

# **Decentralisation, school choice and independent schools: results and equivalence in the Swedish school system**

*The text is a translation of the first and last chapters in [IFAU Rapport 2014:25](#) “Decentralisering, skolval och fristående skolor: resultat och likvärdighet i svensk skola”, where the references made in the text can be found.*

## **1 Introduction**

Our task is to evaluate the large school reforms of the 1990's – the decentralisation and municipalisation of schools, the possibility to choose between schools and the establishment of independent schools. In connection to these reforms, we also study target-based and result-based management, the system with an upper secondary school based on programmes and the criterion-referenced grading system.

The reforms have been questioned in the discussions about the school system. Certain debaters emphasize problems with the municipalisation. In the report (SOU 2014:5) *The Government Must not Abdicate (Staten får inte abdikera)*, Leif Lewin goes as far as to draw the conclusion that due to the municipalisation and decentralisation reforms, the government has largely abdicated from the responsibility for the country's school system. Other people have emphasized that the reforms concerning school choice and independent schools and the market adjustment of the school system have resulted in increased differences in the results between schools and increased school segregation (Kornhall 2013, Östh et al 2013). The introduction of a criterion-referenced grading system, with a great deal of scope for teachers and schools to interpret objectives and grading criteria and without any relation to national tests graded by external people, is considered to have contributed to grade inflation (Gustafsson and Yang Hansen, 2009). The arguments for why competition among schools would be an additional driving force for grade inflation have also been presented, even if the empirical evidence is not so strong (Vlachos, 2010). Attention has also been given to the decrease in the share that completes upper secondary school and the increase in the share of students that leave comprehensive school with incomplete grades. A connection has been made between the extension of upper secondary school and the introduction of the grade “fail” (Björklund et al. 2010).

The perceived deficiencies in the reforms in the 1990's have constituted the basis for reform work in the first decade of the 2000's. Grading systems and curricula have once more been redesigned and the government is active in making inspections, controls and changing the working methods in schools. This re-regulation has, in turn, been questioned and there have been demands for re-establishing the confidence in those professions that work in schools rather than further restricting their liberty.

Against the background of the on-going lively discussion about the school system, there is a great need for a coherent and, as far as it is possible, correct description of reality that creates a picture of both the trend in the results and the school trend on which different groups can agree. There will, of course, always be different interpretations, but a common factual starting point is a condition for a constructive discussion. We hope to contribute empirical data for such a common description of reality.

## **1.1 The commission**

In December 2012, IFAU was assigned by the government to make a collective evaluation of the decentralisation of the school system when the municipalities became the responsible authority, the possibility to choose school and the establishment of independent schools. It is stated that the evaluation should, in particular, consider such aspects as grades and whether educations are completed as well as gender, foreign background and time in Sweden.<sup>1</sup> The commission is limited to comprehensive school and upper secondary school.

The background for the commission is stated to be the national evaluations of comprehensive school made by the National Agency for Education in 1992 and 2003 which show that there was a drastic decline in pupils' study results in that period and that since the mid 1990's, there has been an increase in the share of pupils that have not completed upper secondary school. Previously, the government had also appointed a commission with the task of evaluating the possible effects of the municipalisation on pupils' study results, the status of the teaching profession and the headmasters' tasks well as equivalence within the educational system (SOU 2014:5) and a commission for evaluating the possible effects of those measures and reforms of the school system that have been implemented from 2007 and onwards (SOU 2013:30).

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<sup>1</sup> This description of the commission builds on Government Decision I:15, 2012 and the press release of the Ministry of Education on December 20 2012 when the commission was made public.

## **1.2 IFAU's interpretation and implementation of the commission**

Understanding how the reforms concerning decentralisation, school choice and independent schools might have affected the trend in the Swedish school system and the pupils' results is a delicate task. The conditions for a quantitative evaluation of effects are not the best. As discussed below, this is both due to the way in which the reforms were implemented and to the lack of empirical evidence which would make it possible to operationalise how the reforms have affected the school system and measure their effects on pupils' results.

The reforms were implemented over a number of years so that each part of the reform affected the whole country at the same time.<sup>2</sup> This makes it very difficult to say what would have happened to the Swedish school system if the reforms had not been implemented. Moreover, there are several changes in the school system that can indirectly be related to these large reforms, but that have been implemented over a long and extended time period. Thus, it is very difficult to distinguish effects of these different reforms. It is rather the case that different pupil cohorts that were at school during this reform period have been affected by the different parts of the reforms to various extents. One approach is thus to compare the trend in the results between different pupil cohorts and relate this to by what reforms they have been affected. However, one difficulty is to distinguish the effect of reforms from overall trends which might also have affected the school results but that are not related to the reforms. Another approach is to make use of the fact that the conditions for implementing the reforms do most likely differ between municipalities. The expansion of the market for independent schools is thus an example where differences between municipalities have emerged over time. In a corresponding way, the municipalities' responsibility for the school system has most likely lead to different changes in different parts of the country. One of the fundamental ideas in the municipalisation of the school system was also that it should be possible to adapt the school to local needs. This local variation in the impacts of the reforms opens up for an evaluation strategy that compares the trend in results between municipalities. We will apply both these approaches.

It is not obvious how this municipal variation in the school trend can be captured and thus be related to the trend in pupils' results. Existing registers and documentation contain very scarce information about how schools are organised at the local level and how the school system has developed after the reforms at the beginning of the 1990's. Moreover, it is not obvious how the

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<sup>2</sup> Appendix 1 in the Swedish report 2014:25 contains a matrix which presents the reforms, when and what cohorts that are affected.

trend in school results should be followed up in the absence of regular absolute surveys of knowledge in a time period with a changed grading system and potential problems with grade inflation.

