Area-based ‘Positive Discrimination’ School Funding in Helsinki

Mikko Isak Silliman
University of Helsinki
Department of Social Sciences
Social and Public Policy
Master’s Thesis
August 2016

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

Tiedekunta/Osasto – Fakultet/Sektion – Faculty	Laitos – Institution – Department
Faculty of Social Sciences	Department of Social Research

Tekijä – Författare – Author
Mikko Isak Silliman

Työn nimi – Arbetets titel – Title
Area-based 'Positive Discrimination' School Funding in Helsinki

Oppiaine – Läroämne – Subject
Social and Public Policy

Työn laji – Arbetets art – Level	Aika – Datum – Month and year	Sivumäärä – Sidoantal – Number of pages
Master's Thesis	August 2016	102

Tiivistelmä – Referat – Abstract

Finland has gained a reputation worldwide as a leader both in educational performance and equality of outcomes. In the last decade, however, the results of Finnish schools have grown more unequal. This trend is particularly visible in urban areas: both the bottom and top performing schools in the country are found in Helsinki (Kuusela, 2010). The current "positive discrimination" (PD) funding model has provided additional support to schools in certain areas of Helsinki since 2008. The PD funding policy breaks from the universalist approach typical to Finnish education policy as one of the first policies to explicitly target existing inequalities.

This thesis examines the institutional characteristics and impact of the PD funding policy. The theoretical framework for this thesis situates the PD funding model in Helsinki against a backdrop of Nordic welfare state policies more broadly before approaching the PD funding policy through a framework centered on governance, particularly education governance.

This thesis employs mixed-methods, combining data from stakeholder interviews with a difference-in-differences econometric model. Semi-structured interviews conducted with municipal policy-makers, school principals, and teachers in spring 2016, and quantitative data from both Statistics Finland and the Helsinki Department of Education provide the empirical backbone for this research.

The quantitative analysis in this thesis finds increased rates of enrollment in post lower-secondary education amongst students from schools that receive PD funding. Equally important, the stakeholder interviews suggest that the high levels of local autonomy and trust between stakeholders combined with a notable absence of performance-based accountability are central to the operation of PD funding in Helsinki.

Avainsanat – Nyckelord – Keywords
school funding, Finland, Helsinki, positive discrimination, education governance, governance, education policy, mixed methods, difference-in-differences, trust, autonomy, performance-based accountability, education, policy analysis

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

Tiedekunta/Osasto – Fakultet/Sektion – Faculty	Laitos – Institution – Department
Valtiotieteellinen tiedekunta	Sosiaalitieteiden laitos

Tekijä – Författare – Author
Mikko Isak Silliman

Työn nimi – Arbetets titel – Title
Area-based 'Positive Discrimination' School Funding in Helsinki

Oppiaine – Läroämne – Subject
Yhteiskuntapolitiikka

Työn laji – Arbetets art – Level	Aika – Datum – Month and year	Sivumäärä – Sidoantal – Number of pages
Pro gradu-tutkielma	Elokuu 2016	102

Tiivistelmä – Referat – Abstract

Vuodesta 2008 lähtien, nykyinen "positiivinen diskriminaatio" (PD) -rahoitusmalli on kohdistanut lisäresursseja kouluille, jotka sijaitsevat tietyillä alueilla Helsingissä. Tutkielmassa pyritään selvittämään PD rahoitusmallin institutionaalisia ominaisuuksia sekä sen vaikutusta.

Aluksi tutkielma sijoittaa Helsingin PD rahoitusmallin laajempaan pohjoismaiden hyvinvointivaltiopolitiikkaa koskevaan keskusteluun. Seuraavaksi tutkielma lähestyy Helsingin koulujen käyttämää PD rahoitusmallia teoreettisella viitekehyksellä, joka keskittyy hallintoon, erityisesti koulutuksen hallintoon.

Tutkielmassa käytetään "mixed-methods" menetelmiä, yhdistäen haastattelutuloksia ja ekonometristä "difference-in-differences" -mallia. Tutkimuksen aineisto tulee haastatteluista, joita pidettiin keväänä 2016 kaupungin politiikkojen, koulujen rehtoreiden ja opettajien kanssa, sekä Helsingin Opetusviraston ja Tilastokeskuksen tilastoista.

