



# **EQUITY FUNDING OF SCHOOLS: WHAT DO WE LEARN FROM THE LITERATURE ABOUT ITS EFFECTIVENESS ?**

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# BELEIDSSAMENVATTING

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De meeste rijke landen investeren tegenwoordig in 'equity funding policies' (EFPs). Dit zijn diverse vormen van extra financiering die scholen moet toelaten om de invloed van sociaal-economische of etnische verschillen tussen leerlingen op hun onderwijskansen (deels) weg te werken.

Ondanks de vele EFPs die landen hebben geïmplementeerd de voorbije decennia, blijft de ongelijkheid in onderwijskansen bestaan. Ook het Rekenhof kwam recent nog tot deze vaststelling (Vlaams Parlement, 2017). Hierdoor ontstaat soms scepticisme omtrent de effectiviteit en efficiëntie van EFPs, waardoor zelfs stemmen opgaan om ze terug te schroeven. Dit is paradoxaal in een tijd van toenemende maatschappelijke ongelijkheden. In dit rapport wordt nagegaan of dit scepticisme terecht is. Dit wordt gedaan aan de hand van internationale effectiviteitsstudies van EFPs uit Europa en Noord-Amerika. Hierbij wordt enerzijds een overzicht gemaakt van de stand van zaken en anderzijds worden de knelpunten en mogelijkheden van EFPs besproken. De effectiviteit van EFPs in Vlaanderen wordt in dit rapport niet afzonderlijk besproken, aangezien deze vraag reeds in een voorgaand rapport werd behandeld (zie Franck et. al., 2017). Toch kan deze internationale literatuurstudie ook nuttige lessen opleveren voor het beleid en de praktijk in Vlaanderen.

In een eerste deel wordt aandacht besteed aan de diverse definities van de term 'equity funding'. Ieder land, elke regio of stad heeft een eigen geschiedenis, een eigen onderwijsbeleid, en wordt geconfronteerd met andere ongelijkheden. Daardoor zullen sommige EFPs voornamelijk gericht zijn op het bestrijden van sociaaleconomische ongelijkheden tussen leerlingen, terwijl andere eerder inzetten op het bestrijden van regionale, linguïstische, raciale of etnische ongelijkheden. Dit maakt dat – ondanks éénzelfde algemeen doel – zowel de operationele objectieven als doelgroepen van EFPs sterk kunnen verschillen. In deze studie hanteren we een brede definitie die al deze maatregelen omvat.

Vervolgens trachten we de hamvraag naar de effectiviteit van EFPs te beantwoorden aan de hand van een overzicht van betrouwbare evaluatiestudies. Met uitzondering van het tijdstip waarop middelen worden geïnvesteerd (hoe vroeger, hoe effectiever), zijn de resultaten zeer uiteenlopend en afhankelijk van vele factoren (de context, de 'uitkomst' die men meet, de omvang van de EFP, etc.). Alles samengenomen kunnen we stellen dat EFPs matig positieve resultaten vertonen, maar overtuigende resultaten blijven voorlopig uit.

Deze ontvullende vaststelling leidt in deel twee tot een zoektocht naar mogelijke verklaringen voor de schijnbaar zwakke effectiviteit van EFPs. In totaal worden zes mogelijke determinanten besproken:

1. De negatieve impact van de bredere sociale context waarin EFPs worden geïmplementeerd (e.g. toenemende segregatie, toenemende sociale ongelijkheden en veranderende gezinsvormen)
2. Matteüseffecten in de basisfinanciering van scholen (o.a. 'verborgen' bijdragen van lokale bestuurders, ongelijkheden in de kwaliteit en ervaring van schoolteams, ongelijkheden in de schoolinfrastructuur)
3. Een gebrekkige aanwending van de extra middelen en dit voornamelijk door kansarme scholen,
4. Een inefficiënte doelgroepafbakening
5. Het ontbreken van voldoende monitoring- en evaluatiemechanismen
6. Ingebakken ongelijkheden in de onderwijsstructuren (e.g. het watervalstelsel, quasi-marktwerking)

Naast deze zes knelpunten hebben EFPs echter ook nog heel wat mogelijkheden. Op basis van de aangehaalde verklaringen wordt in het laatste deel van het rapport nagedacht over mogelijkheden om de impact van de knelpunten te reduceren. Zo worden zes sets van implicaties geformuleerd die de effectiviteit van EFPs ten goede kunnen komen en die beleidsmakers en schoolteams kunnen helpen in hun taak om EFPs efficiënter en effectiever te maken.

Allereerst zouden beleidsmakers de negatieve impact van de bredere sociale context, wanneer EFPs worden geïmplementeerd of bijgestuurd, mee in rekening moeten brengen. Zowel de toenemende sociale ongelijkheden, de toenemende sociale segregatie en de veranderende gezinsvormen, als de ingebakken ongelijkheden in onderwijsstructuren zijn belangrijke factoren die een grote versturende impact kunnen hebben op het functioneren van EFPs. Om hun negatieve impact te reduceren is er echter nood aan samenwerking tussen alle betrokken beleidsactoren (uit verschillende domeinen).

Onderwijsactoren alleen zijn niet in staat deze maatschappelijke ongelijkheden weg te werken. EFPs zouden met andere woorden geïmplementeerd moeten worden in *synergie met andere beleidsmaatregelen* (bv. arbeidsmarktmaatregelen, gezinsvriendelijke maatregelen, anti-discriminatiemaatregelen) die de impact van deze trends reduceren.

Ten tweede zou een transparanter financieringssysteem, waarbij de *Matteüseffecten in de basisfinanciering van scholen mee geneutraliseerd* worden, kunnen leiden tot een meer billijke verdeling van de beschikbare middelen. In gedecentraliseerde systemen, waar steden of overkoepelende schoolbesturen vaak autonoom het voorziene budget van EFPs verdelen onder hun scholen, werd soms vastgesteld dat een deel van het herverdelingseffect verloren ging. Alhoewel de financiering van scholen in Vlaanderen gecentraliseerd is en alle scholen in principe gelijk behandeld worden, kunnen er ook bij ons in de feiten ongelijkheden ontstaan in de basisfinanciering. Bijvoorbeeld zijn er indicaties dat een aantal GOK-scholen er moeilijker in slagen om goed gekwalificeerde en ervaren leerkrachten aan te trekken of te behouden, waardoor ze met een gegeven lestijdenpakket de facto minder kunnen investeren dan een doorsnee school. Andere ongelijkheden kunnen ontstaan in de infrastructuur, doordat kansarme scholen om diverse redenen over meer verouderde en onaangepaste gebouwen en recreatieruimte beschikken (Poesen-Vandeputte & Nicaise, 2015). Dit weegt op zijn beurt op de werkingsbudgetten, vanwege hogere vaste kosten. Ten slotte hebben GOK-scholen haast per definitie minder begoede ouders en alumni, waardoor ze niet kunnen rekenen op extra materiële steun van die kant.

Om dit soort ongelijkheden aan de basis te voorkomen of weg te werken, zouden beleidsmakers in eerste instantie kunnen streven naar een overzicht van alle middelen die een school de facto ter beschikking heeft, alvorens de extra-middelen te verdelen. Wat personeel betreft, zouden bovendien regels en incentives kunnen voorzien worden om meer ervaren en gekwalificeerde leerkrachten en directies in kansarme scholen aan te trekken en te houden.

Een derde implicatie betreft de nood aan *klaarheid inzake de doelstellingen van het ondersteuningsbeleid*, een SMART geformuleerde EF-wetgeving en duidelijk afgebakende doelgroepen. Ambigüiteit kan immers leiden tot een inefficiënte aanwending van de extra-middelen, en dit voornamelijk door kansarme scholen met een zwakkere bestuurskracht. Een mogelijke manier om deze ambigüiteit te voorkomen is een meer conditionele extra-financiering waarbij scholen moeten voldoen aan bepaalde voorwaarden, alvorens recht te hebben op bijkomende extra-financiering. Hiervoor zijn echter voldoende evaluatie- en monitoring mechanismen noodzakelijk.

