BUDAPEST INSTITUTE

QUALITY OF SMALL SCHOOLS AND EFFICIENT SCHOOL SIZE

Case study for the project "Good national practices in financing and quality control of rural schools in the European Union: First steps"

The Hungarian education system

In Hungary, compulsory school age is 18.[1] The main structure of the system is summarised in the Appendix. In 2009/2010 about 1.3 million pupils attended primary or secondary education, while 328 thousand children went to kindergarten (*óvoda*). Public sector schools educated 89% of the pupils. Private institutions may be religiously committed and they may charge tuition fees. Pre-primary education institutions charge a small fee for catering, while primary and secondary education are free of charge. Financial support (including free textbooks and subsidised lunch) of pupils is granted generally to disadvantaged families.

Curricula, grading

The framework of the curricula is structured to three levels. At the government level, the National Core Curriculum focuses on the acquisition of key competences. The framework curricula - centrally accredited or published by the Minister - are based on the National Core Curriculum and serve as a basis for shaping the local curricula which are developed by schools themselves. Though the minister responsible for education decides the official list of textbooks, the teachers have the right to choose from them. Every class has a class teacher (*osztályfőnök*) responsible for educational and organisational issues. Pupils are assessed based upon a 1-5 numeric grading scale and they may have to repeat a year from the end of grade two. From grade four, children study at least one foreign language, while in the upper secondary school two languages have to be studied. Secondary education ends with the national secondary school leaving examination (*érettségi vizsga*) which is a prerequisite for admission to higher education.

Pre-primary

Day nurseries (*bölcsőde*) provide daytime supervision and professional care for children aged between 20 weeks and 3 years. During socialism day care services became more widely available, but after the transition capacities shrank by 50%. Today 26 thousand places are available but the service is provided for more than 33 thousand children. A *bölcsőde* operates 5 days a week during the whole year with a 4-5 week summer break.

Kindergartens educate children from the age of 3 until the compulsory schooling age (6 but maximum 8). After 1989, the privatisation of state-owned companies caused most factory- and workplace-based kindergartens to be shut down and the provision became the duty of the local governments. Participation in kindergarten is mandatory from age 5. When evaluating the applications for admission to the kindergarten, the head of the kindergarten draws distinction on the basis if the child belongs to the district (catchment area) of the institution or not. Local governments are obliged to provide kindergarten education to every child categorized as facing multiple disadvantages (*halmozottan hátrányos helyzetű, 'hhh'*) who reached the age of 3, and after September 2011 to

[1] The upper age limit for compulsory schooling is planned to be reduced from 18 years to 15/16. The two major teachers' unions oppose that plan.

every child who reached the age of 3. Enrolment is possible at any time during the education period. From the 3145 townships 1993 have kindergarten, but from them only 245 are equipped with bölcsőde (see map on page 5).

Primary and Secondary

Primary and lower secondary education (ISCED 1, ISCED 2) is provided in eight-grade single structure schools (*általános iskola*). Since 1993 the final 4 of the 8 grades have overlapped with the 6 and 8 grade general secondary schools (*gimnázium*). The *általános iskola* starts with an introductory phase (grades 1-2), followed by a rudimentary phase (grades 3-4) where general competence based (non-subject based) education takes place. In grades 5-8, education is subject-based. The majority of schools are small or medium sized, attended by less than 500 pupils. In order to help integrate children with multiple disadvantages, from 2008 onwards local governments maintaining institutions have to define the catchment area of state *általános iskola* in a way that in a settlement where there are several schools, the rate of multiply disadvantaged pupils in the individual catchment areas should not differ from the rate of multiply disadvantaged pupils in the settlement by more than 15 percentage point. If there are not enough places for the non-disadvantaged applicants, the decision on admittance must be settled by a draw. Otherwise, school choice is free.

