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General and Regional Processes of Public Education in Regions of Various Hierarchy

PhD Dissertation Theses

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Preface

To maintain competitiveness and sustainable development the main objective of the European Union is to build a cognitive society by improving the effectiveness of education and training and to make it accessible throughout the society. The individual's social status and opportunities are more and more determined by the knowledge they can obtain. The individual's relationship has changed concerning individual and social responsibilities as well as concerning his closer and wider social and natural surroundings. It is increasingly true that the main factor of competitiveness is the education and knowledge capital.

In building a cognitive society Hungary is falling behind her competitors. IALS[1] and PISA[2] highlighted serious problems with student and young employees' knowledge, or rather application of knowledge. In some fields there is real recession, meanwhile the educational system in other countries is more effective and better developed (CSAPÓ 2008). Along with average deterioration in performance it is alarming that there are an increasing number of people whose performance is terribly weak and who have become extremely defenceless in the labour market and therefore locked out of social prosperity. The other important message of PISA is that the social position of the families greatly determines student performance.

The educational system of competitive countries develops personality in a holistic way. Knowledge, education, social competence, health and environmental consciousness are the components of human capital, and these competences are the main elements of social prosperity (BLAHÓ 2009).

It is necessary to emphasize that these countries consider education as an important factor of regional and settlement development. It is obvious today that the program creation of the sectoral control does not lack the knowledge of the regional structure and relevant objectives. So the importance of the geography of education in building strategies is accepted.

The evolution of this scientific field has been accelerated and also shaped by the social demands concerning education. The research of education started in the sixties of the last century, satisfying a social demand. After three decades, in October 1997 at the 17th session of Comparative Education Society in Europe held in Athens, Colin Brock was the first to use the expression: geography of education (NAGY 1997).

Research related to the field of geography of education started from the 1970s and 1980s in the Southern Great Plain. In starting and organising this research József Tóth played a significant role, as he was the one who founded and was the leader of The Centre of Research of SCA in Békéscsaba, thereby creating

[1] IALS: International Adult Literacy Survey
[2] PISA: Programme for International Students Assessment

the most significant scientific basis of the Great Plain research. His research focused on regional relations.

The idea of the ”tetrahedron-model” drawn up by József Tóth was elaborated during the process of this research. In the field of population and settlement geography, appearing as co-sciences, József Becsei and Zoltán Dövényi’s scientific achievements must be highlighted.

The infiltration of sociology into research of public education has given rise to the revelation of regional aspects. However, human geography should be kept in mind. The role of socio-geography is significant, as it colours the typology of representing educational processes, and makes it possible to apply several settlement typologies (CSÁSZÁR 2002).

Research of education was institutionalized when on 1st January 2007 the Education Research and Development Institute (OFI) was established, thereby complying with the decree 2118/2006 (VI.30) and merging Professzorok Háza [House of Professors], Sulinova Kht and also the Education Research Institute. The major part of research carried out here pertains to the field of geography of education. Research work lead by Katalin Forrai R. and Tamás Kozma carried out at the Education Research Institute in the 80s and 90s focused on the interaction between the educational system and spatial structure.

At the Institute of Geography and Doctoral School of the University of Pécs several research projects dealing with the geography of education are being carried out. József Tóth and András Trócsányi’s work entitled ”The Cultural Geography of Hungary” was published there in 1997.

As a further result of this scientific work the first Phd dissertation in this field was published by Zsuzsa Császár in 2003. Through the implementation of the experiences of the research a basic scientific work entitled “Magyarország oktatásföldrajza“ [The Geography of Education of Hungary] came into existence which can be used as a reference book by researchers, experts of public education, candidate teachers, and last but not least, decision makers.

Geography of education is considered a sectoral discipline of social geography according to its geographical taxonomy (TRÓCSÁNYI, TÓTH 2002).

Zsuzsa M. Császár defines geography of education as a subcategory of cultural geography, which is not well-known in geographic terminology and links to development of human resources. From a geographical aspect, geography of education investigates the level of education of the population, the educational system, and the geographical and spatial aspects of education. Her analysis focuses on social and economic changes that have impacts on education and training (CSÁSZÁR 2002).

We can state that the inter-disciplinary position of geography of education results from its scope of investigation and methodological variegation.

Objectives and applied methods

In recent years the priorities of education policy have been efficiency and equal opportunities. Planning public education provision as a social service has become complete, involving the regional level (NUTS II) as well in 2006. Achieving regional planning was the task of the Department of Education. Strategies of regional public education development[3] were created in every region. Before building these strategies, extensive research and analysis had been carried out in order to meet content requirements, which at the same time provides the basis for this dissertation.

The objective of this dissertation in line with priorities is to analyze spatial disparities of the standard and performance indexes of public education system as a social service. This dissertation investigates the period after the change of regime, mainly the last ten years. Relying on the methodology of international standards – primarily the PISA Programme – I have identified and classified factors influencing the performance of the public education system. After the typology of factors I investigated the interaction of each with the education system. In order to outline the analyses of geography of education I have reviewed the fulfilments and differences of public education provision in regions of different hierarchy. The other line of the research was to analyze – in the scope of regulations – spatial population processes and their effects on the institutional system.