Dit brengt ons bij de vierde implicatie, namelijk de rol van *monitoring- en evaluatiemechanismen* vergroten. Vele onderwijssystemen besteden hier te weinig aandacht aan. Indien niet wordt nagegaan hoe goed EFPs functioneren, kan ook niet worden beoordeeld of – en waar - bijsturingen nuttig zijn. Hierdoor ontbreekt noodzakelijke informatie om de effectiviteit van EFPs te verhogen. Bijkomend is het financieringssysteem te weinig transparant en kan men moeilijker gerichte extra-financieringsmaatregelen uitwerken. Beleidsmakers zouden dus de monitoring- en evaluatiemechanismen moeten uitbreiden, al moeten scholen en lokale bestuurders een zekere vorm van autonomie en flexibiliteit blijven behouden om te kunnen inspelen op de specifieke lokale noden. Het online indicatorenplatform Dataloop kan hierin een grote rol spelen. Het is nog wachten op aanvulling en verfijning van de huidige set van indicatoren. Daarnaast blijft evaluatie-onderzoek op microdata voor het beleid uiteraard onmisbaar.

Ten vijfde zouden beleidsmakers de *specifieke (na)vorming voor leerkrachten en schoolteams* kunnen uitbreiden in functie van een meer strategische aanwending van de middelen en een beter beleidsvoerend vermogen. Dit kan in de Vlaamse context meerdere vormen aannemen. In de basisopleiding kan bv. een specialisatie op master-niveau worden uitgebouwd, specifiek voor 'GOK-beleid' in kansarme scholen. Door de expliciete koppeling van een aangepaste opleiding en weddenschaal aan specifieke functies in specifieke scholen, kan gespecialiseerd en ervaren personeel verankerd worden in de scholen die er het meest behoefte aan hebben. Daarnaast zouden alle leerkrachten in GOK-scholen meer mogelijkheden moeten krijgen om bijkomende opleidingen inzake gelijke onderwijskansen te volgen. Dit kan bijvoorbeeld door het toekennen van een 'persoonlijk opleidingskrediet' waarover iedere leerkracht beschikt, en dat geoormerkt wordt voor zulke bijkomende opleidingen. Op die manier kunnen leerkrachten zelf bepalen wanneer ze het nodig achten een opleiding te volgen, en welke opleiding het best aansluit bij de specifieke noden van hun leerlingenpubliek. Tenslotte zouden professionele leergemeenschappen kunnen gestimuleerd worden binnen en tussen GOK-scholen, waardoor schoolteams als geheel meer strategisch leren werken aan gelijke onderwijskansen. Dit alles komt niet enkel de leerlingen ten goede (wat betreft zowel de cognitieve als non-cognitieve schooluitkomsten), maar ook leerkrachten zelf (motivatie, appreciatie van leerlingen, etc.).

Tot slot zouden beleidsmakers, scholen en leerkrachten voldoende aandacht moeten besteden aan het bevorderen van de *onderwijsuitkomsten van alle leerlingen uit kansengroepen*. Hier en daar rijzen vermoedens dat EFPs te eenzijdig gericht worden op het behalen van minimum-standaarden door de zwakste (kansarme) presteerders, terwijl sterkere (kansarme) presteerders over het hoofd worden gezien (Plucker, Burroughs & Song, 2010). Het is belangrijk dat ook in deze laatste voldoende geïnvesteerd wordt, waardoor het rendement van EFPs verhoogt.

Uiteraard blijven de lessen die we uit deze internationale literatuurstudie halen voor Vlaanderen tentatief. Ze zullen in ons vervolgonderzoek verder getoetst worden.

# CHAPTER 1. A BIRD'S EYE PERSPECTIVE

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Education is often seen as one of the most useful tools to defeat poverty and to facilitate upward social mobility (Leuven et. al., 2007). Therefore, it is of great importance to ensure children are getting equal educational opportunities, regardless of their socioeconomic status, ethnicity or geographical location (Demeuse, 2012). Since James Coleman's work on equal educational opportunities ('60), many societies have designed policy programmes to tackle educational inequalities, namely 'educational priority policies' (EPPs). More specifically, these policy programmes aim to compensate for educational disadvantages of less privileged populations, as society believes students should not be held accountable for circumstances like socioeconomic status, parental education, ethnicity, gender, etc. (Betts and Roemer, 2005; Li, 2010). In contrast to these circumstances, some characteristics are perceived as inherent to the student (effort, intellectual ability, etc.) (Alexander, 2004; Espinoza, 2007). However, these aren't taken into consideration by the educational priority policies.

Educational priority policies consist of two main types; (1) additional funding schemes for schools serving disadvantaged students (or equity funding policies) and (2) priority rules for disadvantaged minorities in enrolment procedures. This study focuses on the first type of policy, namely 'equity funding policies' (EFP).

Due to scepticism about the effectiveness of these policies, equity funding policies (EFPs) are sometimes called into question (Ooghe, 2011). This is paradoxical in a time of increasing inequalities and it could have serious consequences for societies' disadvantaged and minority groups, social cohesion and international economic competitiveness (Demeuse, 2012). For that reason, an international review of the existing effectiveness studies of equity funding is needed. This will provide the opportunity to check the evidence base and may help in improving the overall effectiveness, by identifying the determinants of success and failure of existing equity funding schemes.

However, such a review faces some difficulties. First, the focus, nature, and scope of such policies differ widely across education systems, which hinders comparisons and evaluations. Secondly, the concept of 'equity funding policies' is not defined in the same way in all education systems. Moreover, various labels are available to denote these policies such as 'positive action', 'affirmative action', 'needs-based funding', 'compensatory policies' or 'positive discrimination'. Thirdly, the level of implementation, as the allocation of school resources and responsibilities at the national, regional or local level differs between countries. Fourthly, the target groups of equity funding schemes vary between countries and/or regions. Lastly, there are many contextual elements that could possibly affect the effectiveness of equity funding policies (Demeuse, 2012).

Considering these difficulties, it is important to delimit the subject of this review. The following criteria will be used. To begin with, the emphasis will be on *school* funding schemes, leaving out *student* financing. Moreover, funding schemes for students with disabilities or special educational needs will be excluded as most equity funding policies intend to avoid the use of criteria linked with individual obstacles. In addition, only mainstream preschool, primary and secondary education will be taken into account. Furthermore, only Western countries (i.e. Europe and North-America) will be considered as education systems in other countries are too different. Lastly, the review will focus on the overall effectiveness. This refers to the effects on students, parents, teachers, as well as other stakeholders, and covers both cognitive and non-cognitive effects.

At least three questions must be addressed when evaluating the effectiveness and efficiency of equity funding: (1) to what extent have policies affected the 'right' groups? (= target effectiveness); (2) what have been the effects on educational outcomes? (= outcome effectiveness); (3) has the investment yielded value for money? (= efficiency). In the following sections, we will attempt to answer these four questions. First we will provide a definition of 'equity funding policies' and an overview of the objectives and the criteria used to define the target groups. Next, the impact and outcome effectiveness of equity funding will be reviewed. In addition, plausible determinants for the observed impact and outcome effectiveness will be discussed. Finally, some suggestions for policymakers and practitioners will be made, followed by a concluding note.



