

Compare: A Journal of Comparative and International Education

ISSN: 0305-7925 (Print) 1469-3623 (Online) Journal homepage: <https://www.tandfonline.com/loi/ccom20>

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To cite this article: Mikołaj Herbst & Anna Wojciuk (2017) Common legacy, different paths: the transformation of educational systems in the Czech Republic, Slovakia, Hungary and Poland, *Compare: A Journal of Comparative and International Education*, 47:1, 118-132, DOI: [10.1080/03057925.2016.1153410](https://doi.org/10.1080/03057925.2016.1153410)

To link to this article: <https://doi.org/10.1080/03057925.2016.1153410>



Published online: 16 Mar 2016.



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Common legacy, different paths: the transformation of educational systems in the Czech Republic, Slovakia, Hungary and Poland

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ABSTRACT

The goal of this work is to better understand the institutional changes in the educational systems of the Czech Republic, Hungary, Poland and Slovakia. We demonstrate that the educational reforms implemented during the transformation introduced very different institutional arrangements in the four countries, despite the fact that their systems shared many common characteristics at the beginning of the 1990s. Differences between the national approaches to educational reforms are particularly reflected in the modes of education decentralisation, the level of school autonomy, accountability and funding mechanisms. We believe that different institutional arrangements may have contributed to the divergent achievements of the Czech Republic, Slovakia, Hungary and Poland in the PISA programme.

KEYWORDS

Educational systems; institutional arrangements; transition; decentralisation; accountability; Czech Republic; Hungary; Poland; Slovakia

1. Introduction

Over the past decade, educational debates have shown a growing interest in the link between the specific institutional settings adopted in different systems and the quality of education. The discussion on the importance of institutions for education has been nurtured by the new phenomenon of cross-country comparisons of educational outcomes. Earlier, the systems were frequently compared in terms of inputs; however, as numerous studies show, inputs do not translate directly into outcomes, understood as the knowledge and skills students acquired (Fuchs and Woessmann 2007; Gundlach et al. 2001; Hanushek 1986, 2002, 2003; Leuven et al. 2007; West and Woessmann 2006; Woessmann 2003). The emergence of international student assessment programmes, such as the Program for International Student Assessment (PISA), the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS), despite their important weaknesses, have inspired educators and social scientists to discuss the differences in educational outcomes between countries, as well as the differences between certain features of national educational systems (Soh 2014; Carnoy, Khavenson, et al. 2015).

Our intention is to contribute to the debate on the effects of educational reforms on learning outcomes. Although this work is inspired by the divergent achievements of the four countries in the PISA programme, we do not aspire to fully explain this divergence, but rather to better understand how some institutional arrangements may lead to improvement or deterioration of educational quality.

Our study may be also valuable in reference to the neoinstitutional, comparative approach to the analysis of educational systems (Wiseman, Astiz, et al. 2014). We aim at contributing to the debate about the growing similarity of national educational systems (see Jakobi 2009a, 2009b; Martens and Leibfried 2008; Mitter 2004; Nagel et al. 2009). One important voice in this discourse is that of Mitter (2004), who predicts a decline of national educational systems as distinguishable organisational and legal structures, mentioning Central and Eastern European (CEE) countries as the exemplars of this trend. As a contribution to the debate, we provide the evidence from four CEE countries whose educational systems were very similar 30 years ago, but are becoming increasingly different due to the institutional reforms undertaken during the transformation.

2. Conceptual framework and methods

Comparative analyses of educational systems often have methodological deficiencies. For example, in the widely discussed McKinsey report (Mourshed et al. 2010), cases are selected on the basis of outcome. The authors focus on successful systems, different in all other ways, and draw far reaching conclusions as to which features and reforms characterise the winners in the race. But the validity of these results is questionable – we simply do not know whether the worse performing systems did not adopt similar arrangements (Wojciuk 2012). A more legitimate way to look for the sources of successful changes would be to take systems that were similar at some historical point in time and that later became more divergent. The reasons for the growing differentiation in results can then be investigated. Thus, we propose a Most Similar Systems Design analysis of educational reforms in four Central European countries: the Czech Republic, Hungary, Poland and Slovakia.

Based on a qualitative approach, this paper may be viewed as complementary to quantitative studies and as providing different novel insight into the functioning of educational systems.

There are many institutional factors that potentially influence the quality of education systems. Because of limited space, in this paper we restrict our attention to the policies that have been identified in earlier studies as potential determinants of educational performance, and that are hotly debated in the four countries we discuss.

As our work is partly inspired by the divergent outcomes of PISA between Central and Eastern European countries, we focus on the policy areas that are emphasised in the recommendations formulated by the OECD, based on the analyses of PISA data. A careful review of such recommendations is provided by Bieber and Martens (2011). More precisely, we refer to the two policy areas: (1) local/school autonomy and (2) quality assurance.

We first devote attention to the issue of decentralisation. The division of power between the central government and local authorities is one of the most important features of modern educational systems. Decentralisation is motivated by the belief that the specific educational needs of citizens can be better addressed by their local representatives than by country-level agencies. Some cross-country studies support this belief (Fuchs and Wößmann 2007), although there is also evidence that the degree of local autonomy has no clear effect on educational quality (Collier and Millimet 2009) or may have an adverse impact due the increase of inequality between territorial units. As demonstrated by Dyer (2005) and Dyer and Rose (2005), the ultimate outcomes of decentralisation depend not only on the willingness to transfer responsibility from the central to the local level, but also on the local capacity to perform educational tasks. Therefore, the planning and evaluation of decentralisation reforms should take into account the ability of teachers, schools and local authorities to autonomously provide a high quality education.

