938	221550	174044	99922	70466
blue collar worker %	70,3	69,8	75,3	70,1	72,0
white collar worker	165819	95796	57043	42615	27408
white collar worker %	29,7	30,2	24,7	29,9	28,0

Table 3.  
Summary of Slovakian data

	4 boroughs altogether	Losonc	Nagykürtös	Rimaszomba t	Rozsnyó
population 1980 (all 356 localities)*	325704	95557	45887	98638	85622
population 1991*	328100	95989	46813	98987	86311
population change 1980-91*	2396	432	926	349	689
population change 1980-91 %*	0,7	0,5	2,0	0,4	0,8
Hungarians 1980*	106719	22893	14536	46825	22465
Hungarians 1980* %	32,8	24,0	31,7	47,5	26,2
Hungarians 1991*	105324	22820	14384	45623	22497
Hungarians 1991* %	32,1	23,8	30,7	46,1	26,1
population 1991 (only 189 localities)**	224947	54848	34115	79611	56373
Hungarians 1991	104186	22451	14247	45432	22056
Slovakians 1991	112898	30836	19214	31105	31743
Hungarians 1991 %	46,3	40,9	41,8	57,1	39,1
active	107937	26735	16717	36860	27625
inactive	43950	11200	6659	16423	9668
employed in agriculture	20047	2761	4190	10308	2788
employed in forestry	2659	462	348	923	926
employed in forestry %	21,0	12,1	27,1	30,5	13,4
employed in industry	32033	9588	4660	7653	10132
employed in construction industry	7763	1910	1357	2565	1931
industry + construction industry %	36,9	43,0	36,0	27,7	43,7
employed in other sector	12370	2801	1819	4363	3387
employed in other sector %	42,1	44,9	36,9	41,8	42,9
0-4 yrs.	16716	3809	2548	6094	4265
5-9 yrs.	18890	4538	2852	6753	4747
0-9 yrs.%	15,8	15,2	15,8	16,1	16,0
over 10 yrs.	189315	46498	28715	66762	47340
10-15 yrs.	23817	5598	3483	8671	6065
over 15 yrs.	165498	40900	25232	58091	41275
16-19 yrs.	13821	3236	2043	4913	3629
20-29 yrs.	32228	7673	5009	11371	8175
over 20 yrs.	151677	37664	23189	53178	37646
60-74 yrs.	25315	6417	3727	9155	6016
over 75 yrs.	9938	2489	1556	3793	2100
over 60 yrs.%	15,7	16,2	15,5	16,3	14,4
dropouts	1785	312	246	783	444
dropouts %	0,9	0,7	0,9	1,2	0,9
primary education	76841	18653	12015	28899	17274
primary education %	46,4	45,6	47,6	49,7	41,9
lower vocational	38459	9206	6381	11763	11109
higher vocational	5132	937	563	2535	1097

	4 boroughs altogether	Losonc	Nagykürtös	Rimaszomba	Rozsnyó
vocational %	28,7	26,9	29,9	26,9	32,4
secondary school	6986	2066	975	2103	1842
higher vocational	30203	7984	4147	10172	7900
over 20 yrs. with secondary %	24,5	26,7	22,1	23,1	25,9
college/university graduates	8505	2330	1180	2674	2321
college/university graduates %	6,3	6,9	5,7	5,6	6,9
min. secondary	45694	12380	6302	14949	12063
min. secondary %	30,1	32,9	27,2	28,1	32,0
university graduate	4083	1152	501	1363	1067

\* data of all 356 localities of all the boroughs.

\*\* data of 189 localities with a .hu minority population

Table 4.

Ethnic composition of population, Hajdú-Bihar County and Bihar (Bihar) County

*Hajdú-Bihar County*

	Population	Hungaria % n	Romanian %	Roma %
Total	548650	539468 98,3	950 0,2	7584 1,4
Maximum	212247	210848 100,0	315 18,1	882 16,2
Minimum	220	207 74,8	0 0,0	0 0,0
Average	6945	6829 96,0	12 0,7	96 2,5

*Bihar (Bihar) County*

	Population	Hungaria % n	Romanian %	Roma %
Total	638863	181645 28,5	425097 66,5	21796 3,4
Maximum	222741	74185 96,4	144244 100,0	2137 18,5
Minimum	1423	0 0,0	11 0,9	0 0,0
Average	6725	1912 21,1	4475 72,1	256 4,5

Table 5.

Age structure of population, Hajdú-Bihar County and Bihar (Bihar) County

*Hajdú-Bihar County*

	under 15 yrs. %	15-59 yrs. %	over 60 yrs. %
Total	115549 21,1	343282 61,9	93897 17,1
Maximum	41129 25,8	137904 67,0	33202 33,6
Minimum	19 9,2	114 53,7	74 9,2
Average	1412 20,9	4345 59,1	1189 20,6

*Bihar (Bihar) County*

	under 15 yrs. %	15-59 yrs. %	over 60 yrs. %
Total	138984 21,8	386101 60,4	113778 17,8
Maximum	51375 26,0	144085 67,4	27281 41,9
Minimum	190 10,5	791 47,3	208 6,7
Average	1463 19,9	4064 57,1	1198 23,0

Table 6.

Educational level of over 15 population, Hajdú-Bihar County and Bihar (Bihar) County

*Hajdú-Bihar County*

	functional % illiterates	max. 1-7 grades%	8 grades %	vocational %
Total	8041 1,8	160288 36,7	154370 35,3	67930 15,5
Maximum	2068 6,5	46381 56,7	57149 45,3	24375 21,2
Minimum	1 0,5	93 27,1	81 26,1	16 7,6
Average	102 2,4	2029 46,5	1954 36,4	860 14,9

	secondary <sup>2</sup> %	min. secondary %	college/university % graduates
Total	70526 16,1	102345 23,4	29974 6,9
Maximum	41291 24,1	62448 36,5	20155 11,8
Minimum	7 2,4	7 2,8	0 0,0
Average	893 8,7	1296 11,8	379 2,9

1. have not completed any education.
2. highest level completed: secondary school

*Bihar (Bihar) County*

	functional % illiterates	max 1-4% grades	primary %	vocational %
Total	26361 5,3	136827 27,4	203686 40,7	93148 18,6
Maximum	1186 16,0	22266 41,8	50435 59,6	35243 29,9
Minimum	31 0,7	338 10,1	490 17,3	72 3,3
Average	277 6,9	1440 29,1	2144 37,1	981 13,0

	secondary <sup>2</sup> %	min. secondary %	college/university % graduates
Total	117432 21,5	158086 21,1	27690 5,4
Maximum	51764 42,4	73385 41,7	15722 9,5
Minimum	85 3,9	95 3,2	8 0,4
Average	1236 12,2	1664 12,5	291 1,9