Tilastollisen analyysin perusteella oppilasmäärä, joka jatkaa koulutusta yläasteen jälkeen on noussut niissä kouluissa, jotka saavat PD tukirahaa. Haastattelutuloksista nousee esille paikallisten toimijoiden autonomian, toimijoiden välisen luottamuksen, sekä testitulosten käytön puutteen keskeiset roolit Helsingin PD rahoitusprosessissa.

Avainsanat – Nyckelord – Keywords
koulujen rahoitus, Suomi, Helsinki, positiivine diskriminaatio, koulutuksen hallinto, hallinto, koulutuspolitiikka, koulutustalous, mixed-methods, difference-in-differences, luottamus, autonomia, koulutus

Table of Contents

Equations

Figures

Tables

1. Introduction

This thesis investigates the area-based "positive discrimination" (PD) funding of schools in Helsinki. At its core, the main idea of the PD funding policy is to provide extra resources to schools that need it most, where a school's need is determined by whether or not the geographical area it is in exhibits characteristics associated with education-related challenges. This policy is the first municipal education policy in Finland that targets resources based on perceived need, and it might be argued that it breaks from the universalist approach often taken as a hallmark of the Finnish education system.

In 2007, the year before the existing PD funding model was implemented, there was an average of an 8 percentage point difference in enrollment in further education directly after lower-secondary school between schools that now receive PD funding and schools that do not receive PD funding. By 2015, after the the funding had been in place for 7 years, the gap in post lower-secondary school enrollment between schools that receive PD funding compared to those that do not receive the funding shrunk by 75%.

The question this thesis attempts to respond to is: How do institutional factors shape the PD funding policy in Helsinki? And, what are the results of the policy? In order to respond to these questions this thesis adopts an analytical framework drawn largely from literature on governance. The empirical research upon which the response formulated in this thesis is founded on comes in two parts: interviews with various stakeholders, including city officials, principals, and teachers, as well as an econometric differences-in-differences model that assesses the impact of the targeted funding on school performance.

Before getting into more details of the thesis, it may benefit the reader to know that, although my name is Mikko, I am from the United States, outside Boston. The motivation for this thesis comes from my experience as a student in the United States public school system, and as a teacher first in New Orleans and then in Boston. Given the phenomenal reputation of Finnish schools, which are known to produce both excellent and relatively equitable results, one of the reasons I decided to come to Helsinki was to better understand how the Finnish school system works, and whether the United States might be able to learn

from the education policies in Finland, particularly those that aim to make learning outcomes more equitable. As such, I write about the Helsinki school system as an outsider. While this has the benefit of providing me with the psychological distance to see things from a different perspective, it also comes with at least one enormous cost: more or less everything I know about the Finnish school system has come through the research for this thesis - there may be subtleties and details whose importance, as an outsider, I neglect to recognize.

The contents of this thesis are organized into chapters as follows. The next chapter, chapter two, seeks to motivate the importance of the issue and highlight some of the challenges associated with the governance and finance of schools as they attempt to tackle problems associated with inequality. To achieve this, as a jumping off point, it presents a short narrative of a school in Boston where efforts are made to improve what is considered an under-performing school. Then, the chapter shifts its attention away from the United States and situates the discussion in Helsinki, Finland.

Before delving deeper into the details of the particular policy in question or the Finnish context more broadly, chapters three, four, and five provide theoretical background for the research. Chapter three frames the discussion of school funding within the social policy context, drawing, in large part, from the work of Esping-Andersen (1990). Chapter four establishes a basic theoretical approach to highlighting issues related to governance. In turn, chapter five reviews literature on education governance more specifically, expanding on the concepts laid out in the previous chapter. After a general framework for approaching the process of education governance is laid out, chapter six outlines the background concerning education governance in Finland, and the use of positive discrimination school funding in Helsinki.

Building from the theoretical framework described in chapters three to six, chapter seven details the data sources and establishes the research methodology used in this thesis. Next, the results of the research, coming from both the qualitative and quantitative work, are analysed in reference to the theoretical framework on governance. In chapter nine the

analysis is discussed more broadly, reflecting on the research process, bringing the discussion back to the social policy context, and posing areas for further research.