In the latter sections of the article, we discuss the different means of control over the quality of schooling, as adopted by the four countries. Since in modern systems many important decisions are taken autonomously at the local level, there is a need for regulatory instruments that ensure that schools in different locations meet the core standards and that prevent excessive inequality. Within this broad issue, we choose to investigate the instruments that are considered most powerful in setting

common standards in education: national curricula, models of school supervision and approaches to school accountability.

3. The legacy and the outcomes

3.1. Educational systems in the four countries in the context of the transformation

By emphasising the common origin of educational systems in the Czech Republic, Hungary, Poland and Slovakia, we refer to the legacy of communist order, which played the dominant role in shaping their education-related institutions. Although the initial formation of public schooling back in the nineteenth century took different forms and occurred at different times in each of the countries considered, the experience of belonging to the eastern block between 1945 and 1989 yielded a mutual assimilation of national educational systems with respect to political motivation, management styles and general organisation. At the end of communist rule, all three educational systems – Czechoslovakian, Hungarian and Polish – faced similar criticisms: excessive unification (i.e., a centrally-imposed curriculum, unified textbooks), rigid bureaucratic control, the dehumanisation of pedagogical practice and the blocking of local initiatives (Halász 1993; Perry 2005). In fact, the systems were very similar. Compulsory schooling consisted of two tiers – primary and secondary. The duration of primary school was 8 or 9 years and secondary school lasted for 3–5 years, the latter being divided into general, secondary vocational and basic vocational tracks, of which the first two concluded with a final examination obligatory for school leavers intending to enter tertiary education. Until the end of communist rule, all schools in the countries considered were maintained and managed by central governments (with some powers reserved for regional agencies subordinate to the government). They were funded from central budgets and had little or no autonomy with respect to both managerial and pedagogical tasks. External evaluation of schools relied on reports from visiting state-appointed inspectors. The only national examination was taken by students at the end of secondary school. Although centrally administered, this examination was, however, conducted and graded within schools in all three countries.

In all of the countries considered, the vocational path was predominate over general upper-secondary education at the beginning of the 1990s. The structure of upper-secondary schooling corresponded to the needs of socialist economies, as perceived by the central planners in the respective countries. However, the 1990s brought about the breakdown of the old economic system, with most of the state-owned companies going bankrupt. One of the adverse effects of the economic transition in CEE countries was rising unemployment, which followed the shrinking number of jobs in industry and (particularly in Poland) in agriculture. Simultaneously came the dynamic increase in demand for higher education (HE). At the beginning of the 1990s, the four countries displayed a similar enrollment rate in HE. Around 10% of young people at school-leaving age opted for university studies. In the case of Poland 11.1% of 18–24 year-olds were enrolled in higher education institutions (HEIs), in Czechoslovakia 10%, while in Hungary somewhat fewer (8.6%) (Baldi, Khalaf et al. 2000). In subsequent years, student enrollment in Poland rose very rapidly: by the mid-1990s it had already doubled relative to 1990. The student population in Hungary grew nearly as fast as in Poland, while tertiary school enrollment in the Czech Republic and Slovakia (independent from January 1, 1993) rose at a much lower rate (see Figure 1). Indeed, Slovakia did not double its student numbers until 2004.

The shift towards general schools and the growing demand for tertiary education was related to the transitional shock in the labour market. Faced with sudden restructuring and uncertainty as to the skills on demand, general education gave better chances of employment and higher wage prospects than specialised training. Vocational training programmes started to be seen as inadequate. Enrolling in HE also delayed entrance onto the labour market, making it possible to wait out the difficult economic period.

With respect to education management, the new governments relaxed the central bureaucratic control and extended the autonomy of schools and local self-governments. New curricula, more liberal regulations on school choice, which allowed the market to exert pressure on schools, and the

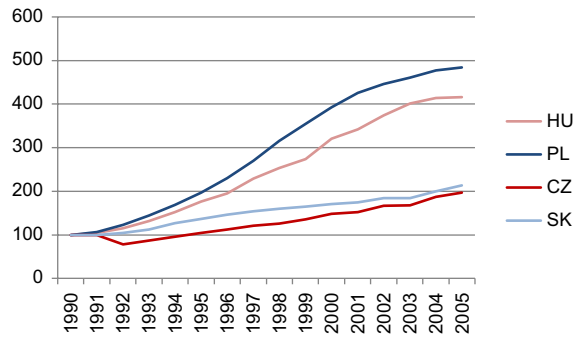


Figure 1. Number of tertiary students in the Czech Republic, Hungary, Poland and the Slovak Republic in 1990-2005. 1990=100. Source: Own calculation based on data from the statistical offices of Hungary, Poland, Slovakia and the OECD database.

establishment of parent committees in schools were all means of weakening the state monopoly in education. All the countries here examined started to extend school autonomy at the beginning of the transformation process in the early 1990s: Czechoslovakia in 1990, Poland in 1991 and Hungary in 1993.

These reforms were strictly embedded in the broader context of transformation and the accompanying ideological shifts. Centralization was earlier an inherent part of the authoritarian institutional setup, therefore decentralisation became a means to bring politics and policy making closer to society. Strengthening the local governance and empowering the citizens was perceived as an effective way of state ‘decommunisation’. Ideologically, liberalism was the main inspiration behind the reforms. However, while in the Czech Republic and Slovakia building of democracy and community on the local level were crucial for the decentralisation, in Poland the effectiveness of service delivery played a larger role. Polish reforms were driven more by the New Public Management concept (Swianiewicz 2002, 2003).