### **1.3 Objective**

In order to carry out this government commission, the objective of which is to make a collective evaluation of the decentralisation of the school system when the municipalities became the responsible authority, the possibility of choosing school and the establishment of independent schools, in the best possible way, IFAU has formulated the following objectives for this report

- i. Provide a collective description of the trend in results in the school system which to the largest possible extent takes into account changed grading systems, grade inflation etc,
- ii. Quantitatively and qualitatively describe changes in the school strategies of the municipalities such as they are expressed in the municipal curricula in the 1990's and at the beginning of the 2000's as well as
- iii. measure changes in teacher density and teacher quality at the school level

The ambition is then to use this empirical data in order to analyse the importance of the trend in the results in the school system and the trend towards equivalence in the school system. We will both relate the trend in the results to those reforms that have been implemented at the system level, such as reforms of upper secondary school and grading and to the resource changes and changes in school policy and the school market at the municipal level due to the decentralisation and school choice reforms. The objective is, in this way, to supply new knowledge of how the Swedish school system changed in this period and possibly also provide a further understanding of why.

The government stipulates that IFAU should compile evaluations and commissions initiated by itself or by others and that are relevant for the current commission, and supplement this with new studies in those cases when this is required in order to provide an overall picture. IFAU considers that providing an overall picture constitutes a central part of the commission. Thus, we have chosen a broad descriptive approach, rather than an approach where the main focus is to clarify well-identified causal relationships. We also estimate that the latter is hardly feasible since those reforms that are studied have been implemented simultaneously in the whole country and there is thus no untreated group of pupils with which to make a comparison.

But, as already mentioned, providing a total picture of how the school system and pupils' results have developed in connection with those reforms

that were implemented in the school area at the beginning of the 1990's is a difficult task. Detailed empirical knowledge about how the school system has developed, both at the national level and within municipalities, is limited. IFAU has thus put great emphasis on improving these particular empirical conditions, not only for the benefit of this commission but also for further school research. We put a certain emphasis on quantitative studies and methods. An important incentive is that it is in this area that IFAU has its greatest competence, another incentive is that such an approach supplements the very extensive, mainly qualitative, analysis of the municipalisation of the school system which is presented in SOU 2014:5.

#### **1.4 Implementation**

IFAU's implementation of the commission has consisted of several different parts. First, an inventory has been made of previous research on Swedish school reforms and corresponding reforms in other countries. Second, we have created conditions for an overall empirical analysis of the reform period by 1) to the extent that it is possible, creating comparable time series on pupils' school results and their knowledge trend over time, 2) collecting and systemising information on municipal school policy and 3) to the largest possible extent creating data series of teacher density and teacher quality at the *school* level using national data registers. Third, using the new empirical data, we have replicated previous studies on, for example, school choice and independent school reforms and fourth, we have made new analyses with a focus on how the reforms can be connected in different ways to the trend in results and equivalence in Swedish schools.

#### **1.5 Some important delimitations**

We focus on the period between the end of the 1980's and 2006. This could be motivated by the fact that the commission concerns the large reforms that were implemented in the first part of the 1990's and that another commission has scrutinized what has happened from 2007, but data limitations are still the main reason why the analysis cannot be extended any further. In the registers from Statistics Sweden, we have access to labour market and educational registers from 1985. Until 2006, we have detailed information on pupils (year 9 and upper secondary school), schools (the school register) and teachers (the teacher register). When possible, we will, however, extend the analysis to later years. Those school and teacher registers to which we have access do not contain any detailed information on the form of operation of schools either and we will thus not be able to distinguish between profit-making and other independent

principals but, on the other hand, we can analyse municipal and independent schools separately.

## **1.6 What we do and our findings**

The ambition is, as mentioned, to connect changes in policy, resources and results to the reforms by studying the trend in different municipalities and schools. We will study average levels, but we are also interested in the distribution among pupils, schools and municipalities. We thus assume that the municipalisation of the school system meant that the implementation and interpretation of, among other things, target-based management and new curricula might have differed between the country's municipalities, with consequences both for the resource allocation and the organisation of schools. Moreover, the conditions for the establishment of schools and school choice differ between different municipalities, which mean that pupils in different types of municipalities might have been affected by the reforms in different ways.

We measure the impact of the decentralisation reform, by both studying the wording of the municipal school policy in the curricula and its effect on teacher resources in schools (primarily teacher density and teacher quality, to some extent other staff resources). The incentive for this is that before the reforms, there was very little scope for prioritising schools within municipalities. School resources were also largely stipulated by the government resource allocation system. Different trends in the resource allocation and the school policy between municipalities are thus to be considered as a consequence of the municipalisation of the school system. The municipalisation did not only mean that municipalities could, but that they should, interpret the government objectives for schools and allocate resources between schools according to local priorities and preferences. When earmarked sector-subsidies were abolished, the municipalisation did also mean that the total school resources were no longer governed by the state.

However, it is not evident how school policy is to be measured. Due to the municipalisation, it was stipulated that the municipalities formulate local objectives and priorities for schools in the curricula which makes these documents an important source for following how the local responsibility for schools was interpreted in different municipalities and follow the changes over time. The quality of these documents does most likely also reflect differences between municipalities in resources and their capacity be the responsible school authority.

The school choice and independent school reforms did, in turn, mean that the school market and the matching of pupils and teachers at different school units did potentially change with the impact of these reforms. The impact of the school choice and independent school reforms will be measured through the share of pupils that exercise their school choice in the sense that they go to another municipal school than the one that is most closely located to their home, as well as the share of pupils that attend independent schools in comprehensive school and upper secondary school. We will investigate how this sorting is changed and to what extent the result trend in different municipalities can be related to the impact of the reform and changed sorting in schools. However, in this case, it is crucial, but far from evident, to distinguish between changes in the composition of pupils in schools which are related to changes in the population structure rather than to changed matching due to the reforms.

An important limitation of this approach which focuses on the variation between municipalities is that it cannot capture the consequences for the entire educational system which is due to an increased presence of individual choice and local influence on municipal school policy, i.e. effects that are common for all municipalities or that depend on whether there are any external effects. This approach cannot be used for analysing the effects of those aspects of the 1990's reforms that affect the entire educational system either. Examples of such reforms are the new curricula, the reformed grading system, with the introduction of criterion-referenced grades in comprehensive school and criterion-referenced course grades in upper secondary school. In order to study the possible consequences of the type of reforms that affects all pupils in a certain year, we will study the trend over time for pupils' results at different ages and the trend in different types of municipalities.