According to the type of research, I applied methods belonging to the sociological and parametrical groups of methods. In the dissertation I had the opportunity to present certain methods applied in the fields of research. However, it is important to highlight one of the applied methods. As public education is embedded in the entire milieu, and interactions were also examined in it, the method chosen had to be suitable to characterize the spheres of the spatial structure and also one which expresses the synergy between the factors. To achieve my objectives I applied TÁGINTER-analysis, based on the *tetrahedron model*[4] elaborated by József Tóth, which is suitable for settlement and spatial analysis. From the geography of education point of view, choosing a method was significant because I did not describe static conditions, but rather investigated dynamic interactions in the spatial structure.

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[3] BLAHÓ J. , TÓTH J. (SZERK.) 2006: A Dél-alföldi Régió Közoktatás- Fejlesztési Stratégiája 2007-2013 (Public Education Development Strategy of the Southern Great Plain Region 2007-2013)

[4] TÓTH 1981: Some Theoretical and Practical Issues on the Interactions of the Settlement System and the Environment (A településhálózat és a környezet kölcsönhatásának néhány elméleti és gyakorlati kérdése.) – Földrajzi Értesítő, XXX. évf. 2-3. sz., pp. 267-292 the detailed description of the model and TÁGINTER-analysis 1981

In the dissertation I set the following objectives

- What factors influence the effectiveness of the school and to what extent?
- How can be these factors measured and classified?
- How does the differentiation of social-economic spatial structure in the region of different hierarchy influence public education provision, especially effectiveness and equal opportunities?
- Is it possible to link any effectiveness to the control level of the authority responsible for the institution and the training fields of schools?
- What are the reasons for and consequences of the settlement, and school-slope?
- To what extent is the added value of schools (HAÉ)[5] satisfactory to achieve competitive and social cohesion aims?
- Where can the consequences of the selective, sometimes segregative public education system be experienced and to what extent?
- How do unfavourable demographic processes influence the structural and organizational transformation of the public education system, and in what regulatory framework do they emerge?
- Why is a new paradigm necessary, and what is it exactly on directional and functional levels of public education?

Platform assumptions of the dissertation

- The slope showing territorial-settlement distribution of social inequality is primarily represented at the directional levels of public education.
- The size of the settlements can be related to certain training structures and some effectiveness and selective impacts.
- The habits of choosing a school originate from the social status – or perhaps we should say that it is rather the opportunities which

[5]The added pedagogical value (HAÉ) model measures the contribution of the school and the student performance with the help of the residue theory

influence the choice of a secondary school and the significant difference in efficiency among the respective educational fields.

- Vocational training has been devaluated socially, and the dropout rate is the highest in this field which means the reproduction of generational disadvantages. Social disadvantages become educational disadvantages and then again social disadvantages.
- The effects of demographic changes take shape in different ways within the vertical factors of public education, in the proportion of secondary school education fields and regions.
- Owing to demographic processes, the number of students per teacher, with the same programme offered by the school, assumes reserves in the system of public education.
- Significantly, in the Southern Great Plain schools of settlements of over 100,000 population or county seat towns are the most effective which is in close connection with the ability of the respective settlements to raise funds.
- Public education of the region could contribute to competitiveness and social reform by constructing crossborder networks in Euro-regions. Within the crossborder cooperation, ethnic kindergartens and schools could act as so-called “bridges”.
- In the region, due to state financing and the limited financial means of municipalities, the strengthening of the plurality of school maintainers, i. e. primarily churches in operating schools is forecast.
- The school system of the Orosháza subregion, almost typically, is characterised by the dominance of the subregional centre. Other settlements with town status, mostly new towns are functionally weak.
- To the extent that regulation does not change in the subregion, it appears that there will only be a chance to organize the performance of tasks in public education at micro-regional level.

Results

Consequences of the differentiation of social and economic spatial structure

On the grounds of PISA (2006) the differences between schools (53.2%) and students' performance (42%) are influenced by parents' social status, to the greatest extent in the OECD countries. These relationships indicate the fast and significant differentiation of the society.

One-fifth of the children arrive at school from the nursery with drawbacks that cannot be compensated for (HERCOG 2008).

Social drawbacks appear as school drawbacks. Social habits, or more precisely, opportunities, of secondary school further education are significantly determined by the social status of families. Cumulative appearance of *settlement slope* and *social slope* is demonstrated in secondary school further education (Chart 1).

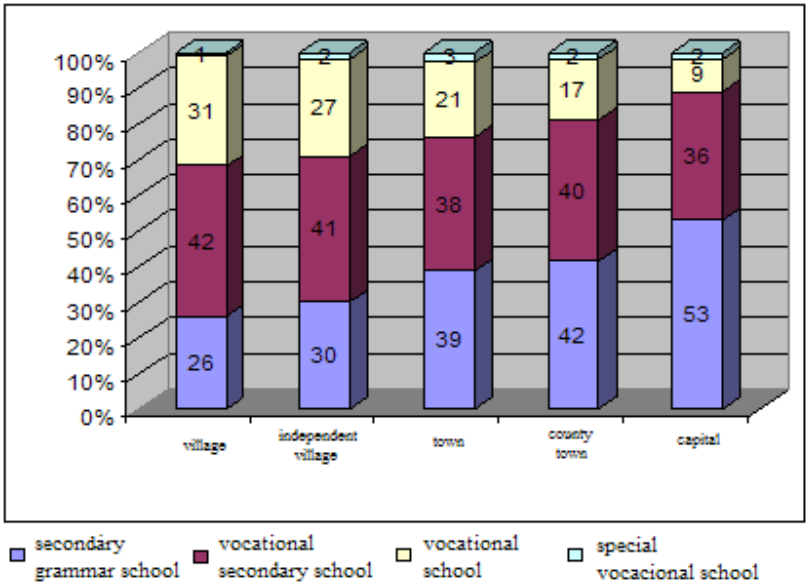

Chart 1: Secondary further education in proportion (%) to settlements of different size in 2006
Source: Ministry of Education statistics, own edition

Examining the output indicators of secondary schools, it can be stated that settlements of different size show great disparities. In Hungary the cultural and

economic disadvantages of villages are still significant compared to towns, but the position in settlement hierarchy greatly influences the opportunities of settlements. As a result of the home routine of giving a settlement town status, significant differences developed between new towns and already existing towns. The reasons are complex, but after all it is about the problem of obtaining town status.