Upper secondary and post-secondary (ISCED 3 and 4) education are particularly complex and multi-layered in Hungary. The majority of institutions teach four grades (9-12), but bilingual upper secondary schools (*középiskola*) can depart from this pattern if they offer intensive language education in the 9th grade and finish with grade 13. Schools admit pupils from the region or country and they may set admission criteria. Three typical types of institutions coexist, which sometimes merge into multiple institutions. The *gimnázium* offers education and teaching to ensure the basics of humanities and science and prepares pupils for the érettségi vizsga[2] and for higher education. Alternative structure gimnázium (with 6 or 8 grades) also includes part or all of lower secondary education (ISCED 2). The *szakközépiskola* has four grades of upper secondary school to give the basics of general culture. From grade 9 onwards vocational orientations is possible. The function of the *szakközépiskola* is to prepare for the érettségi vizsga, for higher education, for employment or for inception of vocational training. The *szakiskola* has grades 9-10 to provide general basic education and a number of vocational training grades required for obtaining the given vocational qualification.

Challenges

The Hungarian educational system faces several challenges today. The number of *pupils per teacher* is lower in both primary and secondary education than the European average. Although one reason is probably institutional inefficiency, another must be unfavourable population trends. The decrease in mortality and in the number of deaths has not counterbalanced the decline in the number of births. Relative to 2005, a decline of about 10 percentage points is expected among the school-age population by 2015 (see graph below).

The number of day nurseries decreased even more radically than the number of children in the early 1990s and has increased only very slowly in the past decade. *Improving access to bölcsőde* is a strategic goal.

Laying the foundations of life-long learning through the *improvement of key competencies* is a key medium term objective, which is itself conditional upon the improvement of the teaching profession, the renewal of the training and further training of teachers, improving the quality of teaching and spreading the application of information technology. Recently, there has been a systemic move away from assessing factual knowledge towards assessing basic and specific, subject based competences. A national, centrally organized testing system for the assessment of mathematic and reading competencies is designed to test every pupil in every school at grade 6, 8 and 10 systematic upgrading of skills will receive much more emphasis in the content of teaching/learning.

[2] The *érettségi vizsga* is a state examination, which has to be held nationally according to uniform central examination requirements. Since 2005 it has been a two-tier exam (standard and advanced levels).

The education of the *Romany (or Roma) and socially disadvantaged children* is claimed to be a top priority. A significant Romany ethnic minority (estimated 600-700 thousand) live in Hungary, and their participation in education is significantly behind the national average at upper-secondary and tertiary level[3]. Further measures are planned to provide successful educational solutions to disadvantaged, largely Romany pupils as well as children with special educational needs. Several EU-sponsored operational programmes[4] were launched under the umbrella of the New Hungarian Development Plan.

Merging or centralizing small schools

The problem with small schools

Small village schools are often mentioned as the source of inefficiency in the public debate and this is not wholly unjustified. Recent trends show growing differences in the performance of primary schools and underperforming small schools may have contributed to this (the characteristics of small schools are summarised in a table at the end of the Appendix). As described above, in the decentralized school system of Hungary financing is based on per-capita lump-sum grants provided by the central government and the additional resources of the local municipality. This is an innate disadvantage for the schools of small settlements since their maintainer (the local municipality) is less able to collect additional resources, while their per-pupil costs tend to be larger. As explained in the other Hungarian case study on segregation, the option of free school choice magnifies the disadvantages of small village schools as the flight of high status children makes it difficult for them to maintain the quality of their services.

Arguments for merging or centralizing small schools

Merging or centralising small schools may help solve some of the above described problems; the ten most commonly cited arguments for merging small schools are as follows (Hermann 2005):

(1) Small schools are expensive and cannot exploit economies of size: they have larger per pupil costs and class per teacher and pupil per teacher ratios are unavoidably lower than average. The effectiveness of education is both constrained by the available teaching staff and the problems of physical school infrastructure.

(2) Whether small schools can provide education of acceptable quality at all is often questioned.

(3) Schools reduce average costs by operating merged, multigrade classes, that, in turn, compromises quality.

(4) Schools with high rates of disadvantaged pupils (some small schools are such) are less attractive for teachers to work for, making it difficult to employ good teaching staff.