One important difference between the organisation of schooling in the four countries is in the attitude toward student tracking. The Czech system is very selective, characterised by early tracking and streaming of students based on academic abilities. While in the OECD the average age of tracking is 14, in the Czech Republic it occurs at the age of 11, when about 13% of the cohort is attracted to the elitist multi-year (8) *gymnasia*. The next opportunity to track is at the age of 13, when another part of the cohort moves to the multi-year (6) *gymnasia*. The majority of children from low socioeconomic backgrounds do not transfer to *gymnasia*, in contrast to children from higher socioeconomic backgrounds whose parents consciously choose schools on the basis of quality and peers. Another policy, and one that has a potentially negative effect on equity, relies on enrolling low-achieving children (about 5% of each cohort) into special schools with reduced curricula.

The Slovak system is also highly stratified, with children being allocated early into different types of schools based upon their perceived ability, and later being sorted into five tracks. The first selection can occur as early as the age of 10, and is focused on identifying students who might be particularly academically oriented. About 8% of students move to *gymnasia* at the age of 10 or 12 after passing a relevant exam. However, tracking occurs for most of the children at the end of the 5th grade. Socioeconomic background has a major impact on the track the student enters (OECD 2007, 82; Zelmanova et al. 2006).

In Hungary, student tracking starts as soon as after grade 4. The Hungarian system of education is one of the most unequal among the countries participating in the PISA study. Schools are free to select and admit only those students who suit them. Horn et al. (2006), basing their analysis on PISA 2003 data, show the dramatic disparities in student performance among the three tracks in Hungary: academic, vocational secondary and vocational. Those authors show that the achievement gap is related to differences in the socioeconomic status of the students’ families.

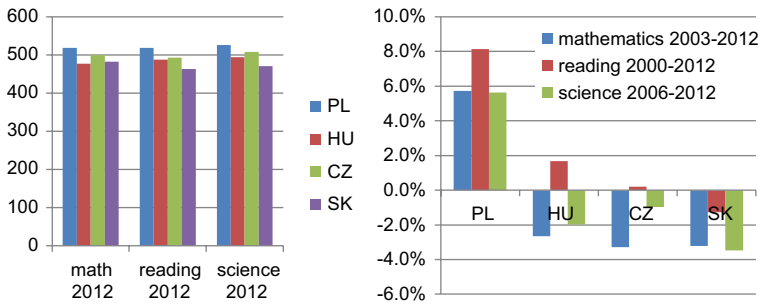


Figure 2. Average PISA 2012 scores in 2012 (left panel) and the % change in average score over 2000–2012 (reading), 2003–2012 (mathematics), and science (2006–2012) in the four countries. Source: Based on OECD data.

Compared to the other three countries, the Polish approach to tracking is very restrictive. Until 1998 (before the introduction of lower-secondary schools), initial tracking took place after completing primary school (thus, after grade 8). After introducing the separate middle tier of schooling, common compulsory education now lasts till grade 9, and initial tracking follows graduation from lower-secondary school. It is not possible to enrol in upper-secondary school before graduation from the lower-secondary level, so there is no opportunity to track students before they conclude grade 9.

3.2. Outcomes of education – recent state and dynamics

The possibilities for comparing the qualitative outcomes of education among countries are very limited. Each national educational system has developed its own instruments to assess student performance, and so any attempt to judge the differences in academic quality upon these instruments is pointless. Comparison can be made only on the basis of international assessment programmes, ones measuring the skills of students or graduates using the same questionnaires, sampling and scaling methods in all researched destinations. Importantly, the Czech Republic, Hungary, Poland and Slovakia do participate in such programmes.

Evaluation of educational systems based on international tests of cognitive skills has some serious limitations. In particular, the PISA programme has been widely criticised with respect to both methodology and the influence it exerts on teaching practice (Grek 2009, 2013; Martens 2006; Martens and Jakobi 2010; Martens, Rusconi, and Leuze 2007; Sellar and Lingard 2013). However, despite being sometimes misused, tools like PISA¹ do provide important signals about the functioning and outcomes of education in different countries. They also inspire more in-depth, qualitative investigations (including this one), ones providing information about differing institutional arrangements of educational systems in the context of measured student performance.

Recent (2012) average PISA scores for the Czech Republic, Hungary, Poland and Slovakia are shown in Figure 2. As presented in the left panel, Poland is the only one of the four countries with a significantly higher result than the OECD average of 500 points in all three parts of the test. The performance of Czech students in science and mathematics is better than their achievement in reading, and in general close to the OECD mean. Both Hungary and Slovakia score below average in all tests. Hungarian students show particularly low achievement in mathematics (477 points), while Slovakia score low in reading (463).

The differences in the change of the national average scores between 2012 and the year in which the given test was administered for the first time are even more striking. As shown in the right panel of Figure 2, Poland's score in mathematics improved by 5.7% between 2003 and 2012. The average achievement in the other three countries decreased over the same period (by between 2.7 and 3.3%). The change of performance in reading and science followed the same pattern. The relative performance of Polish students improved (by 8.1 and 5.6%, respectively), while the scores of the Czech Republic,

Hungary and Slovakia went down. The only exception from this rule was the Hungarian result in reading, which increased slightly (by 1.7%) over the period 2000–2012.