One of the most important conclusions of the report is that the decline in results that has taken place in the Swedish school system and that has been observed in both national and international surveys seems to have started already before the reforms of the 1990's can reasonably have affected the pupils at school.<sup>3</sup> Moreover, our results indicate that the decline in the results that can be observed already occurs before the pupils get to 7<sup>th</sup> grade in comprehensive school but that it is reinforced in their teens. The declining trend does continue throughout the entire reform period, however, and we cannot exclude that the trend has been affected by changes in the school system due to the school reforms in the 1990's. In upper secondary school, we can relate the decrease in the share of a pupil cohort that completes upper

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<sup>3</sup> This has also been found in Gustafsson et al. (2014).

secondary school to the extension of the vocational programmes and the introduction of the criterion-referenced grading system which constituted an important part of the implementation of a target-based school. It is also likely that the change in the grading system contributed to a decrease in those completing comprehensive school. The analysis of upper secondary school does, however, show that the decrease in the share that completes upper secondary school does not seem to be due to pupils leaving school prematurely. Those pupils that do not complete upper secondary school continue to be registered in upper secondary school and enlistment results and labour market outcomes indicate that they actually acquire knowledge.

As in previous studies (for example Skolverket 2009, Böhlmark and Holmlund 2012, Fredriksson and Vlachos 2011), we find that there has been an increase in the differences in pupils' school results in comprehensive school since the end of the 1980's. This increased distribution can be partly related to the school reforms in the 1990's. We can show that the increased differences in the results between schools are due to the fact that schools have become more segregated as concerns pupils' background characteristics due to increased housing segregation and school choice.

Similarly to Böhlmark and Holmlund (2012) but different from, for example, Gustafsson and Yang Hansen (2009) and Skolverket (2012), we draw the conclusion that despite the increased sorting in schools, pupils' family background has not had any increased impact on pupils' results in comprehensive school. However, we can see signs that family background increased in importance for grades in upper secondary school in connection with the grammar school reform in the 1990's.

We can also show that an increased share of independent schools, but not an increase in the choice of municipal schools, is related to an increase in school segregation, but, on the other hand, we cannot see that an increase in the share of independent schools would have contributed to increased differences in the results between schools besides the effect through increased sorting of pupils. It is worth pointing out here that it is not obvious how the results for, for example, an individual pupil with weaker individual and family conditions can be expected to be affected by increased segregation. It is possible to consider both negative effects such as the results of the class deteriorating when it contains several children with difficulties that compete for the teacher's time and positive effects if a homogeneous group of pupils makes the instruction better adjusted to the level of the individual child.

A possible explanation for why increased sorting in school does not have an impact through family background having an increased importance for pupils'



school results could be that the resource allocation succeeds in completely compensating for schools having increasingly different conditions. However, we do not find any sign that the resource allocation would have become more compensatory due to the municipalisation. There was a strong increase in both teacher density and quality-adjusted teacher density in the years before the municipalisation. Then, there was a strong decrease before the levels had been stabilised, but in the year 2006, they had not yet reached the levels before the municipalisation. Only a small share in the differences in resources between schools can also be explained by differences between municipalities. The allocation of resources is thus mainly explained by the differences in the allocation between schools within municipalities and this decreased somewhat in connection with the municipalisation. However, there is a compensatory element in the resource allocation, but it is weak and has not increased to any considerable extent which might indicate that the resources at the end of the period do not compensate sufficiently for the increased differences in the conditions between schools. Thus, there does not seem to have been any increased compensatory element in the resource allocation that has counteracted an increased impact of the importance of family background for pupil results.

When we study the municipal curricula, we find that the municipal school policy does, in many cases, have limitations in how concrete it is and the relationships between objectives and actions. Not until the end of the 1990's did the municipal curricula begin to contain wordings about the follow-up of results with a focus on pupil performance. The emphasis of the municipalities on equivalence, the compensatory task of schools and teacher competence must also be considered to be very weak. An analysis of the curricula thus confirms the picture that has previously been presented in SOU 2014:5. However, there are differences between municipalities of different size and, in general, municipalities in metropolitan areas seem to have had a clearer and more active local school policy than municipalities in the countryside, which might be explained by the fact that there are scale advantages in developing school policy and organising the school system, which can be put to better use in areas with a larger stock of pupils.

Altogether, the analysis of municipal policy and municipal school resources does, however, show that there is no evidence that changes and increased differences in school policy and resource allocation at the municipal level which are due to the municipalisation reform would have driven the decline in school results. Like previous studies, we can, however, see that the increased school choice and the independent school reform seem to have affected the

average results in a positive direction, but that the effects are small. Thus, there is nothing to indicate that the school choice reforms could serve to explain the general decline in the results in Swedish schools even if they have contributed to an increased sorting of pupils.

## **2 The school reforms of the 1990's and the Swedish school system**

Swedish society underwent large changes in the 1990's. The economic crisis had severe effects on employment and the state finances. There was an increase in the size of pupil cohorts at school and Sweden did also receive large streams of refugees. From the mid 1990's, there was a strong increase in the income differences in society. In this period, a number of revolutionary school reforms were launched: the municipalisation, result-based and target-based management of schools, independent school choice and the possibility to establish independent schools.

In order to comply with the government commission that IFAU has been assigned, i.e. to evaluate the large school reforms of the 1990's, we have in this report chosen to describe and analyse what the school trend has looked like just before, during and after this reform period. This is done by describing the pupils at school, the trend in the pupils' school results, the municipal school policy, school resources, the independent school choice and the emergence of a school market. Finally, we try to relate the importance of these factors to the development of the school system. In this concluding chapter, we summarise the main results from the different parts of the report and on basis of these conclusions, we discuss how the school reforms of the 1990's affected the school results and equivalence in schools for Swedish pupils.