According to Zoltán Dövényi, towns which obtained the legal status of a town during the process of declaration of settlements as towns can hardly be considered in a geographic-functional sense, as they do not, or hardly have centre-functions (DÖVÉNYI 2006).

The question arises from the aspects of territorial and settlement development: what level of public services and public education do settlements of different size have?

The most competitive public educational system could develop in towns with a population of more than 100,000. Investigating the period from 1991 to 2005, this is the only category which always has had a result above the average in the admission to higher education (Chart 2).

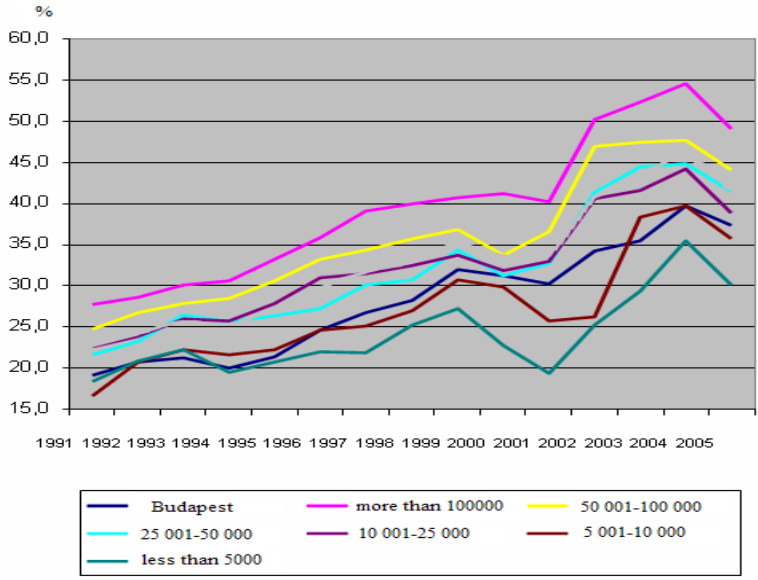

Chart 2: The proportion of admission to higher education (%) in settlements of different size

Source: Own edition based *on indicators of secondary school work 2006*

Investigating the effectiveness of further higher education in the hierarchy of municipalities, we can make the following statements:

- The eight cities with a population of over 100,000 and then the towns with a county seat status are the most effective in the entrance examinations.
- Up to 1999, towns with 10-25,000 people were the third, with 25-50,000 the fourth, but they changed places in 2000.
- The schools of the capital city were the sixth eight times and the fifth six times, changing these two places with towns of population 5-10,000. Since 1994, settlements with less than 5,000 people have had the seventh place.
- Regarding the proportion of admission, the difference between settlements decreased in 1992, then from 1993 to 1997 it was continually increasing, and after a decline in 1998 and 1999 it was on the rise again until 2002, then in the next two years it dropped, but in 2005 the difference increased again.
- It is worrying that in 2005 the difference between the lowest and the highest proportion of admission to higher education was 2.4 times as much as that of 1992, which shows the steepness of the settlement slope.
- It can be stated that the settlement slope manifested not only at the owner/authority and administrative levels, but also in the ability to raise funds and to develop.
- The capital city and towns with a county status, apart from regional disparities, possess the most favourable financial and human resources. Smaller settlements, including midsize towns, are finding themselves in a more difficult position regarding maintenance. In examining the process, it must be emphasized that the geographical situation only effects the speed of the process, not the direction. What makes the problem more serious is that mid-towns mostly act as subregional centres in spatial relations.
- The settlement slope also means that a certain type of training and a proportion within the type of training can be associated with a certain settlement size. In larger settlements the dominance of grammar schools and the reduction of vocational training are typical.

- The selective effect of the school system is adverse to the settlement slope. The bigger the settlement, the wider range of students the school can select from.

The reasons and consequences of performance disparities between the training fields of secondary schools

As the success of secondary school studies depends on the results of nursery school and primary school education, it can be seen how the disadvantages obtained in the vertical stages of public education are distributed horizontally among different training fields. In fact this is the main problem area of the school slope.

The hierarchy of training forms and institutional system of secondary education (grammar school, secondary grammar school, vocational school) the composition of students strictly maps social disparities, and with different standards of education it preserves social inequalities (LISKÓ 2008).The seriousness of the problem is indicated by the significant differences in performance (Chart 3).