2. Motivating the research: from Boston to Helsinki

This section grounds the discussion through a concrete though rough example of an attempt to improve a low-performing school in the United States. The example is not chosen as representative of the process of school governance in the United States, but in order to highlight some of the issues that will come forth later on, and to provide a point of contrast to the policies in place in Helsinki.

2.1 The case of the Dever school in Boston

Based on its performance on the statewide educational assessment exam, after a state law was passed in 2010, the Dever public elementary school in Boston, Massachusetts (USA) was classified as "underperforming". Subsequent to the classification, in hopes of "turning around" student performance in the school, the following academic year brought significant changes. In 2011, the Dever elementary school was merged with the McCormack middle school, a new administration was brought in with increased powers - including the ability to force out old teachers, extend the school day, and make changes to union contracts - and the school was given $2.3 million additional dollars to be spent over a three year period (Vaznis, 2013).

The increased power and resources given to the school, however, came with rigid and ambitious accountability targets to be met at the end of each year in the three year turnaround period. Central to these accountability targets was student performance on the state assessment exam, the MCAS (Massachusetts Comprehensive Assessment System). Unfortunately, the school had difficulty in meeting these targets. When interviewed towards the end of the three year turnaround period, Mitchell Chester, the state commissioner of elementary and secondary education remarked "The bottom line for me is student learning and have we seen it progress [-] the answer is no" (Vaznis, 2013).

In contrast, however, the principal of the school at the time, Mike Sabin, argues that the MCAS results do not provide an accurate picture of the progress experienced in the school and do not fairly capture the obstacles the school faces. He describes the school as being "full of excellent teachers", and that the "majority of ... students are stable, well-adjusting adolescents" (Sabin, 2015). Additionally, he explains that the state assessments results reflect a "triple concentration of need": the school serves students from a public housing development, Columbia Point, the school receives a constant flow of what are termed "transient" students throughout the academic year, and takes in students in specialized programs targeting behavioral and emotional disabilities as well as students who are not only illiterate in English, but also their own native language (Ibid).

Nonetheless, as a result of not meeting the accountability targets on the state assessment, by the fall of 2014 the school had been taken over by the state and put into the hands of a non-profit, the Blueprint Schools Network. This decision was made by the state Commissioner of Education - who, as a staff member explains:

> *"spent no time at the Dever observing during school hours prior to his decision to turn the school around. He was supposed to visit several times but always cancelled last minute. The one time he came to the school was for an afterschool community hearing in which staff, students and parents spoke to him on behalf of the school under its current administration and how much it had improved already. They pleaded with him to give it more time" (Galef-Brown, 2015).*[1]

Maybe this time the turnaround would work. Yet again, however, its students faced the challenge of getting accustomed to changes in administration and an almost entirely new set of teachers. Perhaps even more importantly, whereas the school was given funding in 2011 to improve student performance, when student performance failed to improve at the rates set by the state, in 2014 resources were taken away. As one of the 6 or 7 staff members who stayed at the school (of roughly 70 the previous year) describes, this new transition was not easy: resources were taken away, the number of adult staff at the school

[1] Additionally, Galef-Brown (2015) adds: *"It takes approximately 4 or 5 months to receive MCAS results after students take the test. Commissioner Chester decided to turn the school around about halfway through the 2013-2014 school year. When we got MCAS results back later that year that indeed showed vast academic improvement, the improvement Dever staff had been hoping and waiting for, it was too late. The school was already being turned around."*

fell, and connections to the community were severed (Galef-Brown, 2015). Nonetheless the accountability indicators had to be met: "Terminating the dual language program was supposed to increase English scores on the MCAS" (Ibid). Again, the Blueprint Schools Network was given a three year period to turnaround the school, as evidenced by student performance on the MCAS.

The experience of the Dever school is not unusual in the United States. The MCAS plays an important role in monitoring and steering educational performance in the state of Massachusetts. A parallel structure is in place at the national level; in hopes of improving the education system at the national level - particularly for disadvantaged students - the Congress enacted the No Child Left Behind Act of 2001 (NCLB) in January 2002. Following NCLB, performance on standardized-tests would be used to calculate each school's Adequate Yearly Progress (AYP). A school's achievement of AYP would in turn result in federal sanctions and rewards to the school. This system was created to provide schools with improved knowledge of how they were doing and greater incentives to improve. In this regard, the NCLB policy echoed the influential research by Hanushek (1997), which argues that policies built around incentives rather than increased resources tend to be most effective. At the same time, NCLB strengthened the federal role, providing the national level with increased accountability over local education.