### **2.1 The pupils in school**

Demographic changes, migration flows and an increased income distribution mean that there was an overall increase in the distribution of pupils' school conditions in the 1990's. If we compare the population of pupils in the year 2006 to the end of the 1980's, we find that parents did, on average, have a higher education at the end of the period, but that there had been an increase in the income distribution so that more people were relatively poor. Moreover, a larger share of the pupils was foreign-born. An increasing share of the pupils that were born abroad does also arrive after the age when children start school, which affects both the conditions for individual pupils and for schools.

An important conclusion in the analysis of the changed composition of pupils is that there has been an increase in the differences between schools when it comes to pupils' school conditions. This increase in school segregation is largely the result of an increased housing segregation. When we study the increased differences between schools as concerns children's family incomes, they do, however, seem to be driven by changes in the general income distribution, rather than an increased segregation *per se*. If we hold increased

income differences constant, there is only a small increase in the distance between schools with the best and the worst conditions. The change in the distribution between schools as concerns the share of recently arrived and the share of foreign-born children is also partly due to changes in the migration flows and fluctuations in the number of births. However, we do find that overall, there has been an increase in the school segregation between children with a Swedish and a foreign background, respectively, but a decrease as concerns the education of parents.

## **2.2 The trend in school results**

Our survey of the trend in the results at Swedish schools gives a clear – although somewhat pessimistic – picture of the school trend. The picture of participation in studies is somewhat brighter; it has increased in all parts of the educational system. However, there was a strong decrease in the flow through the school system in this period, in particular in upper secondary school, but to a certain extent also in comprehensive school. There was an increase in the share of pupils who did not complete upper secondary school in connection with the extension of the vocational programmes and when introducing the system with grades for individual courses and it can thus be related to the introduction of target-based management in the school system. In contrast, we find that these pupils were still all enrolled in upper secondary school. The increase in the share that do not fulfil the requirements for obtaining a final grade does not have any clear impact on deteriorated enlistment results or a worse entry on the labour market. This strengthens the impression that the increase in the share that does not complete upper secondary school is due to changes in the regulatory framework rather than a decrease in student participation.

There has been a considerable decrease in the school results of Swedish pupils in the period studied. The knowledge of particular subjects has decreased in all subjects that have been studied, as concerns reading comprehension, mathematics as well as the natural sciences. The results for Swedish pupils are around the OECD average at the end of the period. Our survey shows that the school results have fallen at all levels of the educational system, at least from year 4 to upper secondary school. A central conclusion in this report is that this decline in Swedish pupils' knowledge starts at an early age and seems to precede the large school reforms of the 1990's. There has been a considerable decline in the results already in years 4 and 6. It should thus be possible to find the reason for this decline in the early school years, in pre-school or outside school. Those declines that occur at an early stage seem

to persist also later in life and there is a large correlation between the trends in the results at different levels in the system for the same cohorts. The general decline in comprehensive school does also seem to have deteriorated further between comprehensive school and upper secondary school.

The trend in the differences between school results between different pupil cohorts does not show any uniform pattern. In general, there have been small changes in the differences between the cognitive abilities of low- and high-performing pupils. This indicates that the decline in the results has affected the whole distribution. The reasons for the decline in the results should thus be sought in changes that have affected all pupils.

However, there was an increase in the distribution of grades in comprehensive school in connection with the introduction of the criterion and knowledge-related grading system and in connection with the impact of school choice and the establishment of independent schools. However, there was an increase in the share of pupils with really low grades already before the change in the grading system, while the share of pupils with the very top marks took off at the introduction of the criterion-referenced system. Previous research has shown that these increases in the differences in grades are partly due to grade inflation, which is something that we also confirm.

However, there is nothing to indicate that family background has, in general, become more important for pupils' results today than 25 years ago, even if establishing the trend entails certain methodological problems. There does not seem to have been any considerable change in the differences in school results between native and foreign-born students. For recently arrived pupils, the grades in comprehensive school have declined somewhat, among other things in connection with the introduction of a criterion-referenced system in comprehensive school.

The implementation of the school reforms of the 1990's does thus not seem to have constituted the starting point of the knowledge decline in Swedish schools. But the reforms might have affected an already on-going trend. Since the general decline in the results can be observed already in grades 4-6, and has not lead to any considerable increase in the distribution, it should be possible to find the reasons for the initial fall in the very first school years or in pre-school and in changes that have affected all pupils. It is not possible to exclude that the knowledge decline might be due to factors in the surrounding world outside the school.

The increasing differences in the grades between municipalities and schools coincide in time with the decentralisation reforms. As described above, the distribution in the results does mainly seem to be due to an increased sorting of

pupils and to a smaller extent to differences in school quality or the evaluation of knowledge. The increased sorting between schools does largely seem to be due to increased housing segregation, which could, of course, also indirectly have been affected by the reforms. However, the differences in pupil sorting and school results do seem to have increased somewhat more between schools than between housing areas, which might be explained by an increased presence of school choice and the establishment of independent schools. There are thus signs of a relationship between school reforms and the increased differences between schools.

### **2.3 School policy in the municipalities**

We study how, after the municipalisation, the municipalities took on their responsibility for schools by studying the municipalities' curricula. A general conclusion is that curricula constitute weak steering documents for schools. The contents are partly governed by national steering documents and the national school policy has an impact through a common trend in how curricula develop in certain respects.

During the first years with the municipalities as the responsible authority, most municipalities lack clear knowledge objectives and tools for following up the pupils' results. This responsibility had been given to the municipalities, but it is obvious that there was no functioning local structure for how this was to be implemented in practice. The curricula do thus confirm the picture that was presented in SOU 2014:5. Thus, it is possible that the first curricula were more about describing what the work in schools was actually about at the time of the municipalisation than being well-functioning steering documents.

The municipalities were to stipulate prioritised areas in their curricula. The share of municipalities with clear priorities in their curricula is initially very low but there has been a gradual increase over time. The task of schools that concerns knowledge is among the most common prioritised areas, while teacher competence or personnel supply and equivalence are only prioritised by a few municipalities.