(5) Parents seem to be more inclined to send their children to bigger schools in other settlements if the local school provides multigrade classes. The positive external or peer-group effects can be expected to diminish in this situation, thus resulting in worse results on average.

(6) Small schools cannot exploit economies of scope by offering an adequate diversity of courses, sporting possibilities, music or dance lessons, or differentiated language classes.

(7) Small schools are of lower quality because of other features, like managerial inefficiency.

(8) Due to the recent major demographic decline in Hungary, the existence of small settlement primary schools has been highly questioned.

(9) Total cost is usually assumed to have increasing returns to scale in a relevant range of school size. In the range of increasing returns to scale the owner of the school is interested in increasing the number of pupils in the range where the per pupil grant exceeds the marginal cost.

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[3] There is no education delivered in the languages the Romany minority speak, partly because of the speciality of the language and partly because of the lack of interest or demand from parents.

[4] For instance the Social Renewal Operational Programme and Social Infrastructure Operational Programme.

(10) Educational costs are thought to rise non-linearly with the number of pupils. If class sizes can be increased, few extra pupils add almost nothing to the total cost.

There are however just as many arguments against centralising small schools. In Hermann (2005), the main arguments are summarised as follows:

(1) Smaller class size may foster learner-centred teaching methods, since teachers can concentrate more on teaching the pupils and less on disciplining them.

(2) Small communities allow for a better parent-school relationship: the teacher is an important, highly respected member of the whole community when doing her/his job properly.

(3) Smaller schools are easier to govern and thus create a smaller number of bureaucratic problems. Smaller school staff allows for more efficient peer review and greater responsibility for the children.

(4) Hermann (2005) has shown small settlement schools in Hungary are not the major cause of national budget deficit.

(5) Small local schools have population preserving power; in economic terms there are positive external effects: schools may contribute to the development of the settlement and mitigate outmigration.

(6) Local governments usually consider having a local school as part and parcel of local autonomy.

(7) While experts in Hungary usually agree that multigrade classes are an unfavourable (and, in fact, infrequent) practice in the upper-cycle, the quality of education in multigrade classes in the lower-cycle of general schools (1–4th grades) is a highly debated and more open issue.

(8) In certain areas of the country, school merger is not a viable option due to the low density of the settlement structure and the related excessive commuting times and transportation costs.

(9) The educational performance of small schools may be lower not because they are bad, but because the pupils' background is bad. If that is the case, centralization and mergers do not help. In fact, Horn (2006) found that small settlement schools are just as bad as the larger ones in compensating for initial social inequalities, but at least they do not increase the differences. After adjusting for socio-economic background and distance, almost all of the differences between settlement types vanish, and thus villages are undoubtedly not of worse quality.

The politics of small schools in Hungary

As we have seen above, arguments based on economic efficiency or the theory of education do not lead to a consensus about centralising small schools. The choices to be made require a consideration of specific local conditions and also a value judgement which is more of a political than a professional nature.

In Hungary, a political decision was made four years ago to merge schools below a certain size into nearby, larger schools. Schools below a certain size were not allowed to apply for certain special discretionary transfers from the Ministry and were obliged to administratively join another school. More specifically, the Public Education Act and accompanying decrees were amended, effective September 2007, to include the following provisions:

- a primary school which operates less than eight grades shall join another primary school operating with eight classes or a minimum six graded general secondary school as a constituent school (*tagiskola)*.
- a primary school which has less than eight grades is one that operates classes only in the 1st - 6th grades for at least two consecutive academic years.
- a grade can be counted as an operating one only if the number of pupils attending that particular grade is not less than 50% of the maximum allowed size of a class , that is,15.
- the authority (usually a local municipal government) that maintains the school, shall make provisions for converting schools with less than eight grades into a *tagintézmény*, effectively join forces with other schools or merge it into a larger one, until 31 August 2008.
- Schools which do not conform to the above criteria shall operate only as a *tagiskola* from the

academic year 2008/2009.