2.2 Stepping back from Boston and the United States

The experience of the Dever school in Boston highlights recurring questions faced by public authorities worldwide as they develop ways to improve low-performing schools: How should schools requiring additional support be identified? What resources and forms of support do low-performing schools need? What kinds of accountability structures will help to incentivize school improvement? What kind of data can be used to measure and track changes in school performance?

The United States is not alone in attempting to respond to these challenging questions by increasing the role of standardized assessment data in the governance of educational systems: between 1999 and 2013 the number of countries administering nation-wide tests

more than doubled (UNESCO, 2015). That said, however, the trend is not universal. While Finland is heralded for its PISA success (see for example: Sahlberg, 2011), in order to prevent the high-stakes competition between schools often associated with testing, Finland has chosen not to develop extensive longitudinal data systems (González-Sancho, & Vincent-Lancrin, 2015). Simola et al. attribute Finland's decision not to develop a national system of test-based governance in large part to what they call "radical municipal autonomy" (Simola et al., 2009, pg. 15). As such, they describe the system of education governance in Finland as defined by the interplay between national and local authorities, with the local governance varying significantly from one municipality to another.

From the international perspective, the distinct institutional characteristics of the Finnish education system make Finland's efforts to tackle educational inequality particularly interesting. Moreover, as Kumpulainen and Lankinen write, understanding the process governing the realization of educational equity in Finland is also timely domestically: "Increasing cultural, linguistic and ethnic diversity among learners makes it timely to re-examine educational equity and its realization in Finnish education" (Kumpulainen & Lankinen, 2012, pg. 77). With large variation across Finnish municipalities, however, it is hard to study the phenomenon at the national level. This thesis will examine a specific municipal-level policy: area-based positive discrimination in school finance in Helsinki.

2.3 Helsinki and "Positive Discrimination" school funding

Over recent decades, the population of Finland has grown more heterogeneous. The number of immigrants from other parts of the world has increased, and the socioeconomic differences between subgroups of the Finnish population have increased. These differences are particularly visible in Finland's larger cities. By the year 2000, studies suggested that both the best and the worst performing schools, as measured by test scores, could be found in Helsinki (Kuusela, 2006; 2010).

Already by the late 1990s, the City of Helsinki became interested in the idea of using area-based targeted funding to slow down the process of differentiation. In 1999, the City implemented a preliminary model of area-based school funding, termed "positive

discrimination" (PD) funding, with the aim of preventing learning differences between schools from increasing. At its simplest, the model allocates additional funding to schools in less well-off areas. The model was modified in 2008, with a significant increase in the level of funding as well as changes in the indicators used to measure the need for funding from one area to another. The model will be returned to in more detail after a discussion of the broader social policy context, and the theoretical framework surrounding education governance.

3. Social Policy and Welfare Systems: Theoretical Background

The education system in Finland is closely tied to the broader welfare state in the country. In order to understand the distinct qualities of the education policies in Finland, it will be helpful to position the discussion of the Finnish welfare state against a theoretical backdrop and international comparison.

3.1 Esping-Andersen's categorization of welfare systems

In Esping-Andersen's seminal book, *The Three Worlds of Welfare Capitalism* (1990), he argues that welfare regimes, embedded in the rich political economy of the state, and entailin the interaction between public and private goods provision, rather than simply individual policies, play a decisive role in both tackling and producing problems associated with social stratification and social rights (Esping-Andersen, 1990, pg. 3). In order to examine the relationship between social stratification, social rights, and social policies, he compares welfare regimes in the developed world. Through his comparisons he distinguishes between three primary types of welfare state regimes: liberal, corporatist, and social-democratic.

Liberal. He understands the 'liberal' welfare state to be characterized by "means-tested assistance, modest universal transfers, [and] modest social-insurance plans" (Esping-Andersen, 1990, pg. 26). Examples of countries that fall into the 'liberal' cluster are the United States, Canada, and the United Kingdom. In this regime type public benefits tend to target the low-income working class, and are often associated with a certain level of stigma.