The curricula show that initially, there were no possibilities for the municipalities themselves to take responsibility for evaluations and follow up of pupils' results and the school trend. Due to the requirement for quality reports, the municipalities are obliged to take a certain responsibility and it is also in that case that The Swedish National Agency for Education provides guidance to the municipalities about how they are to deal with the responsibility for evaluations. The emphasis on the work of schools on pupils' results and follow-up is thus more obvious in the mid 1990's. It is getting

slightly more common that municipalities formulate knowledge objectives although the share of curricula with objectives that are sufficiently clear for it to be possible to follow them up and evaluate them is relatively low. Moreover, curricula are seldom clear about what measures that are to be taken for the stipulated goals to be achieved and it might be questioned whether the curricula worked as steering documents in this sense.

The majority of the municipalities mention the term equivalence in their curricula but also in this case do the curricula lack in clarity. It is interesting to note that there is a decrease in the discussions in curricula about school compensatoriness as concerns resource allocation over time. This also applies to the treatment of questions concerning staff and competency.

The treatment and discussion of the term equivalence in the curricula are very limited. This might seem surprising in the light of the intensive discussion about the objectives of equivalence that is being pursued today. It is also interesting that the municipalities to a decreasing extent seem to consider supply of staff and teacher competence as something in which they should be involved. The municipalisation reform did, in fact, mean that the municipalities became responsible for teachers' further education. SOU 2014:5 and Stenlås (2009) also point out that they did not take on this responsibility. One interpretation of this is that individual municipalities did not consider themselves to be sufficiently large agents to have an interest in or a possibility to affect the supply of competence.

## **2.4 School resources**

An important consequence of the responsibility for the schools being transferred to the country's municipalities was that the municipalities became responsible for the resource allocation and got the employer's responsibility for teachers. One objective of the municipalisation was, in fact, that the resource allocation should become more appropriate and adapted to local needs and prioritisations. By creating measures for teacher density and teacher quality at the school level, we follow the trend for teacher resources in schools and the municipalities from the end of the 1980's and onwards and can thus study how resource allocation, teacher competencies and school compensatoriness are changed.

There were no significant changes in teacher competence – measured by age and educational level – between 1989 and 2006. However, relative teacher competence (measured in this way) has deteriorated as compared to other employees who have in general become more educated during this period. We also find that the inflow of teachers at the senior level of comprehensive school

since 1992 consists of a relatively less well selected group over time; they have relatively worse grades from upper secondary school and worse enlistment results in 2006 as compared to 1992. If we more specifically study teacher competence, we find that the share of teaching that is carried out by qualified teachers has decreased from about 80 per cent to 60 per cent both in comprehensive school and upper secondary school. Besides the fact that they lack a formal teacher education or the qualifications to teach their subject, non-qualified teachers generally have a lower educational level and less experience (are younger) than qualified teachers. This trend, which indicates a weakening of the competence of teachers, started already before the implementation of the studied reforms. It is difficult to say how the reforms of the 1990's have contributed to this trend, besides the fact that they do not seem to have slowed it down in any way.

When we study the school resource trend between 1989 and 2006, we both study average teacher density and the corresponding measure adjusted for teacher age and educational level. In comprehensive school, there was a decrease in the teacher density in the whole distribution in the first part of the 1990's, but it has also increased somewhat in the 2000's. The distribution in teacher density between municipalities decreased somewhat in connection with the large school reforms at the beginning of the 1990's, after a large increase in the preceding years. If we instead study the corresponding distribution between schools, there is instead an increase in the differences in connection with the reforms.

For quality-adjusted teacher density, we do instead see a similar pattern but the differences between schools are larger than the differences between municipalities. The trend over time follows the same pattern as that for teacher density but the dynamics is stronger; there was a strong increase in the distribution in connection with the reforms and then there was a slight decrease but it remains at a considerably higher level than before the reforms. When we study upper secondary school at the school level, we do not observe any considerable change over time. There might have been some increase in teacher density for the median pupil in the 2000's.

In this period, there is a doubling of the staff that are not teachers in comprehensive school. This is due to the fact that after school centres were gradually transferred to the school system. If staff at after school centres is removed, we see a small increase for the median pupil at the municipal level but no increase when we study the median pupil on basis of those resources that exist at schools. As concerns staff dealing with pupil welfare (school nurses, welfare officers etc), the supply for the median pupil has been constant



since 1996, when we have data on professions. However, the distribution between schools is large and certain schools do not have any employed staff dealing with pupil welfare, but there has been no change in this pattern.

The resource allocation in schools is weakly compensatory. Schools with pupils with weak background characteristics have more resources, as concerns teacher density and quality adjusted teacher density, than other schools. But the teacher salaries are higher where pupils have strong background characteristics, which might indicate that the competence is higher among teachers in these schools or that the wage level is higher for other reasons in schools in favoured areas. It is also obvious that there are larger differences between schools within municipalities than between municipalities. There is no change in this pattern related to the municipalisation and there is nothing that indicates that there has been any change in the allocation of municipality resources in the period studied, i.e. between the years 1986 and 2006. There might have been a slight increase in the differences in resources between schools with pupils with strong and weak background characteristics in the period studied, but overall, it cannot be said that there has been a decrease or an increase in the compensatory resource allocation of schools. Against the background that there has been an increase in the differences in pupils' background characteristics between schools due to increased sorting, it is, however, possible that, in absolute terms, the school system is less compensatory at the end of the period than before the school reforms of the 1990's.

## **2.5 The school market**

The Swedish school market has developed from an almost inexistent share of pupils enrolled in independent schools at the beginning of the 1990's, to there currently being close to 15 per cent in comprehensive school and more than 25 per cent in upper secondary school. There has also been an increase in the share that chooses another municipal school. School choice is not exercised in the same way by all pupils. We can see that pupils with good possibilities of succeeding at school have a larger probability of being enrolled in a independent school as compared to other pupils. However, there has been a decrease in the distortion in the social distribution over time so that independent schools now exist in more places and to a larger extent. However, 15 years after the independent school reform, there are still socioeconomic differences between pupils in independent schools and municipal comprehensive schools, while the differences have largely disappeared in upper secondary school.