Although the average country scores provide valuable insight into the performance of students in different systems, there are serious concerns about limiting the accountability in education to measuring the average achievement. It is frequently argued that policies improving the average performance may be harmful to low achievers, as didactic efforts are focused on their more talented fellows. To address this issue, some analyses of PISA results emphasise the share of low performing students in the student populations of particular countries as an important indicator of education quality. For example, the European Commission (2013) focused on the share of students at proficiency level 1 according to the PISA scale.² As it turns out, among the four countries of interest, two (the Czech Republic and Poland) managed to decrease the share of low achieving students between 2009 and 2012, while in the other two (Hungary and Slovakia) the number of low achievers grew substantially. Poland is the only one of the four countries (and one of just three in the EU) that has already met the Education and Training 2020 benchmark with respect to reducing the number of students who perform poorly in mathematics. The Czech Republic seems to be on the way to achieving the 15% requirement, while Hungary and Slovakia are rather far from it.

4. Approaches to educational reforms

4.1. Decentralisation of providing education

In the late-twentieth century, the decentralisation of public services, including education, was on the agenda of many governments. However, the role of decentralisation was unique in the countries undergoing post-communist transformation. Autonomous local authorities were restituted in these countries only at the beginning of the 1990s, as a part of the fundamental political project of rolling back the compromised governing institutions and empowering local leadership. Decentralisation of education in the four countries took place almost simultaneously, and involved a hazardous transfer of competencies to institutions that were inexperienced in the provision of public services.

The first wave of decentralisation in Czech and Slovak education arrived in the early 1990s, even before Czechoslovakia was divided into two independent countries in 1993. The initial reforms increased the responsibilities of schools, allowing secondary, and to a lesser extent primary schools, independent legal status. It also provided self-governing municipalities with some limited powers that were transferred from the state level.

After the division of Czechoslovakia, decentralisation progressed much faster in the Czech Republic. Between 1993 and 1998, all schools gained legal independence, which resulted in the transfer of numerous competencies, responsibilities and burdens to the school level. School principals were empowered to hire and fire teachers, allocate wages and maintain schools. This change took place mainly at the expense of the District School Offices (DSOs), an intermediate level of central governance, which had earlier been in charge of many administrative tasks. As stated by Munich (2014), decentralisation replaced the unified, routinised administrative management performed by DSOs with the individual efforts of school principals, who had no experience with this kind of task. This came at the expense of their involvement in pedagogical tasks. The DSOs were gradually divested of powers over primary schools and in 2000 they were finally dissolved. Many powers regarding primary education were transferred to local authorities. This included: the distribution of funds received from the central government (municipalities are also allowed to use local fee-based revenues), maintenance of school buildings, capital investments, as well as nominating and dismissing school principals chosen in an open competition. Formally, municipalities also gained some competencies with respect to supervising the quality of instruction, but most of them do not have the resources to exercise them. Between 1993 and 2003, municipalities became the funding bodies for all primary schools. The abolishment of DSOs also meant the decentralisation of secondary schooling. From 2001, secondary schools became subordinated to the self-governing regions. The regions manage schools through regional school

committees, which are a part of regional administration. According to Munich (2014) this reform has exposed schools to local politics to a much greater extent than in the times of the DSOs.

The decentralisation process relied on three pillars: (1) the growing managerial role of school principals, (2) the transfer of responsibilities from central government to local municipalities and (3) the abolition of centrally imposed curricula, which will be discussed later in this paper. This transformation was accompanied neither with the provision of adequate monitoring, nor with feedback tools. Compared to other OECD countries, the Czech system grants a particularly large share of competencies to schools, and a considerable share to municipalities, leaving little to the central government.

The educational system of the Slovak Republic prior to 2003 can be described as partly centralised. In contrast to the three other countries, no responsibility for education was devolved to the local government, although many municipalities were making *ad hoc* contributions to school maintenance even in the 1990s. The Ministry of Education was the central body of the state administration for primary and secondary schools. The school departments in Regional and District School Offices (RSO/DSOs) were in charge of education at the middle level of governance and were subject in this respect to the Ministry. From 1996, they were in charge of establishing and dissolving schools, distributing central funds among primary and secondary schools, hiring school principals and maintaining the buildings. They were also in charge of supervising the schools' compliance with legal obligations. Since the decentralisation in 2003, when RSO/DSO were dissolved, self-governing regional and municipal authorities started administering both primary and secondary education, including the establishment and dissolution of schools, appointment of school principals and ensuring the material conditions for the schools' operation. Local authorities also became empowered to control school spending. In turn, the state remained responsible for defining generally binding rules for the system. The state determined (directly and via its agencies, like the National Institute for Education or the National Institute for Certified Educational Measurement [NÚCEM]) the principles of pedagogical supervision, designing educational policies and curriculum (Mentel and Pokorný 2012). Compared to other countries, the reforms in Slovakia started later, and the central government kept the most control over education decisions. Of the four systems, local authorities are the least empowered in Slovakia.

The educational system in Hungary was decentralised following the general reform of the administrative structure in 1990. Self-governing municipalities became responsible for maintaining primary schools. The 19 county self-governments and county-level cities became responsible for secondary and vocational schools. The Ministry of Education remained in charge of the basic curriculum and core standards, along with quality, financial arrangements and developmental programmes. After the reform of 1998, the Ministry it also took charge of vocational training, which had formerly been managed by different sectoral Ministries.