The above decisions attracted considerable public attention. Critics of the measures included the political opposition as well as extraparliamentary political groups like *Védegylet*, a green-conservationist-anticapitalist pressure group whose leaders later founded LMP, a green political party that made it into Parliament in 2010.

In addition to the standard social cost-benefit arguments listed in the previous section, András Lányi, then leader of *Védegylet* raised some more general, ideological-political charges against the government promulgating the law. First, that forcing small rural schools to shut down represents the view that modernisation is tantamount to urbanisation, which in fact is not necessarily true. Second, that these measures are somewhat similar to the changes in the policies of the communist leadership of Hungary in the 1970es, when, after a wave of enforced collectivisation in the agricultural sector, to provide the new socialist industrial sector with workforce, a campaign to centralise took place. Finally, that such policies are favoured by the policy elite of the country that is partial to top-down, statist, centralising solutions, and who were trained by the central planners of our recent past.

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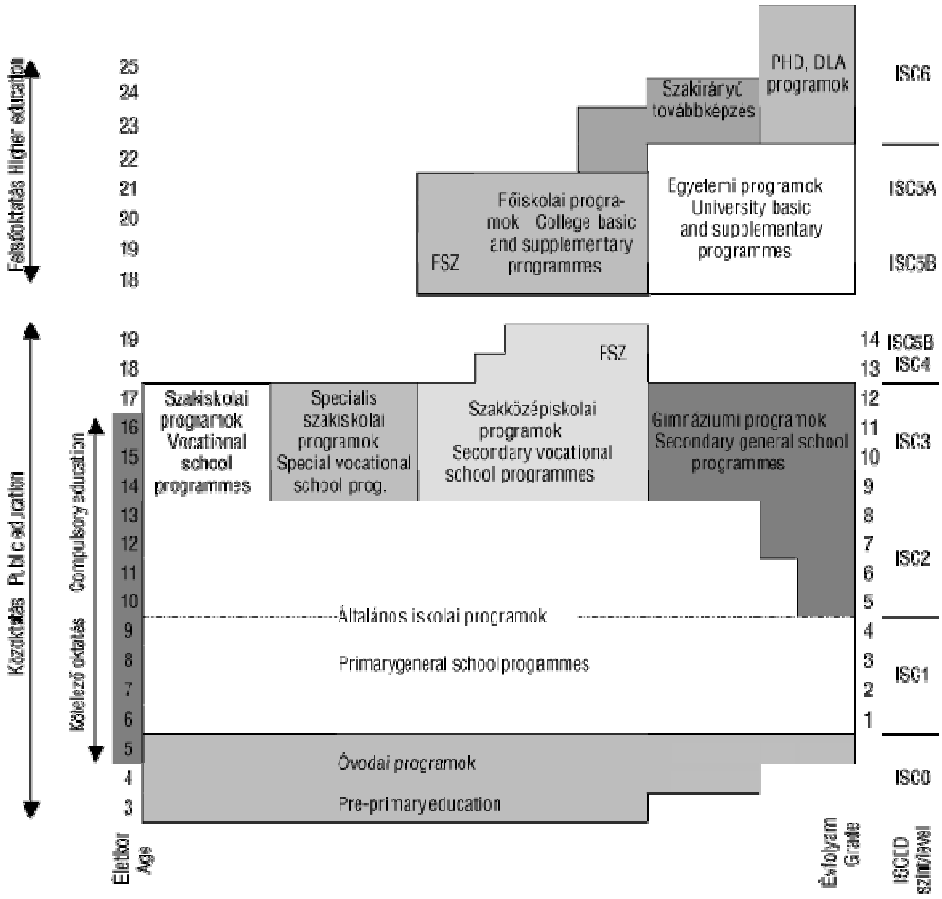
Appendix