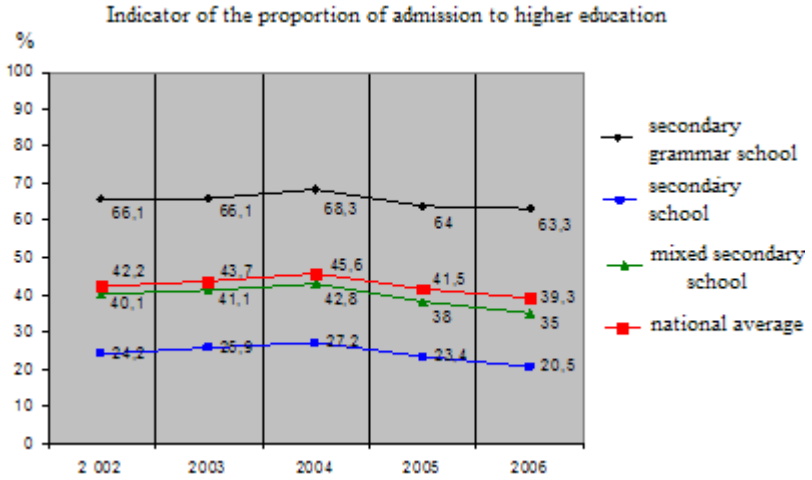

Chart 3: Admission results in proportion to applicants
Source: Own edition based on some indicators of secondary school work 2006

- The change which took place in the percentages of the training fields of secondary schools was accompanied by a significant level of selection. Vocational training became an option for children of disadvantaged and low-income families.
- According to final examination and admission results grammar school training enjoys a stronger position over the others. Secondary schools which combine vocational and academic studies with secondary grammar school training are able to reach the same effectiveness as grammar schools.
- Unsuccessful or less successful schools are not sought after by parents of higher social status. At the same time the settlements where the standard of public services is low are also not in demand. It is obvious that the competition of schools is tightly linked to the competition of settlements.
- Within the field of vocational training, effectiveness is based on the ratio of trainings that provide or do not provide an opportunity to conclude with a final exam.
- In vocational schools providing trainings without school-leaving exams schooling suffers counter-selective impacts. All of these bring about continuous student failures, a high rate of early school leaving and finally hinders getting on within the society successfully.
- The significant inner slope of the secondary school is represented by the 1.5 variance (146 points) difference between an average Hungarian grammar school student and a vocational school student (PISA 2000).
- We can conclude that the admission results of an average secondary school are better than those expected by the respective families. The added pedagogical value indicator is (+3.4), which means that schools contributed to the results of the exams with this value.
- The added pedagogical value (HAÉ) in 2002-2006 admission results differs greatly in different regions which does not come from regional disparities, rather the extent of school selection is decisive. This is the explanation for the weak performance of the secondary school system in the Budapest region.
- The highest added pedagogical value (HAÉ) can be recognised in grammar schools and the lowest in vocational schools. This value is in close connection with student motivation and future vision mainly influenced by family background.

Demographic processes and public education

The well-known demographic processes cause several changes in public education. The effects of demographic changes appear unfavourably, though in a different way in public education system. Besides sectoral regulators, as general framework, the attitude of the maintainer which provides sources and can resist negative effects to some extent.

The number of live births had almost been halved with two steep slopes from 1975 to 2009 meaning exactly 86,058 students, that is 48 %. Since 1999, less than 100,000 children have been born. In the 80s the natural growth of the population stopped and the growth rate became negative (Chart 4).

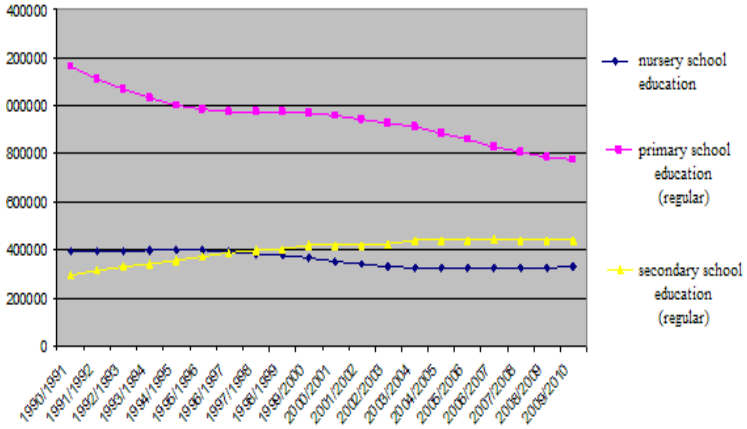

Chart 4: The number of participants of the public education system
Source: Own edition based on KSH-Stadat data

Changes in the number of students affected the vertical elements of the system differently in time and space as well. The reduction of student number has taken place in nursery schools, now it can also be recognised in primary and secondary schools. The lowest point in secondary schools is expected in 2016.

- According to KSH (Central Statistics Office) data 1990-2009, it can be claimed that the number of nursery school pupils has reduced by 16 %, and the number of primary school students by 44 %. The number of participants in regular secondary education, within it in grammar schools, has risen by 52 % as a consequence of the expansion of the training.

- All these resulted in changes in the ratio of participant number on maintenance levels of secondary education. From the 1997/1998 term the number of secondary school students was higher than that of nursery school pupils. 21% of the total number is nursery school pupil, 50% primary school pupil and 29% is secondary school student.
- On the basis of OECD data from 2006 which show conditions in 2004 in 19 EU countries, the average ratio is 15 students per teacher, while in Hungary it is 10 students per teacher. It is a bit better at secondary level: the EU average is 12 students and the Hungarian average is 11 students per teacher.
- The indicators and tendencies brought about by demographic processes sign efficiency reserves in the system along with the present training programmes.
- Demographic changes affect greatly those regions where village- and small village structure is typical.
- Settlement municipalities are more loyal in keeping the number regulations, while county municipalities are more consequent.