When we studied the establishment pattern for independent schools, we can see that they have mainly been established in metropolitan areas, where the population has a higher education and the share of pupils with a foreign background is higher than in the rest of the country. When we instead study how independent schools are established within municipalities, we also see that there is a larger presence of independent schools in housing areas with many pupils, a higher educational level and the share with a foreign background.

An important result is that the choice of being enrolled in an independent school or in the municipal school is affected by the composition of pupils in the local municipal school. When the pupils in the municipal school have strong background characteristics, those pupils that have good possibilities of succeeding in their studies are more likely to remain in the municipal school sector, as compared to a situation where the municipal school has a weaker pupil population.

Establishment patterns, independent school choice and municipal school choice mean that pupils' family background have become more important for what school that the pupil attends. At the same time, one objective of the school choice and independent school reforms was to give families increased freedom and diversity in the educational system. Thus, it is also possible that the increased sorting of pupils between schools (in this case between the private and the municipal sector) is due to this particular diversity and that schools have adopted profiles in order to attract specific groups of pupils and that family preferences now have an increased impact. Thus, there is potentially a contradiction between equivalence and diversity.

We also study how resources have developed in independent schools and municipal schools. Initially, independent schools had more teacher resources than municipal schools, but the relationship has been the opposite since the turn of the century. We also find that the resource allocation in the independent school sector is more compensatory (in the sense that it varies depending on the pupils' background characteristics) than in the municipal school sector and that this is mainly driven by a low teacher density in independent schools with pupils with strong background characteristics.

However, there are arguments for why school competition might have increased the grade inflation and that competition between schools might lead to an adjustment in the programme supply. A school market that is subject to competition might also mean that pupils change schools more often. In fact, we do find that the grade inflation is stronger in municipalities with more school competition. Similarly to Vlachos (2010), we do, however, find that an increased share of independent schools can only serve to explain a smaller

share of the grade inflation after the introduction of the criterion-referenced and knowledge-related grading system. Competition from the independent school sector does not seem to have any relationship with the probability of changing schools, but there are certain signs that the municipal upper secondary school adjusts its supply of programmes to the competition.

## **2.6 Municipal school policy, resources, school choice and independent schools**

In the last analytical chapter of the report, we study what municipality characteristics that co-vary with municipal school policy, as it is expressed in the curricula. In general, it is difficult to systematically explain the differences between the municipal curricula. We do, however, find some interesting patterns. For example, we see that municipalities with a large share of foreign-born pupils and relatively large school segregation have a clearer focus on questions that concern equivalence and the compensatory task of the school in their curricula. Municipalities that focus on the compensatory task are also more prone to redistribute resources to pupils with weak background characteristics. However, changes in the contents of the municipal curricula do not seem to be reflected in changes in school resources.

We also analyse whether changes in the resource allocation of the municipalities to schools have been of any importance for the trend in school results. We do not find any relationship between changes in school resources and changes in school results during the reform period. However, it should be emphasized that it is methodologically difficult to completely take into consideration that resources are redistributed to low-performing groups of pupils and this result must be interpreted with some care.

We reply to earlier research which shows a small positive relationship between the share of pupils in independent schools in the municipality and pupils' school results. A conclusion of this analysis is that the effects of the school choice reforms on the municipalities' school markets cannot explain the decline in Swedish school results.

We find that there has been a positive trend in the metropolitan regions for grades for pupils in year 9 as compared to other parts of the country. At the same time, we see that these municipalities have been better at exactly defining their school policy priorities in their curricula. A possible interpretation is that large municipalities have better conditions for succeeding at being the responsible authority than what is the case for small municipalities. It is also in these regions that school choice has been developed to the largest extent and it is possible that higher grade inflation can partly serve to explain the differences in the grade trend.

We can also see that the differences in grades between schools have increased more in municipalities where there has been a large increase in the share of independent school students as compared to municipalities with no increase in the independent school sector. However, the increased differences in the results can, as we saw in the analysis of the pupils' results, be explained by an increase in pupil sorting in these municipalities. Thus, this means that increased differences in the results can be explained by the changed pupil composition at schools. One possible interpretation of this result is that the increased school segregation has not had any negative (or positive) consequences for pupils' school performance. However, it cannot be excluded that school segregation might potentially have consequences for school work, due to peer effects, that the teaching is adjusted to the level of the group of pupils, for better or for worse, and since school quality, grading and resources are affected by the composition of pupils.

Altogether, the analysis of municipal policy and municipal school resources, the establishment of independent schools or school choice, does show that there is no evidence that changes at the municipal level would have driven the decline in school results. However, the increased diversity in the results between schools can be related to the reforms.

## **2.7 Discussion**

The reforms that were implemented in the school system at the beginning of the 1990's were radical, both for the organisation and management of schools and the pedagogical tasks of the school and the teachers. The right of all pupils to equal schooling was previously guaranteed by the state-run allocation of resources, the assessment of teacher qualifications, and detailed curricula and hourly plans. After the reform, it was the responsibility of the responsible authority, the schools and the teachers to organise the schools and design the instruction so that every pupil was to achieve the objectives of the school and be offered a good and equal schooling. Previously, it was regulated how schools were to be run; after the reforms it was regulated what overall objectives that were to be achieved. After a few years, this was clarified to specify that this concerned pupils' results, measured in grades and national tests. A possible interpretation of the trend is that school equivalence becomes an objective (in the form of knowledge results) instead of previously having been a means (in the form of efforts and organisation).

Previous research shows that there was a decrease in teacher density in the early 1990's and that there was a considerable change in the municipality resources when the municipalities became responsible for schools. Earlier

studies have also shown that the municipalities were not prepared to take over the responsibility for schools and that the local work in interpreting the objectives of the curriculum and designing the activity in a way that made follow-up and evaluation of the pursued policy and the effects of the development of pupils' knowledge possible did not work. The school choice and independent school reforms have also been studied and frequently debated. One conclusion has been that school choice and school competition have contributed to increased school segregation, have possibly contributed to grade inflation, but have also lead to somewhat improved school results in those municipalities where there has been a larger increase in the share of independent schools. A possible interpretation of the increased variation between schools is that schools have become less equal and that an increase in school segregation is a reason for this. In this report, we have put great emphasis on understanding the decline in school results and on better understanding what drives the increase in the differences on basis of what school one is attending and to what extent this can be related to the school reforms of the 1990's.