The structure of Hungarian education system



Source: Oktatásstatiszikai évkönyv 2003/2004, Budapest, 2004

http://www.oki.hu/oldal.php?tipus=cikk&kod=iskolarendszerek-forgacs-isced

Number of educational institutions 2010/2011

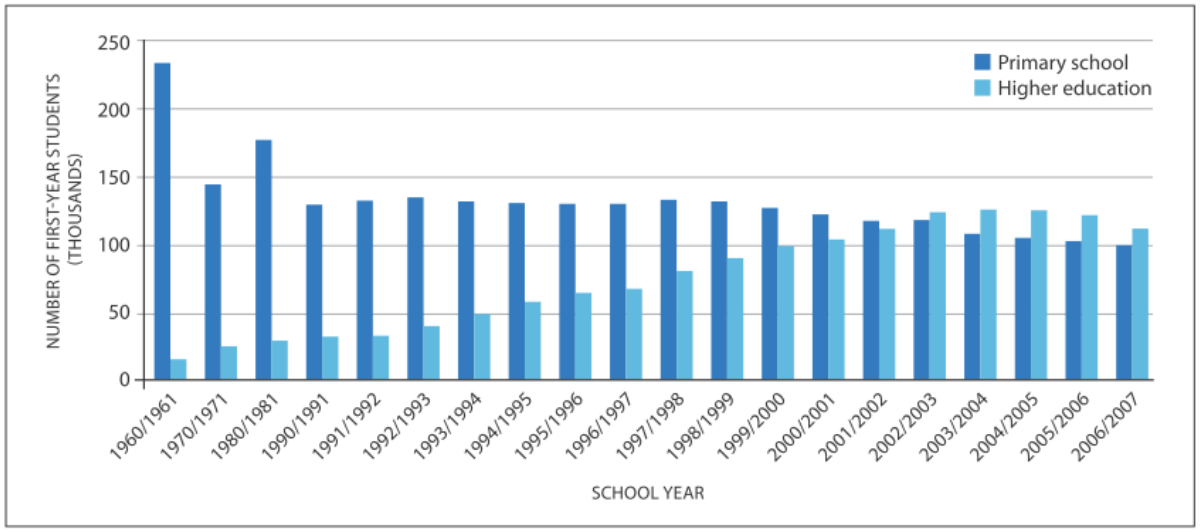
Type of institution maintained by	State	Private	Total
Day Nursery / *Bölcsőde*[5]	562	63	625
Kindergarten / *Óvoda*	3953	405	4358
Általános iskola	2934	372	3306
Gimnázium	427	449	876
Szakközépiskola	557	382	939
Szakiskola	510	292	802

Source: KSH

http://portal.ksh.hu/pls/ksh/docs/hun/xftp/idoszaki/oktat/oktatas1011.pdf

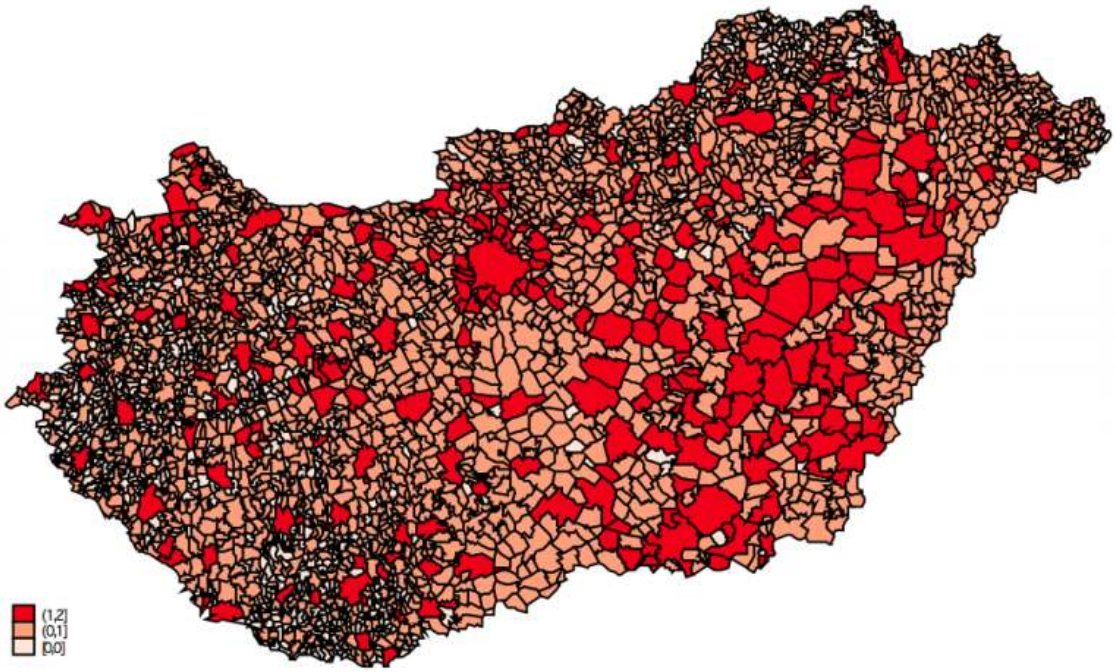
Demographic transition, number of first year students by year