In the early 1990s, among other responsibilities regarding primary education, local governments hired and fired school principals, defined the number of teachers and other staff and supervised schools with respect to finances and fulfillment of legal regulations. As a result of insufficient funding from the central budget, as well as the severe demographic problems that were already being experienced, municipalities increasingly tried to lower the burden, for example by contracting educational services to external providers. Since the central government did not have adequate tools for keeping schools accountable for the implementation of curriculum (as the system of inspection was abolished in 1986), it decided to make municipalities responsible for the quality of instruction. The vast autonomy in curriculum development given to schools increased the differentiation between schools, sometimes producing adverse effects. Although schools that did not have the capacity to produce quality curricula could adopt one of the options offered by the Ministry, some schools designed and implemented teaching programmes of questionable value (Vágó 2000). Therefore, the between-school variation, which had already existed in Hungary before the reforms discussed, increased further still. The central government could not easily recover control over the decentralised system, even if it was producing unintended effects. Some authors argue that the decentralisation of education in Hungary deserves criticism, as it focused mainly on abolishing the existing structures of centralised control, without

introducing alternative arrangements that would ensure the consistency of the system (Halász 1993, 2002, 9).

Recently, the government of Victor Orbán has undertaken reforms that reverse earlier decentralisation policies. In 2011, all principals were forced to resign and then reapply for their post. In this process many lost their jobs permanently. As a second step, by January 1 2012, all schools in municipalities numbering less than 3000 inhabitants (4169 schools) were automatically taken over by the central authority. Larger municipalities could remain responsible for the maintenance and real estate, but most of them decided to transfer this responsibility to the state. Currently, almost all the powers are centralised, with the state deciding about hiring and firing, as well as managing the whole educational process. In 2012, the government established the Klebelsberg Institution Maintenance Center, which is a liaison between the Ministry and school administrations that manages more than 4000 schools, with 1.2 million students and 120,000 teachers. The effects of these changes remain to be seen.

Similarly to the other countries discussed, Poland profoundly decentralised its educational system during the 1990s. In terms of its remit, its scale of expenditure and its role in the community, education is now undoubtedly the most important area of activity for Polish local governments. This duty was handed over to them in the early 1990s, not long after the reinstatement of local government in Poland, despite fears, particularly in educational circles, that the inexperienced local institutions would prove incapable of meeting such a complex challenge. The decision stemmed partly from the fact that the main aim of reform in public administration was to create strong and independent local governments. This reform was aimed at breaking with the communist legacy of the centralised state and building a rational and democratic administrative system. It was also intended to increase the efficiency and effectiveness of public services by passing responsibility to local governments for both defining aims and financing and managing them (Levitas 1999, 409).

Starting from 1993, municipal councils began, on a voluntary basis, to take on the management of primary schools. Before this became a statutory duty in 1996, municipal councils were already in charge of 32% of primary schools. Between 1996 and 1999, only large cities made use of the handover of post-primary schools as part of a pilot programme. However, in 1999, two reforms were introduced – in administration and schooling – in which the county level (*powiat*) of local government was established and the hitherto 49 regions (*voivodeships*) were reorganised into 16 new ones. It now became the statutory duty of counties to run basic vocational schools, technical colleges and general and profiled high schools. Meanwhile, the education reform involved creating middle (lower-secondary) schools as an intermediate level between primary and upper-secondary education. The management of middle schools automatically became a statutory duty of municipal governments. The current competencies of local governments in Poland with respect to providing education are very wide: planning the budgets of pre-schools and schools, setting teacher wages (within country-level regulations), adjusting the school network, transporting pupils to school, maintaining and improving the facilities, as well as organizing and financing extra-curricular activities.

Given the common origin and common political motivations, the mode and scope of decentralisation in each of the four countries is surprisingly diverse. In each case, decentralisation was a political process, embedded in the particular dynamics and circumstances of a broader transition, rather than a reform designed within educational circles. The four countries ended up with a quite different division of responsibilities among institutions and various levels of administration (even if we ignore the recent moves towards re-centralisation in Hungary). This diversity is well illustrated in Figure 3, depicting the percentage of education-related decisions (with respect to lower-secondary education) taken at each level of government. As it turns out, the Czech Republic went a long way along the decentralisation path and left markedly few competencies (1%) to its central government. The Czech degree of decentralisation is very high, not only in the analyzed group, but also as compared to all OECD countries. At the same time, it remains one of the countries with highest percentage of decisions being made directly at the school level (68%), and has a noteworthy scope of competencies (28%) assigned to local governments. Interestingly, the Slovak Republic, which of course had a common educational system with the Czech Republic until 1993, eventually followed a different path and transferred much