## 1.1. Defining the concept of ‘equity funding policies’

While a variety of definitions of the concept of ‘equity priority policies’ have been suggested throughout the past few decades, the one introduced by Demeuse (2012) will be used in this article, i.e. ‘*policies designed to have an effect on educationally disadvantaged groups through systems or programmes of focused action (whether the focus be determined according to socioeconomic, ethnic, linguistic, geographic or educational criteria) by offering something more (or ‘better’ or ‘different’) to designated populations*’. However, this definition rather refers to the more general concept of ‘educational priority policies’ (EPPs), whereas, we will only focus on one type of EPP, namely the additional funding schemes for schools serving disadvantaged students (or equity funding policies - EFPs). Despite the fact that this broad definition covers the diversity of equity funding schemes between and within countries examined, any understanding about the various *purposes of EFPs* is lacking. Therefore, specifying the objectives and generally acceptable criteria to define the target population and their needs is a fundamental element in evaluating the effectiveness of EFPs. Due to the variety in education systems, and changes in the political, social, cultural and economic context during the past 50 years, a multiplication of EFPs has taken place (Bernardo and Nicaise, 2000; European Commission/EACEA/Eurydice, 2014). We will restrict ourselves here to highlighting some general objectives of the EFPs, as well as some basic modes of targeting.

Before continuing, it is important to outline the conceptual difference between educational opportunities and educational outcomes strategies to achieve equity in education. The first set of strategies aims at supporting or encouraging groups that are educationally disadvantaged to participate on a more equal footing, or to continue in study after formal education. In other words, they are intended to overcome exogenous obstacles and ensure that all children are getting equal *access* to education. They do not challenge the structural barriers to success within education systems as such (Nicaise, I. et. al., 2000; Ross, 2009). Educational outcomes strategies, on the other hand, aim at bringing children from different social backgrounds (as much as possible) to the same level of school outcomes by investing additional resources in disadvantaged groups that lag behind or are at greater risks than others. However, as this study focuses on the *effectiveness of EFPs*, educational opportunities are also taken into consideration, as stepping stones towards more equal outcomes (Nicaise, I. et. al. , 2000; Ross, 2009).

### 1.1.1. Objectives

As mentioned earlier, the diversity and number of objectives have increased during the past few decades. Furthermore they vary considerably as a consequence of on the one hand diversification and on the other hand the shift from a ‘compensatory perspective’ towards an ‘inclusive perspective’. Whereas the first EFPs were explicitly aimed at reducing educational inequalities through (a posteriori) compensatory measures, nowadays EFPs (and their objectives) are defined in terms of the (a priori) leveling of unequal opportunities (Demeuse, 2012). This broadens its scope, causing a significant increase in the number of objectives such as the fight against absenteeism or dropping out, the fight against violence at school, assistance for parents, and so on (Demeuse, 2012). Despite all these differences and varieties, the general objective of equity funding schemes could be seen as supporting students who suffer from learning and development difficulties which are due to exogenous circumstances (e.g. socioeconomic status, ethnicity, gender, parental education, etc.) (Bernardo and Nicaise, 2000). However, considering the observed differences, Bernardo and Nicaise (2000) stated that in broad terms, five general types of specific objectives exist;

- (1) Promoting the acquisition of basic skills that are traditionally more difficult for target populations to acquire (e.g. acquisition of local language by immigrants);
- (2) Improving support mechanisms for teachers and schools (e.g. infrastructural matters, staff and teacher training);
- (3) Enabling the development of educational activities, whether or not integrated in the school curricula to promote school success, especially of the targeted populations (e.g. intercultural education);
- (4) Promoting a collaboration between different stakeholders such as the school, families and other local authorities to ensure an integrated form of intervention (e.g. literacy courses for parents, health services at school, internships in local enterprises);
- (5) Tackling specific and more pressing needs of schools or areas where school exclusion is more problematic due to the high concentration of targeted students (e.g. dropout prevention programmes).

Demeuse (2012) compared the EFPs of eight countries and found similar types of objectives as Bernardo and Nicaise (2000). However, one type of objective wasn't mentioned by Bernardo and Nicaise (2000) but appeared to be an important objective of many EFPs in the study of Demeuse (2012):

- (6) Encouraging authorities to target early learners as this would be the best time to compensate for social disadvantage (e.g. early childhood intervention programmes).

### 1.1.2. Target populations

As indicated above, the objectives and the target populations are closely intertwined. A target group is after all the subject of an objective. In case of EFPs, target groups are less privileged population groups who are likely to achieve lower educational outcomes, due to external circumstances such as socioeconomic status, parental education, ethnicity, gender, etc. (Ross, 2009). Additional support is provided to ensure that these groups are given equal chances to fully develop their abilities and to maximise their educational success. Indirectly, this relates to the question of target effectiveness .

The definitions of target groups and their needs vary widely between - and sometimes within countries. In Europe, target groups are mostly specified as students with low socioeconomic background, migrant status (and/or disabilities), whereas criteria like geographical area or students' ethnic origin are used less often. A few education systems also use criteria such as educational attainment, grade repetition or behavioural problems (European Commission/EACEA/Eurydice, 2016). In general, there are two modes of targeting; (1) based on individual student characteristics, or (2) based on geographical areas (Bernardo and Nicaise, 2000; Demeuse, 2012; Groenez, 2013; Ross, 2009).

In the case of individual student targeting, schools receive equity funding, depending on the proportion of students with a disadvantaged background served by the school. Students can be disadvantaged in several ways; children belonging to ethnic or linguistic minorities, children from traveling or itinerant families, or children who are socioeconomically disadvantaged. Belonging to a less privileged group often implies a cumulation of educational disadvantages, complicating the integration and educational success. For example, many students with a low socioeconomic status also belong to an ethnic and/or linguistic minority group (Bernardo and Nicaise, 2000; Demeuse, 2012; Ross, 2009).

The second mode of targeting is based on geographical areas (educational priority areas), which are disadvantaged regions or neighbourhoods. Here, the majority of the population is affected by poverty, unemployment, dependency on social benefits, educational difficulties, etc. (Demeuse, 2012; Ross, 2009).

According to Bernardo and Nicaise (2000), three main types of areas could be distinguished: (1) disadvantaged neighbourhoods within flourishing urban areas, (2) areas undergoing economic restructuring, (3) and backward rural areas where poverty continues to persist due to specific regional development problems.

According to Demeuse (2012), the transformation from the ‘compensatory perspective’ to an ‘inclusive perspective’ went in pair with a shift from territorial to student-based targeting. Yet, both types of targeting are still used in Europe and North-America. In the literature, a debate has arisen about the most effective way of targeting. Each mode has its strengths and weaknesses. The major advantage of territorial targeting is the possibility to apply an integrated approach where synergies can be created between educational and other local development strategies. As argued by the overall report of the EPASI programme (Ross, 2009): ‘Education alone cannot provide the solutions to inequity. There will always be a wide range of other social factors involved, and a wide and multi-agency approach will be required to address all of these.’ Moreover, the creation of synergies between different stakeholders in a particular educational priority area fulfills one of the objectives mentioned by Bernardo and Nicaise (2000), namely ‘Promoting a collaboration between different stakeholders such as the school, families and other local authorities to achieve an integrated form of intervention’. Another advantage of the area-based targeting is the simplicity of the method; the areas are easy to define.

Despite its benefits, the area-based targeting has been criticised for its limited efficiency. Social disadvantage does not fully coincide with local territories: some disadvantaged pupils don’t live in the educational priority area and therefore don’t benefit from additional resources, whereas other, less disadvantaged pupils do live in the targeted area and do receive additional resources (Bernardo and Nicaise, 2000; Demeuse, 2012; Nicaise, I. (Ed., 2000); Nicaise, I., 2008). Therefore, student-based targeting is increasingly preferred, with the additional school funding being based on the concentration of students with particular characteristics such as low socioeconomic status, ethnic and/or linguistic minorities or children from travelling or itinerant families. Nevertheless, with student-based targeting some other issues need to be addressed. First, privacy issues might arise when registering students’ characteristics. The production of some of such registers hasn’t always been authorised by law. In France and the Czech Republic, this is the case for ethnic background. Secondly, obtaining data on all these characteristics involves a lot more paperwork. Finally, focusing on the entire school population could be more effective as a more structural impact on the learning process can be achieved due to the involvement of all educational agents (Bernardo and Nicaise, 2000; Demeuse, 2012).