[5] Year 2009.



Source: Lannert (2009)

Institutional availability in Hungary*



*Red: day nursery / *bölcsőde* and kindergarten / *óvoda*, pink: only kindergarten / *óvoda*, white: none of them.

Source: KSH (2008)

Average values of characteristics of the study environment and schools by school categories

	Rural small schools		Schools in bigger villages			City schools		
	mean	st. dev.	mean		st. dev.	mean		st. dev.
Ratio of endangered students	0,079	0,115	0,089	**	0,098	0,098	***	0,156
Ratio of students with conduct disorder	0,051	0,086	0,051		0,075	0,069	***	0,128
Ratio receiving free meals	0,034	0,141	0,030		0,117	0,047	**	0,111
Computers per student	0,064	0,067	0,037	***	0,032	0,043	***	0,083
Computers (not older than 3 year) per student	0,012	0,027	0,008	***	0,017	0,012		0,049
I Internet dummy	0,569	0,496	0,792	***	0,406	0,850	***	0,357
Fast Internet dummy	0,362	0,481	0,548	***	0,498	0,589	***	0,492
Gym dummy	0,409	0,492	0,805	***	0,397	0,873	***	0,333
Library books per student	4,726	7,665	4,085	**	5,677	5,737	***	6,582
Foreign books per student in the library	0,954	2,576	0,523	***	1,324	0,847		1,936
Ratio of teachers below 35 years	0,328	0,218	0,286	***	0,137	0,251	***	0,147
Ratio of teachers above 55 years	0,083	0,131	0,087		0,076	0,090	*	0,074
Ratio of female teachers	0,842	0,135	0,833	*	0,085	0,871	***	0,077
Ratio of teachers with secondary education	0,041	0,072	0,062	***	0,074	0,131	***	0,144
Ratio of teachers without certificate of pedagogical attainment	0,063	0,097	0,034	***	0,053	0,018	***	0,047
Average school size	14,0	4,419	18,9	***	3,266	21,9	***	4,468
Average teacher per class ratio	1,502	0,313	1,550	***	0,273	1,886	***	0,39
Number per class of teacher assistants	0,161	0,024	0,120	***	0,012	0,110	***	0,018
Ratio of the lessons held by teachers without certification	0,134	0,139	0,097	***	0,118	0,031	***	0,069
Foreign language teachers with certification (dummy)	0,620	0,486	0,859	***	0,349	0,952	***	0,214
Ratio of students attending multigrade classes	0,227	0,385	0,032	***	0,075	0,012	***	0,071
Ratio of students attending merged classes (in grades 5-8)	0,066	0,219	0,027	***	0,069	0,012	***	0,075
Ratio of students n in remedial training	0,361	0,290	0,299	***	0,237	0,244	***	0,223

Source: Hermann, Zoltán (2005) A falusi kisiskolák fajlagos kiadásai. manuscript. Asterisk show level of significance