One of the most important conclusions of the report is that the decline in the results that has occurred in Swedish schools and that has been given attention in both national and international surveys seems to have started already before the reforms of the 1990's might reasonably have affected the pupils at school. This conclusion has also been drawn by Gustafsson et al. (2014) on basis of the survey on adult knowledge recently carried out by OECD. Moreover, our results indicate that the decline in the results can be observed already before the children reach the senior level of comprehensive school, but that it is reinforced in their teens. This downward trend continues throughout the entire reform period and we cannot exclude that it has been affected by changes in the school system due to the school reforms of the 1990's. In upper secondary school, we can relate the decline to the share of a pupil cohort that completes its upper secondary school studies, to the extension of the vocational programmes and the introduction of the criterion-referenced grading system which was an important link in introducing a school system with target-based management. The analysis of upper secondary school does, however, show that the decline in the share that completes upper secondary school does not seem to be due to pupils officially leaving school. Pupils that do not complete upper secondary school are still registered in upper secondary school and military enlistment results and labour market outcomes indicate that they do actually acquire knowledge.

As in previous studies, we can see that there has been a strong increase in the differences in the results between municipalities and between schools (Skolverket 2009b, Böhlmark and Holmlund 2012, Fredriksson and Vlachos 2011, Gustafsson and Yang Hansen, 2009). This increase in the distribution can partly be connected to the school reforms of the 1990's. It is interesting that the increased differences in the results can be completely explained by the increase in pupil sorting at schools. Our analysis does also indicate that about half of the increase in the differences in grades in comprehensive school is due to an increase in housing segregation and half can be attributed to school choice which has further contributed to the pupil sorting in schools. We can also show that an increased share of independent schools is related to an increase in school segregation, but we cannot see that an increase in the share of independent schools would have contributed to increased differences in results between schools, beyond the effect through increased sorting of pupils.

We also draw the conclusion that it is the expansion of independent schools and pupils' choice of independent schools rather than the possibility of choosing between municipal schools that have contributed to the increased sorting in schools. This might be explained by how independent schools choose to establish themselves. Independent schools are generally established in municipalities with pupils with stronger background characteristics and once they exist, they attract pupils who on average have somewhat better possibilities for completing school. At the same time, the probability that pupils choose to attend an independent school depends on what the municipal schools is like – pupils with strong background characteristics are attracted to independent schools to a larger extent if the municipal school has an admission area with weak pupil background characteristics. The driving forces for choosing between different municipal schools do not have the same sorting effects, however.

An important explanation for the increased differences in the results is thus that there has been an increase in the differences in the composition of pupils between schools. We find that the differences in the pupil composition in particular concern the share of pupils with a foreign background and the share of relatively poor and rich. These increased differences between schools as concerns the pupil composition are largely due to increased housing segregation, but when the school choice and independent school reforms have an impact, we see that there is a larger increase in school segregation than in housing segregation. Even if it cannot be excluded that housing segregation has been affected by the school choice reforms, it is an important conclusion that the increased housing segregation partly seems to be driven by the fact that the

composition of pupils in the country as a whole has changed due to an increase in immigration and due to the fact that there has been a strong increase in the income differences in society since the mid 1990's. Areas with many immigrants already in the 1980's do currently have a larger concentration of foreign born, while the changes are small in other areas. The relatively rich or poor live where they have always lived, but the differences are more pronounced today.

Despite increased pupil sorting and deteriorations in pupils' knowledge, we can, similarly to Böhlmark and Holmlund (2012) but different from, for example, Gustafsson and Yang Hansen (2009) and Skolverket (2012a), not see that there was any increase in the relationship between pupils' family background and their results in comprehensive school. But we can see signs that there was an increase in the importance of family background for grades in upper secondary school in connection with the upper secondary school reforms of the 1990's. That the segregation as concerns pupil background characteristics does not increase the importance of the family for pupils' school results indicates that the segregation has not been beneficial for pupils in schools with good conditions, or has disfavoured pupils in schools with weak pupil background characteristics in any disproportionate way. This might be explained by the fact that peer effects, effects of an adjustment of the educational level or other effects on school quality of the composition of pupils in a school are small or cancel each other out. It might, for example, be possible that the quality of education in certain respects is favoured by the groups of pupils being more homogeneous. An important contributing factor might also be that grading is compensatory and that this outweighs or disguises differences in results between schools. The explanation why family background has not had any increased impact on pupils' results might also be due to factors outside school, such as an increasing amount of children having attended pre-school and that there has been a decrease in the differences in parents' education (see, for example, Böhlmark and Holmlund, 2012).

One of the starting points for the municipalisation was that the municipalities would be able to allocate resources and organise schools in a more appropriate way to create a more equal school. Another possible explanation why the increased school segregation has not had an impact through an increased importance for the pupils' family background could be that schools have succeeded in their compensatory task. When we study teacher resources in schools, it can, however, be questioned whether this is the case. Like previous studies, we find that the resources in comprehensive school per pupil, measured as teacher density, decreased in the 1990's after an increase at

the end of the 1980's. There was also an increase in the distribution of teacher density between schools until the municipalisation when there was a decrease in the distribution of resources between schools. If we take teacher competence into consideration, the trend is more dramatic. There was a decrease in the resources for comprehensive school per pupil and there was then a trend with a decrease in the distribution between schools in the 1990's, and then there was once more an increase in the 2000's. However, the resources do not reach the same level as before the reforms. The trend in upper secondary school is much less dramatic and the situation is relatively stable over time.