Next to the two modes of targeting explained above, the EFPs are often restricted to pupils of a given age range (e.g. pre-primary or primary education). This is explained by a ‘preventive’ perspective in defining the at-risk groups. Heckman (2011) argued that remedying problems is less cost effective than preventing them in early childhood education. Machin (2006) reviewed a substantial body of evidence that confirms the profitability of early childhood and pre-school programmes for disadvantaged children such as Head Start (US) and Sure Start (UK), while there is less agreement on the effectiveness of EFPs targeting disadvantaged pupils at later ages.

## 1.2. How effective are EFPs? A brief review of empirical findings

Regarding the effectiveness and efficiency of the EFPs, a first question that needs to be addressed is: ‘which outcomes do we target?’. Output criteria that are commonly used include test results, student

achievement, attendance rates, early school leaving, etc. Non-cognitive outcomes are less commonly used, but are possibly equally – if not more – important (Heckman, 2011). Therefore, we will not only focus on cognitive outcomes, but also include school career effects and non-cognitive outcomes.

In general, existing evaluations of the effectiveness of EFPs yield modest positive effects (Bernardo and Nicaise, 2000; Betts and Roemer, 2005; Bjorklund et. al., 2006; Demeuse, 2012). The debate about whether ‘money matters’ seems to continue causing scepticism about the effectiveness of all EFPs. By analysing the allocation of additional resources and the specific outcome measures used in greater detail, we can possibly distinguish some policies that are more effective.

Starting with the *cognitive outcomes*, the results are mixed. Card and Payne (2002) analysed the impact of school finance reforms on the distribution of school spending across richer and poorer districts, by using nationwide data from the US. They discovered that the equalisation of school spending induced a decrease in the student achievement gap between pupils from different family backgrounds. Papke (2005, 2008) evaluated the impact of Michigan’s ‘Proposal A reform’ on fourth-grade pass rates and seventh-grade math tests and concluded that low-performing schools improved the most. Roy (2011) drew a similar conclusion: the Michigan’s ‘Proposal A reform’ increased the student performance of both fourth- and seventh-graders on state tests in poor school districts, although no improvement in scores on nationwide tests were observed. In contrast to these findings, Van der Klaauw (2008) did not detect any impact of supplementary educational services in mathematics and reading in New York, on the achievement of disadvantaged students in primary and secondary education.

Looking at specific ways in which schools use their equity funding, the results are mixed again. Firstly, several studies researched the impact of class size reduction on student performance scores in both primary and secondary education. The assumption is that smaller classes enhance student test scores. However, results of existing evaluations of class size reductions are disputed or showed rather small improvements in the achievements of disadvantaged pupils (Angrist and Lavy, 1999; Gibbons and McNally, 2013; Rivkin et. al., 2005). Secondly, with respect to allocating the additional funding for personnel, evidence has shown that minority and disadvantaged pupils are often faced with starting teachers, who perform less well and possibly negatively affect these pupils’ performance. Bénabou et. al. (2009) investigated this issue by looking at the ZEP in France, a programme that provided additional funding to schools in disadvantaged areas (cf. territorial targeting). Here, the additional subsidies were used partly for teacher bonuses and partly for additional teachers. However, Bénabou and colleagues could not detect any effect of the extra resources on the test scores of disadvantaged students in middle schools (sixth-grade through ninth-grade). Leuven et. al. (2007) evaluated the impact of two measures (extra funding for personnel and extra funding for ICT) in the Netherlands on language and arithmetics achievement in primary schools with at least 70% disadvantaged (minority) pupils. The effect of the personnel subsidy was not significantly different from zero, presumably because the targeted schools already had sufficient personnel resources. Contrary to these findings, Machin et. al. (2010) found positive effects of allocating equity funding for personnel. As they examined the impact of UK’s “Excellence in Cities (EiC)” programme in secondary schools, positive impacts on students’ attainment in mathematics and on school attendance were observed. Finally, as regards the impact of the ICT subsidy on pupil’s achievements, results showed negative effects, meaning a decrease in pupils’ test scores. The latter results are confirmed by other studies, e.g. Angrist and Lavy (1999) who investigated the impact of computers in elementary and middle schools in Israel, Goolsbee and Guryan (2006) who found no impact of the availability of internet on pupil achievement in primary and secondary schools, and Malamud and

Pop-Eleches (2011) who examined the effect of home computers on child and adolescent outcomes through a voucher programme in Romania.

Whereas the impact of alternative uses of equity funding in schools are mixed, evidence about the timing of allocation is more clearcut. Recent studies on targeting at early learners showed a positive impact of pre-school interventions on educational outcomes, particularly for disadvantaged children. Cascio and Schanzenbach (2013), for example, examined the impact of President Obama's "Preschool for All initiative" on a variety of child and family outcomes and observed increased enrolment rates for all children. However, regarding the impact on test scores in eighth grade, they found that children with a lower socioeconomic background benefit clearly from the programme, whereas no positive impact was found on the maths scores of children from higher-income families. Similarly, Felfe and Nollenberger (2012) found sizable improvements in children's reading and maths skills at the age of fifteen due to a shift from maternal care towards universal high-quality childcare for 3-year olds in Spain. Again, these effects were larger for disadvantaged children.

Summing up, the impact of EFPs on students' cognitive outcomes are mixed. Whereas the evidence on the alternative uses of equity funding remains ambivalent, the evidence on the timing of investment is more clearcut. EFPs targeting early learners prove to be highly cost-effective in terms of cognitive outcomes.

Continuing with the effect of EFPs on pupil's *school career and labour market transitions*, Chung's study (2015) investigated the impact of Maryland's education finance reform on drop-out rates. He found no decrease in drop-out rates. Comparable results were observed in the study of Neymotin (2010) where the Kansas School finance reform did not affect the drop-out rates in elementary and secondary education, although the study lacked precision. Similarly, Leuven & Oosterbeek (2007) did not discover any significant effects of extended schooling in primary education, i.e. receiving extra education (combined with EF), on the wages of graduates.

To conclude this section on the effect of EFPs on *non-cognitive outcomes*, the number of studies is limited, despite general agreement on the importance of these outcomes. Non-cognitive outcomes, such as perseverance, motivation, self-esteem, self-control, conscientiousness, forward-thinking behaviour, and well-being, all proved to be powerful predictors of students' achievement and success (Almlund et. al., 2011). This was demonstrated in the Perry Preschool Programme (Heckman, 2011). The target group consisted of disadvantaged 3-years-old African American children with an IQ of 85 or below. Following an intervention of two years, they did not have a higher IQ at the age of 10, although they did score better on achievement tests. This indicated that achievement test scores were influenced by both cognitive and non-cognitive factors. As such, improvements in non-cognitive outcomes may positively affect the (long-term) performance of disadvantaged students. A study of Artlet and colleagues (2003) supported this: in general, a stronger motivation, a stronger academic self-concept, and a great ambit of learning strategies, increases performances of fifteen-years old pupils. Furthermore, they concluded that students with a low socioeconomic status have lower self-related beliefs and less confidence in their abilities. By contrast, students with a high socioeconomic background were more motivated and used more control and elaboration strategies. Therefore, the better performance of students with a high socioeconomic status may be attributed (partly) to the differences in non-cognitive characteristics.

In summary, the literature on the effectiveness of EFPs shows very mixed results. The question whether the investment yielded value for money (= efficiency) has no clear answer yet. Some researchers draw the conclusion that the amount of funding per student does not impact the effectiveness and that the

focus should be shifted from more funding towards the way resources are spent. Others find that additional funding per student does improve the effectiveness, and suggest a strengthening of the schemes to boost it further. This ambiguity can be explained partly by the variety of national and historical contexts and partly due to the diverse legal frameworks.