Sectoral policy intends to handle the impacts of demographic changes on public education with financial regulations. It is backed up by the fact that since September 2007 the central budget has financed schools on the basis of so called *performance indicators*. It is important to keep in mind, that if the problem is managed only from a financial aspect, its consequences may be serious for the major part of the settlement system. On the other hand, if it is not managed at all, the whole public education system may be affected in a negative way as most institutions are undersupported financially.

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The characteristics of public education in the Southern Great Plain Region

Bács-Kiskun, Békés and Csongrád counties make up the largest region of the country with its 18,339 km^2, which means 20% of the whole territory of the country. On the other hand the 1,325,527 inhabitants living here are 13.1% of the whole population (KSH 2009). The density of the region is 74 person/km^2 which is under the national average, that is 109. The most densely populated county is Csongrád (100), while Bács-Kiskun and Békés have similar data in density (64 and 69). 44% of the population live in settlements with 2000-9999 inhabitants. This settlement category takes up 44.9% of the settlement system. Towns with

10,000-49,999 inhabitants (75% of the settlement system) home 31.6% of the population. 21.3% of the population live in the two towns with a population of more than 100,000. So 97.6% of the population live in the above mentioned settlements.

The Southern Great Plain is the second region of the country according to the number of settlements with a town status. That is why problems originating from the functional inefficiency of new towns occur in great numbers. When planning public education provision it should be kept in mind that the frame of the spatial structure within the region is made up not by statistical subregions, but homogenous settlement groups, formed as a result of complicated correlations of the spatial structure. These are mostly the county centres and Hódmezővásárhely and partly Baja (TÓTH 2006). They are the most capable to get resources in the region, and they also have the most effective comprehensive school system (Chart 5).

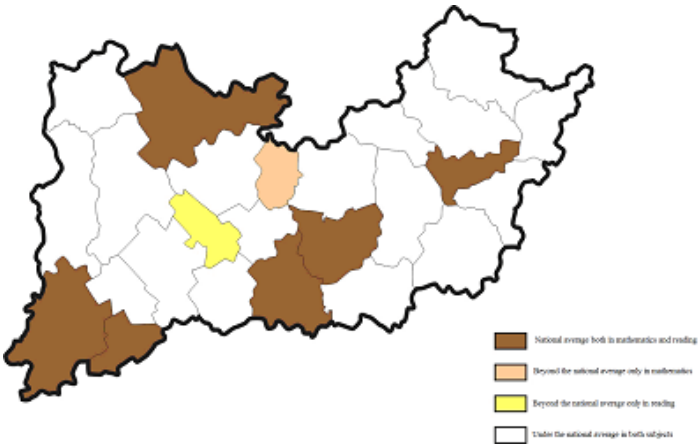

Chart 5: Results of 10-grade students in the subregions of the region
Source: National Survey on Competencies 2010

While planning public education provision, indicators of high outskirt population in the Southern Great Plain should be taken into consideration. Homesteads can be found mainly in the area situated west off Motorway 5. However there is a significant outskirt population around some towns in Csongrád and Békés counties as well (Szentes, Csongrád and Szarvas, Békéscsaba).

The results of competency assessment of 10-grade students, moreover the rate of successful entrance examinations is the highest in these towns. Regarding efficiency, public education shows a more and more diverse picture that relates to

the strong and accelerating differentiation of the social and economic spatial structure. Almost one third of the subregions within the region falls into the most disadvantageous category (NFÜ[6] 2008).

The public education of the region can be characterized as follows:

- In the region, the proportion of nursery (13.2%) and primary school pupils (13.4%) is in line with the proportion of the region compared to the whole Hungarian population (13.1%)
- In the Southern Great Plain area, the proportion of vocational training is the highest within secondary public education.
- The ethnic diversity of the region is rather rich. The educational system provides for all social demands. Nevertheless, the public education system struggles with the effective integration of the school age gipsy population.
- The average number of participants in schools is 290 students and 22 teachers. These indicators are higher than the national average.
- The constraint to close down public education institutions does not primarily affect this region, which results from its settlement structure.
- The public education system of the region is less cooperative and less planned ; it is basically organized along opportunities and interests.
- Nursery school education is not provided in 10 settlements and 16 settlements lack primary school education. On the whole there is no education at all in 10 settlements 8 of which are located in Bács-Kiskun county (with its large outskirt population), and 2 in Békés county, which is less than 4 % of the total settlement system.
- Maintainer supplementary normatives in the region differ greatly depending on the territory, the size of the settlement and also the maintainer. This brings forward serious questions concerning equal opportunities.
- Civil responsibility as a maintainer's attitude is still not typical in the region.

[6]National Development Agency (Nemzeti Fejlesztési Ügynökség)

The Public Educational Profile of Békés County

In 2007, the number of live births per 1,000 citizens was the lowest in the country. The high rate (-3.0) of migrational difference intensifies the ageing of the population. 69.9 % of the population are city-dwellers and 19% live in settlements having gained town status. The remaining 30.1% of the population live in the 56 parishes of the settlement system.

The average headcount of kindergarten groups is 22-32 at county level. Preschool education is provided in between 90 and 100% in the settlements of the county. Note that „overpreschooling" is characteristic in the county as well. By comparing the children's social data we can clearly see the consequence of the general backslide of the county, i.e. that one-third of kindergarten-age children live in poverty.