When we instead study how resources have been allocated among schools with different pupil background characteristics, we find that there is no clear break in the trend in connection with the reforms and there is nothing to indicate that the municipalities were better or worse at allocating resources to schools according to their needs. Overall, the school system has not become more compensatory with relative measures, but not less either. There is nothing to indicate that municipalities have been better or worse than the state at targeting resources towards needs. Since there is a great deal to indicate that schools with weak pupil background characteristics at the end of the period studied have a weaker group of pupils in the absolute sense than at the beginning of the 1990's, it can be said that schools became less compensatory in absolute terms, however. This picture is reinforced when we find that teacher salaries at the end of the period are higher in those schools with the best pupil background characteristics, if we assume that the salary reflects valuable competency.

When we study the trend in school results and school policy in the country's municipalities, we find that the trend differs between types of municipalities. From the mid-1990's, the metropolitan areas are characterised by a stronger trend in grades and a clearer and more tangibly expressed school policy. A possible explanation is that there are large scale advantages in developing school policy and organising the school which can be put to better use in areas with a larger stock of pupils. Despite this pattern, changes in the municipal school policy or resources cannot explain changes in pupil results.

The municipal curricula confirm the gloomy picture that previous studies have given of the municipalities' readiness to be the responsible authority for schools and the employers of the country's teachers in connection with the municipalisation. The municipalities' interpretation of their task, as it is expressed in the curricula, is generally so inconcrete that it is doubtful whether a curriculum could have worked as a local steering document. However, it is evident that large municipalities seem to have had a better ability to formulate



their school strategy in curricula. The curricula show that the focus on personnel supply, development of teacher competency and their role for distributing resources in a compensatory way was low in the municipalities already at the beginning, but it decreases over time and becomes largely inexistent. The first municipal curricula are almost entirely devoid of information about the trend in pupils' knowledge and results. From the end of the 1990's, when the lack of a systematic follow up of schools had been observed and the demands made by the government on the municipalities had been clarified, there has, however, been an increasing focus in the curricula on the trend in pupils' knowledge and different tools for following this. This change is most obvious in the metropolitan areas, however.

Altogether, our analysis of municipal policy and municipal school resources shows that there is no evidence that changes and increased differences in school policy and resource allocation at the municipal level due to the municipalisation of the school would have driven the declining school results. We can confirm the results from previous research which show that the increased school choice and the independent school reform seem to have affected the average results in a positive direction, but that the effects are small. Thus, we draw the conclusion that the school choice reforms cannot explain the general decline in the results in Swedish schools either, even if we can show that they have contributed to increased pupil sorting and have most likely also affected the grading inflation.

However, it must be emphasized that our measures of municipal school policy – such as they are expressed in curricula and municipal resource allocation – are incomplete and that we can thus not exclude that the decline in the results has still been affected by the school reforms in the 1990's. One possibility is that the school results have been negatively affected by municipalities in their role as employer and have not taken externalities into sufficient consideration in their investments and priorities, with negative consequences for, for example, teacher recruitment and the entire educational system as the result. Another possibility is that the reforms have affected the trend in the results in the entire educational system. The introduction of target-based management in the school system is such an example. One hypothesis, which is partly based on research on the so-called *No child left behind*-reform in the US, is that the criterion-referenced grading system, possibly combined with increased segregation, might have contributed to instruction increasingly targeting the fact that pupils should reach the level for the grade pass or that, due to grading inflation, this has led to a general decrease in the requirement level. If it is in general too easy to obtain the highest grade, there is also a risk

that the learning of high-performing pupils is negatively affected. This might have served to decrease the overall instruction level.

We show that the school choice reforms and target-based management through the criterion-referenced grading system can be connected to an increased distribution of grades and that school choice has led to increased school segregation. To what extent have the reforms then affected equivalence? To be able to discuss this, it is important to emphasise that equivalence is not a well-defined term. One approach is to say that equivalence means that everyone meets a similar school environment, have similar resources and educational methods and are evaluated in a similar way. Another approach is that equivalence means that all pupils are given the possibility to go as far as possible, and that the school system balances the opportunities in life by compensating pupils with weaker background characteristics.

From the first perspective, it is obvious that grade inflation and those problems in making an equal evaluation that follow from a criterion-referenced grading system without any foundation in externally evaluated national tests constitute a problem for school equivalence, both between schools and between pupils from different cohorts. The increased presence of independent schools does, almost by definition, mean an increased variation in the way that schools work and its design. That there is an increase in school segregation when using this perspective is also a sign of decreased equivalence.

As concerns the other perspective, i.e. whether there has been a change in the equivalence due to the fact that the current school system offers other (better or worse) possibilities for children with different background characteristics, the answer is less clear. If we consider the school resources, there are no obvious signs that they have become more or less compensatory over time. At the same time, there has most likely been an increase in the differences in pupils' background characteristics which might mean that the school system has become less compensatory in absolute terms. The increased importance of the family for grades in upper secondary school indicates that the upper secondary school reform and course grades might have decreased the school equivalence in this sense. Increased school segregation might constitute a problem for schools' possibilities to offer pupils equal educations if the segregation affects the quality of the instruction or leads to unevenly distributed peer effects. However, our results do not indicate that school segregation has led to pupils' background characteristics having a larger impact on pupils' results, which indicates that, after all, there has been no decrease in the equivalence when it comes to school results in comprehensive school. However, we cannot exclude that differences in grades underestimate real

differences in knowledge between pupils, since compensatory grading means that it might be relatively easier to get a high grade in a school with many weak pupils. The increased school segregation might also mean that the school system has become less equal when it comes to its tasks that concern education, values and democracy.

In this report, we have shown that there are no simple answers to how the reforms of the 1990's have affected the Swedish school system and that it is complicated to evaluate such extensive reforms. It is obvious that schools were affected, even if it looks as if the decline in the results among Swedish pupils started before this reform period. What lies behind this trend will continue to be subject to discussion. The discussion about how the results in the Swedish school system can be turned in a positive direction and how the school is to be organised to give all pupils a good start in life will continue. Our hope is that this report will constitute a basis for the work at improving and developing the Swedish educational system. Our hope is also that future reforms are designed so that lessons can be drawn and knowledge can be generated about how the school system can be improved.