## CHAPTER 2. DETERMINANTS OF EFFECTIVENESS

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As the measured effects of EFPs did not always meet the expectations of policymakers and educational agents, questions have arisen how this could be explained and what could be done to improve the effectiveness. Six potential explanations will be discussed: (1) the general context in which EFPs are implemented, (2) Matthew effects in the baseline funding of schools, (3) the ineffective use of additional resources, (4) ineffective targeting, (5) flaws in the monitoring and evaluation, and (6) inequitable educational structures.

### 2.1. General context: an overview of some current social trends

Some general trends in the wider social context of education might undermine the effectiveness of EFPs. We will discuss three current social trends – increasing social inequalities, increasing segregation and changing family dynamics – that may have adversely affected some students' educational opportunities, and possibly offset the effect of EFPs.

One well-known contextual factor is the rising socioeconomic inequality in Europe and other industrialised economies since the 1980s. Over the past decades, income inequality has been rising almost continuously in almost all OECD countries. In recent years, the OECD has repeatedly expressed concern about the fact that widening disparities have already led to under-investment in low-income groups in education, which in turn puts a brake on economic growth (Keeley, 2015). Countries with the widest socioeconomic inequalities face more social problems such as poverty and decreasing literacy and numeracy among the youngest generation. As stated in a report of the European Commission (Perrons and Plomien, 2010): 'Poverty is transmitted from one generation to the next and increased education is not sufficient to overcome childhood family disadvantages' (OECD, 2011a; Perrons and Plomien, 2010).

Strongly associated with these socioeconomic inequalities, is the increasing (school) segregation, i.e. separation of pupils into parallel school systems, based on socioeconomic status or ethnicity (Agirdag et al., 2012). The Coleman Report (1966) was the first to bring the topic into the spotlight by stating that school segregation contributes to more inequality of educational opportunities and outcomes. Many studies have been focusing on this topic in the past fifty years and all unanimously concluded that the composition of school and classroom impacts student and school achievement through unequal learning opportunities and peer influences (Karsten, 2010). Students from disadvantaged backgrounds in particular suffer from segregated education in ghetto schools, whereas upper-class students gain little from separation in elite schools. Moreover, in a period of increasing racial and/or ethnical diversity and increasing 'school choice programmes', school segregation is on the rise in many countries (Östh et al., 2013). This tends to offset the impact of EFPs. In the Flemish community, for example, Groenez et al. (2015); Wouters and Groenez (2015) showed an increase in school segregation until 2012 and noticed that schools that received additional funding due to an over-representation of disadvantaged students, used these resources mostly to try and neutralise the detrimental effects of segregation.

Finally, an increasing amount of research has emphasised the importance of changing family dynamics for students' educational opportunities and outcomes. During the past thirty years, many changes have occurred in family formation and household structure, mainly increased separation and divorce rates resulting in more difficult family environments for children to grow up. Studies showed a significant impact of a child's family structure – whether a student grows up in a single-parent, two-parent or extended family; how many siblings live in the household; and other important family characteristics such as divorce and remarriage – on their educational outcomes (OECD, 2011b). For example, the OECD (2016) concluded that students who live in single-parent families perform worse than the ones living in two-parent families (Heckman, 2011; OECD, 2016a). Bernardi and Radl (2014) observed that parental breakup is associated with negative long-term consequences for children's educational attainment. Taking into account the educational level of parents as a reflection of their socioeconomic status, Bernardi and Radl (2014) suggest that parental divorce tends to be more detrimental for children of highly educated parents.

Broken family structures and changing family dynamics do impact the children's educational outcomes through a reduction in economic resources, changes in parental time and parenting practices, more parental stress and a lower well-being of the child (Bernardi and Radl, 2014).

## 2.2. The baseline funding of schools

School funding mechanisms are extremely complex due to the involvement of several levels of administration, the increasing number of (private) actors contributing to educational provision and their growing influence on spending decisions (European Commission/EACEA/Eurydice, 2016; OECD, 2017b). Whereas the provision of a sufficient level of investment in education is of importance, the equitable allocation of resources between schools is equally, if not more, crucial as it determines whether or not all students are given equal opportunities to learn (OECD, 2016b, 2017b; Roemer, 1998). Many education systems haven't adequately neutralised the pre-existing 'Matthew effects' in educational funding, meaning that schools, attended by disadvantaged students, are themselves often disadvantaged in terms of economic, cultural, social and human resources (Poesen-Vandeputte and Nicaise, 2015). Underestimating these school resource inequalities may have impeded the effectiveness of EFPs.

Schools might be inequitably funded due to decentralisation and/or school autonomy over budgetary matters. With respect to the first aspect, the OECD (2017b) has argued that the more decentralised a system is, the better it can allocate resources in line with schools' specific needs, but the higher the risk of inequitable funding. The funding system in the US, where school districts are responsible for school funding and states only play a limited role, illustrates this well. Due to the fact that nearly half of the funding for public schools is provided through local taxes, great disparities in spending capacities between school districts (and states) have been identified. For example, in Connecticut, one of the richest school districts (Greenwich) spends about \$6000 more per pupil per year than one of the poorest school districts (Bridgeport). Such disparities in spending capacities seem to be a persistent problem in 23 states (Biddle and Berliner, 2002; Klein, 2015; Semuels, 2016). Consequently, unless they are counteracted by educational policies, spending capacities might vary geographically in favour of the richer areas, enlarging disparities in the quality of school buildings, facilities, equipment and teaching materials, teachers' experience and qualification, class size, and other resources (Biddle and Berliner, 2002; Connecticut State Department of Education, 2015; OECD, 2017a, 2017b). In Europe, countries that also see local authorities allocating the major proportion of funding are Denmark, Sweden and Lithuania (OECD, 2017b). Furthermore, school board autonomy over budgetary matters could also contribute to adverse redistribution effects. In the Flemish Community of Belgium, the funding for operational costs is calculated by a weighting of the proportion of disadvantaged students of schools. These additional resources are provided to school boards who allocate it further amongst their schools (OECD, 2017b). Groenez (2015) and his colleagues observed that some school boards, which are responsible for several schools, use their own weightings whereby disadvantaged schools do not necessarily receive all the additional resources they are entitled to, according to their weights in the central funding.

Besides lower financial resources, disadvantaged schools also tend to have more difficulties in attracting qualified (in terms of educational certificates) and experienced teachers than schools with a more advantaged student population. For instance, in the Netherlands, the proportion of qualified teachers is three times higher in advantaged schools compared to disadvantaged schools (OECD, 2013) and in the Flemish community, Sweden and Alberta, experienced teachers usually work in advantaged schools, whereas teachers with less experience mostly work in disadvantaged schools. Less competent teachers



not only directly affect students' educational outcomes but are also less able to use additional resources in the most effective way (OECD, 2013, 2017a).

Finally, disadvantaged schools can also suffer from poor quality of infrastructure, furniture, IT equipment, etc. (OECD, 2017a). Although the evidence on the effect of such resources on students' performance is mixed, the OECD (2016b) concludes that in most education systems poor infrastructure and equipment hinder schools' capacity to provide decent instruction. This is negatively associated with students' scores in thirteen educational systems. Moreover, poor infrastructure may necessitate more maintenance and heating expenses, or schools may choose to invest their additional funding in capital expenditures instead of spending it on pedagogical measures such as after-school classes, tutoring, extra personnel, class-size reduction, etc., which obviously reduces the impact of EFPs (OECD, 2017b).

### 2.3. The use of additional resources

Another possible contributor to the weak effectiveness of EFPs is the inefficient use of equity funds. Many countries are characterised by a multi-level and multi-actor education system, possibly resulting in ambiguity about the purposes and regulatory frameworks of EFPs. In this context, questions have arisen about the degree of discretion that schools should be granted in managing equity funds (cf. school autonomy), and the ability of school leadership and management teams to deal with budgetary tasks (Burns and F. Köster, 2016; Demeuse, 2012; OECD, 2017b).