The material, infrastructural conditions of the Békés County kindergartens are only in 40% compliance with the system of criteria for the mandatory register of assets. The micro-regional proportions of kindergarten service comply with the headcount rates. This also indicates that the service is requested in the place of residence.

A plurality of legal owners is present among the entities responsible for primary schools as well. The second largest school authority after the respective municipalities is the church, which operates 10% of the county's primary schools.

Primary school service is decisively chosen within the respective settlements or micro-regions. School choice motivated by the parents' social status has generated a selection process in the county seat and in larger cities. In these settlements, social separation is manifested in the separation of schools as well.

2,881 educators are employed in the primary schools of the county. The representation of subjects is satisfactory in the lower grades, almost 100% while it is only about 80% in the upper grades. The unsatisfactory representation of majors is mainly a problem to small settlements of micro-regions where the level has fallen behind the normative. Non-competitive wages and the backward environment are unable to attract graduates to these settlements, not even by counter-selection.

The level of infrastructural equipment of primary schools is extremely deficient. Poorly-equipped schools in bad condition are not characteristic only of the backward settlements of micro-regions lagging behind, but also of larger cities – primarily in the socially underprivileged districts. The current federal norm for the most part does not even cover employees' wages. Operational costs are covered by bank loans in several municipalities.

The Békés County secondary school system is strongly centralised. 39 percent of the training takes place in Békéscsaba with almost 18% of the population of the county (Chart 6).

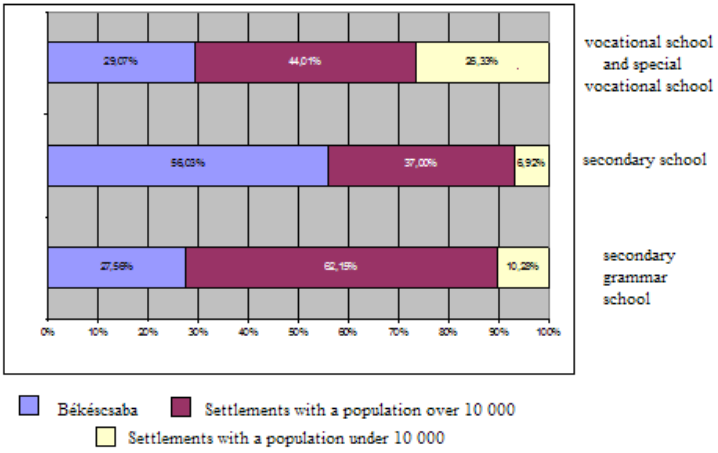

Chart 6: Proportion of settlements of different size in secondary education 2007
Source: Based on data of the Representative Body of Békés County

Based on an index number calculated by the correlation of the number of training institutions to the population, the result is a high number (2.29). In the smaller-size categories of the settlements the proportion falls, as 48% of secondary education is operated by settlements with populations of 10,000-49,999, and this size category includes 37% of the population. On the other hand, the index number correlated to the population is much lower (1.29). More than 44% of the population live in settlements with populations below 10,000 but their proportions in the operation of secondary education is 13%. Consequently, the index correlated to the population (0.29) is the smallest in this size category.

A further characteristic of Békés County is the considerable proportion of secondary technical schools in the county seat, while there is an even distribution of grammar school education in other smaller towns. In Békéscsaba, there are almost twice as many secondary technical schools as grammar schools, with even the number of vocational schools exceeding that of grammar schools. Most of the vocational training which requires equipment is concentrated in the county seat and Orosháza.

The Characteristics of the Orosháza Micro-Region Public Education

The area of the Orosháza micro-region is a total of 848.56 square km, covering 15.07% of the area of Békés County, 4.62% of the Southern Great Plain region, and 0.9% of Hungary. The population density of the micro-region is 74 residents/square km, which is 5% higher than the county average but is 32% behind it. The population[7] of the micro-region accounts for 16.5% of the population of Békés County, 4.6% of the Southern Great Plains Region, and 0.62% of the country's total population.

Domestic demographical processes apply in the micro-region as well, i.e. the population is gradually dropping and ageing simultaneously. Consequently, the number of school age children has also decreased considerably.

In 2004, 13.2 % of the population, in 2006 only 11.8 % of the population was of compulsory school-age.

The public educational system of the micro-region is decisively concentrated in Orosháza. 87 percent of grammar school education, 100% of vocational training and almost 50% of pre-school/kindergarten and primary school education takes place in the city (Chart 7).

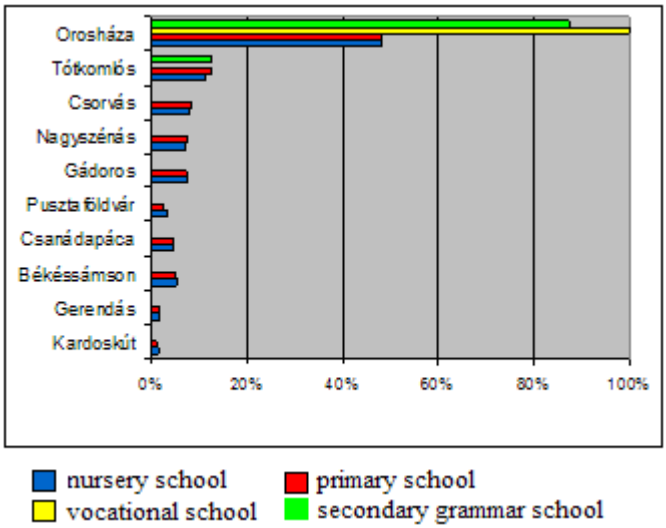

Chart 7: Proportions of the subregional public education system, 2005
Source: Own edition based on data KIR-STAT 2006

[7] Population data of the subregion according to 2006 statistics.