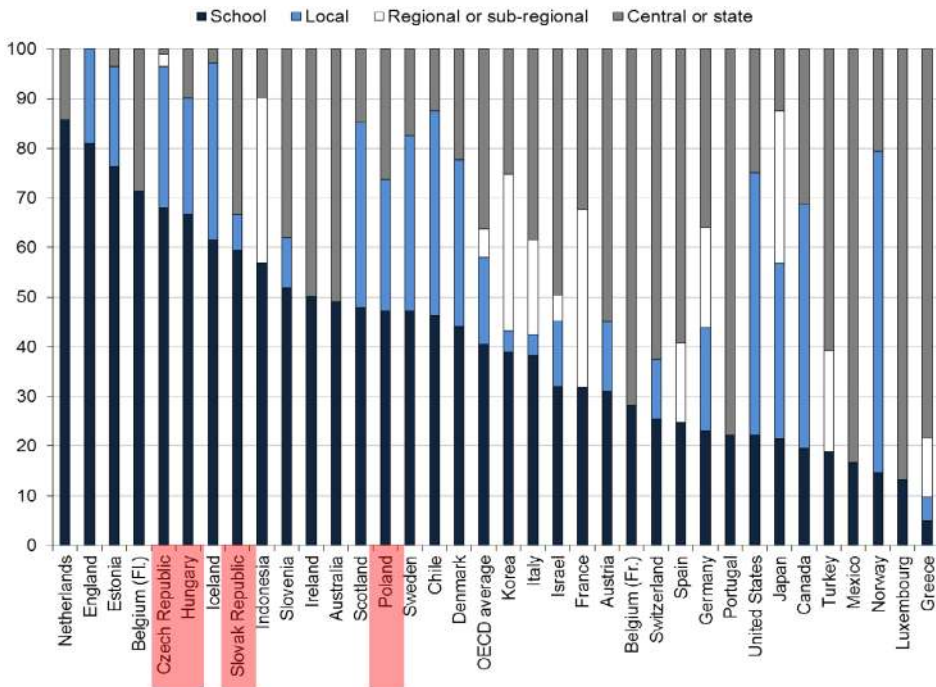


Figure 3. Percentage of decisions taken at each level of government in public lower secondary education (2011). Source: OECD Education at a Glance 2012.

less responsibility to municipalities (7%), while preserving much more at the central level (33%). As the data on the graph refer to the year 2011, the division of responsibilities in the Hungarian educational system closely resembles the Czech system, with two-thirds of decisions being made by school principals, an important role being played by municipalities and little influence exerted by the central government. However, as described earlier, a profound recentralisation of Hungarian education is currently taking place. Of the four countries, Poland seems to have the most balanced division of tasks between different tiers of government. Roughly 50% of decisions are left to school principals, while municipal authorities and the central government are each responsible for about 25% of tasks. Interestingly, although the Polish educational system is more centralised in terms of decision-making than the Czech, Slovak and pre-2012 Hungarian systems, it still leaves more power to local governments and school principals than is the case in the average OECD country. This once again shows that the degree of decentralisation in CEE countries is very high. The decentralisation of education in these countries was clearly a part of the larger political plan of cutting back the post-communist central administration, which explains both the dynamics and profundity of this process.

Questions have been raised in all four countries as to whether the local governments and schools have sufficient competencies and capacities to properly fulfill the numerous and complex tasks assigned to them. The smaller the units, the more likely that some of them may lack the resources to provide education of good quality. As local governments in all countries (except Hungary after 2011) contribute financially to maintaining the educational system, it is also important to look at the fiscal strength of school-governing municipalities as an important indicator of their capabilities.

The degree of fiscal federalisation in Slovakia is quite low. Less than 20% of public expenditure is made at the sub-central level. Local governments have a somewhat stronger position in the Czech Republic and Hungary, where approximately one-quarter of public expenditure is made by the local authorities. The ratio is, however, substantially higher for Poland, where local and regional expenditure accounts for 32% of total government spending.

As shown in Table 1, both the local administration and primary school network in the Czech Republic, Slovakia and – to a somewhat smaller degree – in Hungary, are very fragmented. In the former two countries, the average municipal population is below 2000, and most municipalities have fewer than 500 inhabitants. Even if not every municipality runs a primary school, the average school is very small (between 111 pupils in the Czech Republic and 141 in Hungary). In contrast, Polish municipalities are rather large (15,500 inhabitants on average). The mean municipality in Poland maintains between four and five primary schools. The primary school network is rather dispersed, but the average school has 159 students, more than in any of the other three systems.

4.2. Means of quality control

In a decentralised educational system, the outcomes may depend on the adequacy of decisions taken by the local authorities responsible for providing education, as well as on the quality of management at school level. The question of how much control and over which functions control should be preserved at the central level is one of the most fundamental issues in the public (and academic) debate on education management. It is thus worth examining how the school accountability and supervision mechanisms function in the four countries. We focus on the common school curriculum and standardised testing, leaving aside the issue of external school evaluation by school inspectorates, as new evaluation mechanisms are still in the phase of development in most of the four countries.

Curriculum and national standards for providing education

In the Czech Republic, the national curriculum was abandoned in 2006 and replaced with general guidelines. They are developed by the Ministry, but schools have vast autonomy in designing their own instruction. The guidelines define the objectives of basic education, the key competencies to be acquired, and the general content of subjects and learning outcomes. They also provide a framework timetable and the minimum total number of hours for the educational areas per week. The Ministry approves curricula on the basis of these very general standards, and school principals are still allowed to adjust them according to local needs, altering timetables (up to 10%) and teaching programmes (up to 30%). Czech teachers are free to choose the teaching methods, textbooks and educational aids they use. The Czech Republic has also recently adopted a National Qualifications System linked to the European Qualification Framework. In 2011, the National Institute of Education was established, with the goal to provide evidence on policy and practice in education, formulate the framework for education programmes and assist schools in the development of teaching programmes.

In Slovakia, the Ministry and its agencies were fully responsible for designing the curriculum until 2007. There were at least three alternative national curricula designed by the state government, and schools were allowed to choose between them. Teachers could modify up to 30% of the adopted curriculum. The reform in 2008 introduced a two-level model of curriculum, comprising the national component, developed by the National Institute for Education and the National Institute of Vocational Education, and part developed by individual schools (Mentel and Pokorný 2012). Based on the national curriculum, schools can therefore develop their own programmes. The reform brought a radical change with respect to both the general shape of the curriculum and the distribution of responsibilities

Table 1. Indicators of fragmentation and decentralization in schooling and administration.