Whilst greater discretion gives schools the opportunity to use equity funds to fit their specific needs and address local challenges, it also increases the risk of an inefficient use due to the lack of top-down guidance and support for teachers, principals and school management teams (OECD, 2017b). A recent overview of how additional resources are allocated to schools in Europe (European Commission/EACEA/Eurydice, 2016) concluded that in two-thirds of the education systems, schools receive equity funds from central administrations. In the remaining third, other educational administrations (regional, local) are responsible (such as municipalities in Denmark, Sweden and Norway or autonomous communities in Spain). Moreover, they found that in the majority of education systems, schools receive additional resources in kind, typically additional staff (such as Germany, Poland, Bulgaria, Slovenia, Montenegro, Portugal) or by the provision of professional development opportunities for teachers to improve their competences (e.g. in France). Nevertheless, the degree of discretion a school is granted in the use of equity funds differs between countries: the OECD (2017b) states that the more discretion local authorities have, the greater the discretion a school will receive. However, in most education systems, schools or local authorities are bound to several conditions (e.g. criteria, national or local rules, or for specific types of activities) when using equity funds. Yet, in the Flemish community of Belgium, the Netherlands, Finland, The UK (England, Wales, Northern Ireland) and Bosnia Herzegovina, schools have full discretion in spending equity funds as they deem most appropriate. With such a degree of discretion, concerns arise about the lack of transparency and the accountability at school level (European Commission/EACEA/Eurydice, 2014; OECD, 2017b). How can one guarantee that the additional resources benefit the disadvantaged students and that the targeted students have received genuine equal opportunities, if schools can freely choose how to spend their equity funding? The Flemish Community of Belgium illustrates this well. Groenez and his colleagues (2015) observed that the additional operational subsidies were largely used by schools to cover fixed costs and basic necessities rather than pedagogical support for disadvantaged students. Yet, the authors suggested that it was logical for schools in difficult financial circumstances to use these funds to cover the most basic needs, even if those are 'material'

rather than educational. However, the question arises whether it would be more efficient to earmark the subsidies, as the combination of non-earmarked subsidies with poor accountability at school level, increases the likelihood of inefficient use of equity funding. Not only the Flemish Community has these concerns: other countries also need to carefully consider whether earmarking of additional resources would improve the efficient use of the additional subsidies.

In addition to national funding, international funding sometimes also plays a role in supporting educational initiatives and infrastructural investments. For example, the European Union's structural funds – the European Regional Development Fund (ERDF) and the European Social Fund (ESF) – are both designed to promote economic and social development, and to address specific needs of disadvantaged regions or groups across the European Union. Despite their effectiveness, countries benefiting from these funds face the common challenge of providing adequate management capacity to absorb and successfully use the funds. More specifically, in countries where individual schools need to apply for international funding, competent and experienced management teams are required to write an adequate grant application. However, as disadvantaged schools often also lack strong management teams, they are less likely to attract these funds as opposed to advantaged schools, which possibly enlarges disparities between schools (OECD, 2017b).

A related determinant – especially when schools have much discretion over the allocation of their resources - is the ability of school leadership and management teams to handle budgetary matters (Bloom et. al., 2015). Evidence from PISA (OECD, 2016b) indicates that students' scores are positively associated with a high degree of discretion for school leaders. Nevertheless, this applies only in countries where the level of competence of the management is above the OECD average. Often, disadvantaged schools have difficulties recruiting better qualified principals and management teams (OECD, 2012, 2017b).

In sum, the degree of discretion as well as the quality of school leadership and management teams play an important role in the effectiveness of EFPs.

## 2.4. Targeting

As mentioned in section 1.1.2., there is a great variety between and within countries as to how target groups are defined. The way in which target groups and their needs are specified, might be insufficient and thereby cause the apparent under-performance of EFPs (Bernardo and Nicaise, 2000; Demeuse, 2012).

First, the ongoing debate about territorial versus student-based targeting has revealed some examples of inefficient territorial targeting. In the US, for instance, several studies evaluating 'Title I' concluded that at the end of the 1970s, 68% of all schools in the US received some equity funding, but about 40% of disadvantaged students were overlooked, whilst 58% of the children who did receive support were not deprived. Similar results were observed in the UK (e.g. Education Action Zones, Sure Start, Excellence in Cities, etc.) and Ireland (Breaking the Cycle Scheme, Schemes of Assistance to Schools in Designated Areas) (Tunstall and Lupton, 2003; Weir and Ryan, 2000). Moreover, in France, Bénabou and his colleagues (2009) found that the 'Zones d'Education Prioritaire (ZEP)' had no significant effect on students' achievement at secondary level, while (maybe because?) the 'ZEP'-label did stigmatise those areas and caused a flight of middle class families making them even more disadvantaged.

Due to these criticisms, a shift towards student-based targeting was observed in EFPs, although again some challenges need to be overcome (Bernardo and Nicaise, 2000; Demeuse, 2012). First, in

implementing more refined indicators of needs, very detailed data on individual student characteristics are needed which could lead to privacy issues and implies much more paperwork (OECD, 2017b). Second, as reporting systems were developed for schools to collect data on students' characteristics, concerns have been raised about the reliability of the statistics submitted by schools to apply for additional resources. Last but not least, the indicators used need to be good predictors of educational disadvantage. Scientific assessments can be made, before as well as after implementation, based on correlations between the administrative indicators and more detailed profiles of students at risk. In the Flemish Community, for example, a combination of indicators is used reflecting economic, social and cultural capital (parental educational attainment, entitlement to school grants, mother tongue and area of residence). All this information is available from 'day one' of a child's school career, mainly from administrative databases, and can therefore be used in strategies to prevent – rather than remedy – school failure. Although this mix of indicators proved to produce reliable predictions of young people's educational success, it would have been preferable to include further information on the student's family composition (single- versus two-parent household) (Groenez et. al., 2003). The latter indicator was not used in the Flemish EFP scheme as it was considered too sensitive.

The ongoing debate on how to define target groups has proven that a simple 'recipe' for efficient targeting does not exist, but needs to be developed in each country based on an arbitrage between accuracy, administrative simplicity, and privacy protection (Bernardo and Nicaise, 2000; Demeuse, 2012; Raffo et. al., 2014).

Another dimension of the targeting issue relates to the age range targeted, and the distribution of the additional funding across age groups. Heckman claims that the efficiency of educational interventions for disadvantaged groups is inversely related with their age: very high for infants and toddlers, high at primary level and rather modest at secondary level and beyond. Consequently, he unambiguously recommends a concentration of investments at the earliest possible age – for example, in childcare and preschool.

Targeting additional funding at specific groups is one issue; making sure that it produces the desired effects for those groups is another one. In section 2.3., we already suggested that the inputs are gradually transformed and pass through many hands: from the Ministry to school boards, from school boards to principals, then to teachers or classes, and finally students. The (re)distribution of inputs at each stage of the process depends on a mix of norms and private objectives, which are partly concordant but also sometimes conflicting. What happens in the final stage, where teachers divide their energy, know-how and attention across students? What pressure do they experience from other agents in the process (principals, inspectorate, different groups of parents)? What ethical and pedagogical considerations determine their behaviour? Legislators and governments have only limited power in imposing their priorities. A common principle is that none of the students should lose for the benefit of their more disadvantaged peers<sup>1</sup>. In some cases, the law on EF indeed prescribes that the additional resources should be used in such a way that *all* students gain, on condition that disadvantaged groups gain most, so as to reduce performance gaps. Very few evaluation studies have explicitly focused on the distribution effects of EFPs (OECD, 2017b). In most cases, separate effects are measured for one or two subgroups of students (e.g. ethnic minority or 'low-SES' students) or schools (e.g. schools in priority areas). But what about subgroups within the broadly-defined target groups or areas?

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<sup>1</sup> In economic terms, a Pareto-optimal transaction is defined as a transaction that allows at least one party to gain, without negatively affecting any other party.