Tótkomlós is the only other settlement where full-time secondary education takes place. The Tótkomlós educational palette is diversified by the Slovakian ethnic kindergarten and primary school.

In the micro-region, pre-school education is provided in every settlement. Education is church-administered in Gerendás, municipality and church-administered in Orosháza, and municipality-administered in the remaining settlements. Regarding the number of children admitted and the number of available places, the utilization rate of kindergartens is 83%. The regional map of the utilisation rate of available places is mostly even, follows the regional average and converges to full utilisation, the sole exceptions being Csorvás, Pusztaföldvár and Békéssámson. The utilisation rate of available kindergarten places is below regional average in Csorvás and Pusztaföldvár, while that of Békéssámson is the highest, clearly rather exceeding the average.

The number of children per kindergarten teacher is 10.8, and this number is a little higher in church-run kindergartens: 11.5. Regarding the index, the picture is more unified and only the indexes of two settlements, Csanádapáca and Gerendás, are lower (Chart 8).

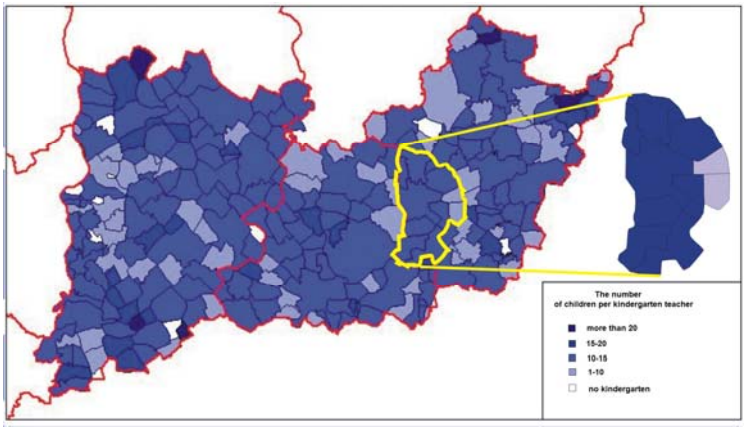

Chart 8: The number of children per kindergarten teacher (2005-2006)
Source: Blahó , Tóth 2006

Obviously, there is a difference between the respective operators as well, and the number of children per kindergarten teacher in church-run kindergartens is higher. In the micro-region, the index is shaped by demographic processes and the operator's expectations and opportunities.

The number of students per class shows a north-south dichotomy in the micro-region (Chart 9). City and parish averages are almost identical, while the indexes of smaller population settlements are lower.

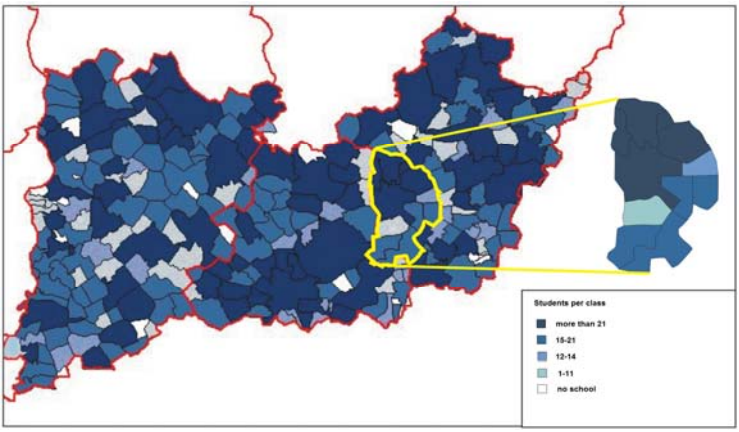

Chart 9: Students per class (2005-2006)
Source: Blahó , Tóth 2006

The lowest numbers were measured in Kardoskút and Gerendás. The different regulations in ethnic education may account for the drawback of Tótkomlós.

With the introduction of the *Public Educational Efficiency Index*[8] the system shifts towards a more unified picture. Another consequence of the efficiency index is that concerning small settlements, non-cooperational public educational service cannot be realised. Despite statutory incentives, the organization of the micro-regional level public educational service has not been achieved. Cooperation at micro-regional level is more typical.

While concerning the size of kindergarten and primary school service the Orosháza micro-region can claim to have the third largest system in the county, it only comes in fourth regarding the number of students in secondary school education with even the Békés micro-region preceding it. In the micro-region, grammar school education is the only area representing a proportion above 10%, although the similar index of the lower population Gyula micro-region is 8% higher. Based on the training/educational structure, the territorial proportions and the efficiency indexes, we may draw the conclusion that the field the micro-

[8] It will be introduced into the system from term 2007/2008. The index is based on the number of students and shows the size of classes, the number of lessons and the size of teaching staff the central budget intends to finance.

region can primarily be competitive in at county level in secondary education is grammar school education.

Orosháza's loss of position – apart from the decrease in population, the drawback in regional traffic and market centre functions, moreover the decline of the food industry – has taken place in public education and especially in vocational education. The paradox of the situation which has evolved is that the most industrialised city in the county has only the fourth largest vocational capacity.

The results of the regional level empirical research support the fact that in the hierarchical levels of public education, strategic approach and the scheduling of public educational task performance are weakening, but ad-hoc decision-making is on the rise. In several cases, forced and limited choice responses are characteristic. These all decrease the efficiency of the system and weakens the chances for a successful integration into public educational networks.