	Average primary school size	Average municipality population	Sub-central government spending as % of total government spending (2011)(%)	Average number of primary schools per municipality
Czech Republic	111	1682	26.32	0.78
Hungary	141	3141	23.07	1.14
Slovakia	132	1872	17.46	0.86
Poland	159	15,500	32.09	4.5

Source: OECD Government at a Glance 2013, OECD Education at a Glance 2013, national statistics.

between the state and schools. In terms of curriculum content (in the state part), the requirements referring to factual knowledge were replaced with definitions of key competencies. The traditional teaching subjects were integrated into more general 'areas of education.'

In 1989, the curriculum in Hungary was centralised with strict national standards, but since 1985, schools have been allowed to apply 'particular curricular solutions' if authorised. These school-level modifications gained popularity in the early 1990s. The NCC, issued in 1995, was designed by progressive educators strongly influenced by international trends. Great attention was paid to cross-curricular areas: communication, health education, information and telecommunication technology, technical-practical skills, environmental protection and so on. The required achievements were defined by outcomes at the end of grades 4, 6, 8 and 10. These arrangements left a lot of space for schools to develop various local curricular approaches. In order to support the decentralised mechanism, nationally accredited experts evaluated the curricula developed at the school-level. The local curricula also had to be accepted by municipalities governing particular schools. By 1998, this reform was completed and a large share of responsibility for the curriculum was effectively shifted to the level of municipalities and schools. Simultaneously, however, the government established the National Center for Evaluation and Examination of Public Education, set up to serve as a direct administrative tool for evaluation, supervision and quality assurance. Later, in 2000, following the controversies around the NCC, the Frame Curricula (FC) were created to supplement the NCC. They reintroduced specific subjects within the 10 broad knowledge areas along with annual timetables. The NCC still existed, but the FC took more of a regulatory burden. The general structure of a two-level system, with schools having broad curricular autonomy, was maintained. Schools that offered high quality programmes different from the FC could keep them if they obtained special accreditation. Since 2012, consistent with the political line of the governing party, Hungary has started to reintroduce a high degree of central control over the curriculum.

In Poland, both public and non-public schools are obliged to follow the Core Curriculum developed by the Ministry. Until 2009/10 the curriculum precisely specified the content of teaching. After the reform in primary and lower-secondary schools, and since 2012/2013 in high schools, the curriculum defines learning outcomes, basic content knowledge and the skills students should acquire. Thus, teaching content has become less specifically defined. The common core does not define the sequence of teaching, nor the time necessary for teaching each part of the curriculum; nor does it specify the hierarchy of particular topics, thereby giving more autonomy to the teachers. However, besides the core curriculum, schools are obliged to follow the Frame Teaching Program set by Ministry of National Education (MEN), which specifies the minimum required number of teaching hours by subject for each education stage (grades 1–3, 4–6, 7–9 and 10–12).

Standardised tests

In the Czech Republic, there are no central examinations, no nation-wide system of testing nor other standardised tools monitoring student achievements. Municipalities, which are in charge of quality of instruction, do not have easy access to sources of information about teaching in their schools. The Czech government is considering the possibility of introducing a full-cohort national standardised test in grades 5 and 9 (in the Czech language, a foreign language and mathematics), but the term for it has yet to be fixed. In the absence of standardised testing at the end of lower-secondary school, acceptance to upper-secondary school (particularly to the general secondary path) depends on the completion of compulsory education and passing the entrance examination set by a chosen school. The upper-secondary track, with the exception of schools offering only basic vocational training, ends with the final assessment of students (the *maturita* examination). However, its content varies in different schools, so universities do not rely on its results, and organise their own entrance exams.

Slovakia organises only one national test during compulsory education (grade 9), testing student performance in two main subjects – the language of instruction and mathematics (Eurydice 2009). Until 2003, certificates at the end of primary school were awarded on the basis of continuous assessment carried out by teachers. Students were admitted to full-time secondary schools if they completed

entrance examinations. Secondary school ended with a compulsory final examination (the *matura*), which had to be passed in order to access an HEI. From 2003, Slovakia began experimenting with national testing of pupils at the end of lower-secondary school. This was fully implemented in 2009. The test aims at obtaining information about students' performance at the end of compulsory education and providing schools with feedback. In turn, the *maturity* examination consists of an internal and external part. The external part of the *maturity* examination measures student performance with respect to the language of instruction (Slovak, Hungarian or Ukrainian), mathematics and a foreign language. External testing in both instances is of moderate importance, but achieving a very good result may allow enrollment in the next educational tier without entry examinations. The NÚCEM is responsible for conducting both 9th grade testing and the external part of maturity examinations. Slovakia does not make school test results public. The government also intends to introduce standardised tests at the end of primary education.