An interesting research question is whether equity funding is primarily used to guarantee that their target groups reach a minimum level of competences, or to boost the educational outcomes for *all* socially disadvantaged students, including those performing at higher levels of achievement. In this regard, Plucker et. al. (2010) examined the ‘excellence gap’ in the US, referring to the differences between subgroups of high-performing students from different social backgrounds. They concluded that in the US, schools benefiting from equity funding tend to focus too narrowly on reaching minimum competences with low-achievers, while neglecting the (potential) high-achievers in the target group. According to Plucker and colleagues (2010), the modest overall effects of EFPs in the US could be due to this ‘selective attention’.

In sum, the effectiveness of EFPs crucially depends on two stages in the targeting process. First, the equity principle implies that target groups are defined in such a way that their educational disadvantage, which is due to exogenous social circumstances, can be adequately tackled in a preventive way, with a minimum of leakages or spill-over effects. Next, all along the implementation chain, stakeholders need to agree on common strategies to maximise the potential gains from their intervention. Inadequate targeting at any stage tends to weaken the effectiveness of EFPs.

## 2.5. Monitoring and evaluation

Governments sometimes invest substantial amounts of resources to improve students’ educational opportunities and outcomes. To ensure that these resources are effectively and efficiently spent in line with the specific needs of the targeted students, it is crucial to monitor and evaluate the use of equity funding. This helps to avoid both overspending and underspending, to increase the transparency, to lower the risk of mismanagement or fraud, and to increase the accountability of administrations and decisions makers (OECD, 2017b). However, the OECD (2017b) concluded that monitoring and evaluation practices could be improved in many education systems. More specifically, out of the 17 countries participating in the OECD Review of School Resources, only five oblige their schools to report on a regular basis to central or local administrations about their finances (Chile, Slovenia, Slovak Republic, Iceland and Israel). In other education systems, public authorities depend on the discretion of schools to provide information in order to evaluate or monitor EFPs, but this is often not even a primary concern to administrations (e.g. Lithuania, Portugal, Czech Republic, Sweden, Denmark, etc.). For example, in Lithuania, schools with students from poor families are provided with additional support, but nobody knows to what extent these additional resources serve the needs of these disadvantaged students, as the government prefers to focus on providing inputs rather than monitoring the outcomes (Shewbridge, 2016). In four education systems, no information is available (Austria, The Flemish and French Communities of Belgium, Spain). The absence of such information may undermine the effectiveness of EFPs, as it limits the possibility to adjust EFPs to emerging local challenges, and to make well-informed spending decisions.

As referred to earlier, due to the increasing decentralisation of education systems and the extended school autonomy, multi-level and multi-actor governance have become a reality. This raises questions about the accountability of each actor at each level with regards to spending decisions, and creates challenges for fiscal control and financial reporting (Burns and F. Köster, 2016). Moreover, makes decisions at central level to ensure equitable resource allocation more difficult. Therefore, by implementing monitoring and evaluation practices, administrations can examine whether resources have been allocated and managed productively and effectively, and collect information for possible improvements. However, as Burns and Cerna (2016) note, in a multi-actor educational governance, it is

important to involve all stakeholders in the process of evaluation and monitoring. In other words, teachers, principals, and school teams should also be involved in evaluating and (if necessary) revising the use of equity funding within their school. This not only increases the awareness of schools whether they spend their additional resources effectively, but also facilitates the efficient planning and management of resource provision (Burns and Cerna, 2016). In Slovenia, for instance, schools are obliged to make a self-evaluation of the implementation of their annual work plan and the links with their financial and human resources plans (Slovenian Ministry of Education, 2016).

In short, to strengthen the efficiency of EFPs, monitoring and evaluating at central, local and school level are necessary. As schools and/or local authorities receive a certain degree of autonomy over budgetary matters, it is of great importance that this flexibility is accompanied by well-established accountability mechanisms and a high degree of transparency, especially in those school systems where school autonomy is negatively related to student achievement.

## 2.6. Educational structures

EFPs are embedded into national education systems with their own characteristics, which in turn also affect the equity of outcomes. Thus, if educational structures are inherently inequitable, the impact of EFPs could be largely offset. For example, educational systems with a high degree of free school choice tend to fuel competition between schools, with elite schools becoming more selective in enrolment, and thus strengthening segregation and enlarging disparities in student achievement between schools (Belfield and Levin, 2002; OECD, 2017b; Wößmann and Schütz, 2008). The adverse impact of free school choice on equity can be larger than the favourable impact of EFPs. Similar observations can be made regarding the tracking age. Studies examining its impact on student performance, found that the earlier students are tracked, the bigger the disparities in achievement between weak and strong students (Lavrijsen, 2013; Schütz et. al., 2008). This is strongly related with their socioeconomic background, as talented students with a low socioeconomic background will be 'misallocated' more frequently in systems with early tracking (Lavrijsen, 2013; Pekkala Kerr et. al., 2013). Hence, the tracking regime may well completely outweigh the effect of equity funding.

Another important issue is the baseline funding of schools. When the baseline funding is inherently unequal, as is the case in the US where public schools depend on local district funding, or in some European countries where municipalities are responsible for the provision and funding of basic education, the funding of schools will inevitably vary with spatial inequalities in the distribution of public resources, and EFPs will face greater difficulties in compensating for these inequalities. Hence, a first and crucial step in improving the functioning of EFPs is to level the playing field in the baseline funding of schools.

Furthermore, many other educational structures could be partly responsible for the poor impact of EFPs. Discussing all these structures goes beyond the scope of this article.

## CHAPTER 3. IMPLICATIONS FOR POLICY AND PRACTICE

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After identifying the potential reasons of success and failure of EFPs, this chapter will sketch some implications for policy and educational providers. As the discussed determinants are all to some extent linked with one and another, in total, six sets of implications will be addressed.

### **1. Acknowledge and minimise the adverse impact of the broader social and educational context**

Three exogenous social trends were discussed in this paper that may have reduced the effectiveness of EFPs over time: increasing social inequalities in Western societies at large, increasing segregation, and changing family dynamics.

- Growing macro-social inequalities cannot be compensated for by EFPs, nor indeed by educational policies alone; they must be addressed in the first place through taxes and transfers, and labour market policies (employment, minimum wages, labour protection)(Keeley, 2015; OECD, 2011a).
- School segregation is at least partly an exogenous trend, because it mirrors residential and labour market segregation. Hence, (public) housing and anti-discrimination measures in other policy areas need to be co-ordinated with school desegregation measures. Within education, equity funding itself is a tool for desegregation (as it makes low-SES and minority students more attractive for schools). However, it should go hand in hand with anti-discrimination measures, strengthening student enrolment rights and fostering intercultural education. In some countries – particularly those with free school choice - positive discrimination in enrolment (e.g. through quotas) can be imposed in order to obtain a better social mix in the student population. Resistance can be overcome by convincing all stakeholders that heterogeneous groups of students have a favourable impact on the educational achievement of disadvantaged groups, without harming the performance of the more privileged ones (Holzer and Neumark, 2006).
- Finally, governments could invest more in family-friendly policies to support single parents and prevent the further fragmentation of families. This includes targeted income and family support as well as measures to improve the work-life balance (OECD, 2011b).

Apart from these social trends, some educational structures such as early tracking and quasi-market mechanisms could also counteract the effectiveness of EFPs. As these structures are often deeply rooted in the education system, it is not easy to change them. Structural reforms in education are long-term processes, which require the involvement and effort of all educational actors. However, in the short run, governments could opt to implement experiments on a smaller scale and carefully monitor their impact on equity. In addition, they could check if the effectiveness of EFPs has changed in this context, before extending their coverage to the (sub)national level (OECD, 2017b).