The unfolding competition within the cognitive social structure concerns the whole settlement system and is about the level of public services, and within that, it is about the level of education as well. Its consequences are visible in the social-economic spatial structure and shape further major differentiations. The territorial picture of public educational service has, regarding equal opportunities and efficiency, been transformed in such a way that the lower hierarchical elements of the settlement system have become those which have suffered the most as a result. In consequence to the direction and dynamics of the process, the competitive public educational system will soon be a problem to medium-size cities as well. The structural and content related reform of public education cannot be delayed any longer.

Being aware of the position of public education in international efficiency rankings, the considerable territorial differences in educational service, and the resulting serious consequences, we may claim that within the given general terms the system cannot fulfil its social undertakings. Paradigm shift both at governance and implementational levels of public education is needed! This all requires the definition of national level social and economic goals, and the social legitimacy of this shift needs to be established. The definition and implementation of new knowledge and literacy contents relevant to the above-mentioned goals into public education may be carried out only subsequently. Furthermore, state responsibility and the competences of actors in the system need to be clarified. Throughout the process, the state has to guarantee sustainability, quality and equal opportunities. Parallelly, a pedagogical career model and effective teacher training, as opposed to career selection, have to be established.

The most important results of the research:

1. The thesis is based on regional research that has been carried out since 2006. One of the main syntheses of this work is the Southern Great Plain Region Public Education Development Strategy 2007-2013. With the completed document, public educational service planning and the integration of sectoral priorities into the New Hungary Development Plan could be concluded.
2. The applied research methods have contributed to the enrichment of the methodological field of observations concerning geography of education, in a way that methods relevant to research areas have been set. The spatial observation of educational processes may help specify the place and role of the geography of education in territorial and settlement development.
3. Regional strategy, with its system of objectives and indicators, provided the basis for public educational development plans at county, micro-regional and settlement levels, and its updated database provided background information for decision-makers in the territorial planning of public education.
4. The research results have been published in public educational strategy and in Regional Operative Programs (TÁMOP [Social Renewal Operational Programme], TIOP [Social Infrastructure Operational Programme]) as well. By surveying the operators' level of adherence to Regulation No 11/1994 of the Ministry of Education and Culture, the research has defined the actual needs, the extent of lack of physical infrastructure, and defined developmental contents.
5. I have proved – in accordance with and in support of OKI [National Institute for Educational Research][9] researches – the evolution of social, settlement and school slope. Furthermore, I have concluded that the high number of disadvantaged, multiple-

[9] Halász G. – Lannert J. (SZERK) 2006: Jelentés a magyar közoktatásról 2006 [Report on Hungarian Public Education]. Országos Közoktatási Intézet [National Institute for Public Education], Budapest. 624p.

disadvantaged and special-education students in public education falls within the subject of social and school slope.

6. I have examined the social habits of school choice and the differences in efficiency concerning schools and certain fields of training. By applying correlational calculations, I have proven a significant connection to parents' social position. I have also clarified the direction and consequences of the process, the fact that social disadvantages are turning into intensifying educational disadvantages and that the educational reproduction of social disadvantages is taking place. Moreover, I have concluded that public education is becoming selective, and the agent of the problem at a secondary level.

7. During the research, I examined the development of the number of kindergarteners and students per teacher and compared them with OECD averages. I have discovered that apart from its variety of programs public education also possesses cost-effectiveness related reserves. These are efficiency-related reserves as well, in case organizational culture development and the extension of the variety of programs would take place in public education, complying with competitiveness and social cohesion objectives.

8. Within the micro-regional case study, I included the examination of school-age students' health status and the influencing factors in the observational field of geography of education. Its importance is underlined by the fact that a multitude of health problems of school-age students jeopardize individual success and social competitiveness. Consequently, the importance of the complex and holistic development of personality is also supported by this research.

9. The research results have been mentioned at the professional forums of the Educational and Child Aid Round Table[10] and helped shape the conclusions drawn. In the final panel debate the following conclusion was drawn: "The selectional effects of schools are primarily rooted in school choice habits determined by social status. On the other hand, a different selectional effect is demonstrable as well which is in connection with the level of infrastructure, the training types offered, the efficiency of

[10] The State Reform Committee – in compliance with Government Decree 1061/2006 (VI.15.) – have established the Educational and Child Aid Round Table with an objective to perform a study concerning the relations between the extremely low level of employment in Hungary and the efficiency of public education.

trainings, and the level of development of the sustainable settlement. These factors – especially in settlements lagging behind – may arise as counter-selective characteristics. In case the above-mentioned conditions are satisfactory, they will be alluring for educators with a higher level of knowledge and professional culture. It is clear that settlements and fields of training badly in need of the right professionals mostly lack them. This is one of the reasons for the establishment of a state-operated resident teachers' system modelled on countries with successful educational systems. Of course, this needs to be accompanied by a remodelled pedagogical allowance system, the acknowledgement of surplus performance, and the creation of an attractive career path."

Other directions of the research:

In the Southern Great Plain region, research creates a basis for the establishment of a regional public educational network connecting to the university as a knowledge pole. In component TÁMOP- 4.1.2-08/B/, the actual research direction is the survey of public servant educators based on age and professional qualifications per settlement and per institution.

Research objective: Teacher training adjusted to needs, regional professional service and research centre supporting the training, network cooperation and the establishment of an IT database.

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