Hungary has quite a long tradition of testing as a tool for monitoring, evaluation and quality control in public education. Testing had a purely diagnostic function and was run on representative samples of students. As early as 1986, Hungary started conducting experiments in testing at the end of International Standard Classification of Education (ISCED) 1 and 2 levels. In the first decade of the twenty-first century, the country started introducing a broader set of national tests with the objective of monitoring and evaluating schools. In 2001, a new test was introduced in lower-secondary schools aimed at monitoring individual student skills and knowledge on a standardised and regular basis. Currently, Hungary organises four compulsory national tests encompassing maths and literacy in grades 4, 6, 8 and 12. This system gives all schools feedback concerning their performance, and the individual student identifier allows parents to access information about their children. Optional in 2001, this new evaluation system became compulsory for all schools in 2006. From 2008, all local authorities had to use it when monitoring the schools in their charge. However, in practice this tool was applied very rarely. Currently, the Klebelsberg Institution Maintenance Center and its district offices can use this tool, but it remains to be seen what practice will be established with regard to measuring competence.

Hungary and Poland are two of the small group of EU countries (including Denmark, Iceland and Sweden) publishing the results of tests for each school.

Poland introduced standardised, externally evaluated tests after grades 6 and 9 in 2002 and a standardised maturity examination after grade 12 in 2005. The examination at the end of primary school (6th grade) serves only as an evaluation of student performance and is a low-stake one. It should not be used by lower-secondary schools to determine a candidate's eligibility. In practice, however, student sorting at the beginning of lower-secondary school has recently become a serious issue in big cities, where parents can choose between different schools. In turn, the 9th grade tests are definitely high-stake, as they determine which upper-secondary school will be accessible for a given student. Upper-secondary schools accept candidates based on their performance in the 9th grade test, although they are allowed to organise an additional examination in some cases (e.g. for bilingual classes). Following the introduction (in 2005) of a standardised maturity examination, HEIs rely on it to determine student admissions. However, some of them still perform additional entrance interviews.

5. Summary of findings

In this paper, we have provided an in-depth comparative analysis of four educational systems that shared many characteristics at the beginning of the 1990s, but chose different developmental paths in subsequent years. Our research shows that in the case of Central and Eastern Europe, contrary to what the isomorphism theory would predict, national educational systems became increasingly diverse in terms of many institutional arrangements.

We found that all four countries have profoundly decentralised their educational systems since 1990. The Czech Republic, Hungary and Poland introduced their major reforms in the mid-1990s, while decentralisation was delayed in Slovakia. In Poland and Hungary, most powers were transferred

to local government, while in the Czech Republic schools were given substantial autonomy. Poland and Slovakia preserved most quality-related competencies at the central level.

Local governments in all countries perform an important role in the system. However, in the Czech Republic, Slovakia and Hungary, the local administration is very fragmented. Polish municipalities have much greater administrative and financial capacity to manage schools as compared to the other three countries.

Slovakia, Hungary and Poland (but not the Czech Republic) perform standardised tests at school. Slovakia administers only one test (grade 9), while Hungary and Poland measure student skills several times over the course of schooling. In all three countries, the test results are meant to be used as a diagnostic tool for schools, but only in Poland and Hungary may they also be used for school accountability: the average outcomes of every school are made available, in Poland publicly, in Hungary for experts. Of all countries, Poland is the only one in which standardised tests have effectively replaced the entrance examinations to the next education tier, which definitely makes them high-stakes examinations. Overall, our study supports the view of Collier and Millimet (2009, 361) that externally evaluated exams on the curriculum may have a positive correlation with student performance.

The core curricula for schools are defined by the central governments of the four countries, but the systems differ in the level of autonomy assigned to schools. The core curriculum in the Czech Republic and Hungary is very general and schools are allowed to implement very different teaching programmes. However, in Hungary the curriculum began to be recentralised in 2011. Poland and Slovakia have retained most control over the school curriculum over the whole study period.

Although it is impossible, based on the analyzed material, to draw definite conclusions on the causal effects of particular institutional solutions on the outcomes of education, it turns out that the differences in the arrangements are substantial. Taking into account that 30 years ago the four systems were organised in a very similar manner, this proves that decision makers have taken different paths while making reforms. The common characteristic of the transformation was the decentralising effort, which has recently been reversed in the case of Hungary. Similarly, in the Czech Republic, criticisms were raised over the decentralisation of the system, with claims that it had gone too far in too short a period of time, and had not been properly designed. The empowerment of school principals and local authorities was not accompanied by monitoring and feedback arrangements, and this eventually caused teachers', principals' and schools' accountability for educational performance to deteriorate. School principals were overburdened by administrative duties at the expense of management over the quality of instruction.

Poland seems to have the most balanced division of powers between various levels of educational governance, combining the managerial capabilities of central agencies, local governments and school principals. Delayed student tracking (by introducing lower-secondary schools), along with the implementation of standardised examinations at three different stages of the student career, has kept the Polish educational system more uniform and based on common standards, even though most managerial responsibilities have been transferred to the local level. Finally, compared to the other three countries, local administration in Poland is less fragmented and better equipped with financial tools that allow municipalities to manage schools more effectively.

Notes

1. PISA is administered every three years by the OECD. The examination is administered to a representative sample of 15-year-old students in each country and refers to three kinds of cognitive skills: reading, mathematics and science.
2. The PISA 2012 scores are divided into six proficiency levels ranging from the lowest, level 1, to the highest, level 6. In mathematics, pupils who reach only level 1 'can answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined. They are able to identify information and to carry out routine procedures according to direct instructions in explicit situations. They can perform actions that are obvious and follow immediately from the given stimuli.' However, they are not able to complete tasks at higher levels.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the European Union's Seventh Framework Programme (FP7/2007-2013) under the grant agreement "Growth-Innovation-Competitiveness: Fostering Cohesion in Central and Eastern Europe" (GRINCOH).

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