### **2. Level the playing field in the mainstream funding mechanisms of schools**

The share of EF in the overall national education budgets is often relatively limited. It should come as no surprise, then, if its redistributive impact remains limited or insignificant. This is particularly relevant when the provision or funding of education is decentralised to the local level. Educational authorities should therefore evaluate the actual distribution of school resources, taking into account the legal framework but also (if possible) hidden contributions from municipalities, non-profit organisations, parents and alumni, and quasi-market mechanisms in the mobility of personnel whereby the quality of teachers correlates with the social status of the school intake. Unless these inequalities are ironed out, EF cannot fully play its role in equalising opportunities. The necessity of public information on the actual school resources justifies mandatory reporting of school accounts to the ministries of education.

### **3. Clarify the objectives, target groups and regulatory framework of EFPs.**

The objectives, target groups, instruments and regulatory framework of EFPs need to be formulated in a SMART (specific, measurable, assignable, realistic and time-bound) way, and clear to all stakeholders. Ambiguities could lead to inefficient or conflicting usage of funds by administrations and/or schools, particularly in disadvantaged areas or schools due to the lack of qualified management teams. Hence, in

order to promote a more effective and efficient use of the additional resources, these policies should be (better) regulated by conditioning the funding upon the fulfilment of certain basic requirements such as development of plans.

The *definition of target groups* deserves special attention. First of all, needs criteria based on the profile of pupils tend to be increasingly preferred over territorial criteria, because many disadvantaged pupils live outside deprived areas and vice versa, many pupils living in deprived areas are not disadvantaged. This does not mean that territorial criteria are irrelevant: in some cases they are combined with student profiles in determining the amounts of EF provided to schools.

Furthermore, as ample evidence has demonstrated that the rate of return on investment in human capital is greatest in children's early years, the importance of early childhood interventions and pre-school programmes is undeniable (Cascio and Schanzenbach, 2013; Felfe and Nollenberger, 2012; Heckman, 2011). It is therefore recommended to concentrate EFPs at the earliest possible ages (including the 'childcare' period) and gradually reduce the additional funding across primary and secondary education.

#### **4. Strengthen monitoring and evaluation practices to ensure that equity goals are met**

The monitoring and evaluation (M&E) of EFPs is a critical factor to improve their overall effectiveness. The OECD (2017b) concluded that many education systems are in need of better M&E practices. The lack of such instruments is detrimental for EFPs, because educational actors are missing information about the operation of the programmes. For example, the adequate targeting of interventions is a complex task that requires frequent revision. When M&E instruments are lacking, such revisions are hard – if not impossible – thereby making policy makers grope in the dark. As a consequence, transparency is missing and accountability mechanisms will be insufficient, whereby local administrations and/or schools have too much flexibility to spend the extra funding for other purposes. Therefore, the OECD recommends finding the right balance between flexibility on the one hand, and accountability and transparency mechanisms on the other hand. In order to do so, efforts are required at school, local and central level. For instance, at local and school level, expenditures should be reported and justified on a regular basis, students' educational careers should be tracked and schools should make a self-evaluation whether equity funds were spent effectively and efficiently. In this way, local administrations and schools will become more aware of the specific needs of their students, and capable of designing efficient indicators while – if necessary – adjusting them to local challenges. At central level, thematic studies on the effective use of equity funding, the validity of target group definitions and remaining inequities in school funding could be commissioned.

#### **5. Develop and promote professional development programmes for teachers and school leadership**

Teachers and school leaders are important actors in any education system as they are – at least in principle - in the best position to identify the specific needs of their school and to allocate resources accordingly.. Yet, disadvantaged schools usually experience problems in recruiting qualified teachers and school leaders, which negatively affects students' educational outcomes (OECD, 2013, 2014, 2017a). Therefore, policies aimed at professionalising teachers and school leaders, are necessary, also to improve equity in education. In-service training and professional learning communities are most profitable if they are directly connected to the needs of schools. Earmarked funds for professional development at school level and personal training allowances for teachers can help in developing a genuine professional development culture at school level (Santiago and et al., 2016). As regards the professionalisation of school leadership, educational administrations need to pay sufficient attention to the development of the

pedagogical and managerial capacity of principals (OECD, 2017b). As the responsibilities of school leaders are often wide-ranging, professional training should be available at - and tailored to the different stages of a school leaders' career and the specific needs of a school . Moreover, school leaders should be encouraged to collaborate with one and another, share knowledge about daily practice and thereby possibly gain new expertise.

**6. Do not overlook the 'excellence gap'**

Some studies (e.g. Plucker et al., 2010) suggest that in the past EFPs were mainly focused on reaching minimum competence levels with the lowest achievers among the EFP target groups, while failing to challenge *all* disadvantaged students to reach their full potential and to increase the number of high-performers (Plucker et. al. , 2010). Even though the priority for the lowest achievers is perfectly legitimate, this means that EFPs only achieve part of their objectives. In the future, strategies need to be developed that also boost the opportunities of more talented students among the disadvantaged (OECD, 2017b). In order to do so, differentiated approaches to teaching, assessment and evaluation should be used to provide the right amount of support and challenge, to individuals, professionals and schools at all levels. A more differentiated strategy will also prevent the criticism that educational priority for socially disadvantaged groups goes at the expense of excellence. Moreover, by examining in detail the effect of EFPs on different student subgroups (e.g. low-achievers, high-achievers, underperformers, average students, etc.), new insights can be collected to inform policies to target and support students more effectively.



# CONCLUSIONS

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Education is a key instrument to strengthen social cohesion, overcome social disadvantage and facilitate upward social mobility. Nevertheless, still today, millions of children are not given full opportunities to develop their abilities and to maximise their educational success. As children should not be held accountable for unequal opportunities that are due to exogenous circumstances, equity funding policies (EFPs) are implemented in many countries to tackle educational inequalities.

In this article, an international review of the existing effectiveness studies concerning equity funding in Western countries was provided. The literature on the effectiveness of EFPs tends to show mixed results, with the exception of schemes targeting early learners. The latter have been proven to be highly cost-effective. All in all, we found that evaluation studies yield moderate positive effects. However, the results often did not meet the expectations of policy makers and educational providers, causing some scepticism about the effectiveness of EFPs. Six key determinants of the success were examined in this paper that can help explain both weaknesses and strengths of national EF schemes; (1) the general context in which EFPs are implemented, (2) the pre-existing 'Matthew effects' in the baseline funding of schools, (3) the (in)effective use of additional resources, (4) adequate targeting of the additional resources, (5) the monitoring and evaluation, and (6) the degree of equity of educational systems as such. These determinants should be kept in mind in designing and evaluating EFPs.

While this study does not offer a conclusive answer to the question whether the present EF schemes yield value for money, it does not question the relevance of EFPs. However, one must accredit the various factors that are linked to equity funding and impact their functioning. Due to the complexity of determinants, it is very difficult to disentangle the pure effectiveness of EFPs or predict what would have happened if equity funding did not exist. To date, no researcher has successfully solved the previously mentioned issue(s). However, as a few countries appear to have implemented both effective equity funding, we conclude that EFPs have a the potential to reduce educational inequalities. In order to establish opportunities for improvement, this review provided seven guidelines for policy and educational providers: (1) minimise the impact of adverse mechanisms in the social and educational context, (2) level the playing field in the baseline funding of schools, (3) clarify the objectives, target groups and regulatory framework of EFPs, (4) strengthen monitoring and evaluation practices to ensure that equity goals are met, (5) Develop and promote professional development programmes for teachers and school leadership with a specific focus on equalizing opportunities, (5) target resources wisely, preferably based on pupil profiles rather than territorial criteria, and concentrated at the earliest possible age so as to prevent gaps rather than having to fill them ex post, and (6) do not overlook the 'excellence gap'. These guidelines are however no guarantee for success, as each education system has unique characteristics. In order to obtain successful EFPs, these guidelines should be adjusted to the national and/or local challenges.

A number of interesting issues remain to be investigated. To date, indicators reflecting the key characteristics of EF systems, needed for transnational comparative research, are still very partial. An international research by a special task force on this topic would be extremely useful. Moreover, case studies of successful EF schemes could serve as a source of inspiration for reforms in other countries via a peer-learning process.

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