Apart from the meager public benefits targeted at the low-income working class, the majority of social assistance is delivered privately, using market mechanisms.

Corporatist. In 'corporatist' regimes, on the other hand, often rooted in the legacies of Catholic or authoritarian states, market efficiency was never central to social policy provision; instead, social policies tended to develop as a means of maintaining existing status and class structures. In these regimes, social services were largely provided by employers and the family rather than by the state. Examples of 'corporatist' countries include Germany, France, and Italy.

Social-democratic. Lastly, the 'social-democratic' regime type is guided by the principle of universalism, by which a high level social rights were extended to the middle classes. Sweden, Denmark, and Norway are examples of countries fitting the social-democratic model. In his initial categorization, Esping-Andersen (1990) does not include Finland in this group. Later scholars often do (Pierson, 2007; Kvist & Fritzell, 2012). As Esping-Andersen describes, social policy provision in the social-democratic regime was intended to foster "cross-class solidarity" (Esping-Andersen, 1990, pg. 25), characterised by "an equality of highest standards, not an equality of minimal needs as was pursued elsewhere" (Ibid, pg. 27). As he notes, the goals underlying this principle lie both in the universality closely linked with socialist minded thinking as well as the emphasis on individualism generally associated with liberal thinking. By pre-emptively socializing the costs associated with various risks, the goal of social policies in the social-democratic regime "is not to maximize dependence on the family, but capacities for individual independence" (Ibid, pg. 28). As such, social policies in the social-democratic welfare state are intended to lessen the impact of family background on later-life opportunities.

One of the major roadblocks for universal benefits in the social-democratic state, however, is that it can be difficult to mobilize politically around universal benefits: "the solidarity of flat-rate universalism presumes a historically peculiar class structure, one in which the vast majority of the population are the 'little people' for whom a modest, albeit egalitarian, benefit may be considered adequate" (Esping-Andersen, 1990, pg. 25). When the portion of

the society requiring additional levels of social benefits is only a small minority, the middle class may reassess their support for universal benefits. Esping-Andersen explains, "Where this no longer obtains, as occurs with growing working-class prosperity and the rise of the new middle classes, flat-rate universalism inadvertently promotes dualism" (Ibid, pg. 25) between the new middle class and those requiring additional levels of benefits. As the class-structure and demographics within a nation change, welfare-state systems like those in the Nordic countries, may need to adapt in order to remain politically feasible.

3.2 The changing context of welfare provision

Esping-Anderson's book was published already in 1990. Since then, changes have taken place in the demographic and social structures around the world. Most notably for the context of this thesis, in Finland as well as many of the other social-democratic states located at the center of his argument, demographic and socioeconomic structures have grown more heterogenous. Not surprisingly, there has been discussion regarding the extent to which his analysis, or even the concept "welfare state" still applies (see for example: Pierson, 2007; Seeleib-Kaiser, 2008; Kvist & Fritzell, 2012). As Seeleib-Kaiser (2008) explains, welfare provision today tends to be provided through a complex mix of public and private means, with the state playing a changed role.

Rather than discard his analysis completely, however, Pierson (2007) argues that, in keeping with these pressures on states to allocate their resources more effectively, contemporary social policies - from the 1990's onward - are best understood, not as a retrenchment of the welfare state, but as a *recalibration* of the welfare state. Pierson points to a shift towards what has been labeled as "new public management" - characterised by an attempt to introduce quasi-markets; increased organisational flexibility and responsiveness; decentralisation and de-layering of decision-making; the use of performance indicators and output targets as incentive mechanisms; efficiency; managers and management by results; increased technology-use; and an increased importance on audits (Pierson, 2007, pg. 179-181).

In turn, instead of simply providing a flat level of funding across social services - including education - even states once dominated by social-democratic thinking are becoming more targeted in their funding of programs. This has come with a changed role of the state; instead of higher organisational layers of governments mandating how funding is used, more autonomy is being given to local authorities. While these transformations hold true in many countries, the particular transformations of the public role are taking shape in different ways from country to country and between regime types.

These transformations in the structures of welfare states coincide with changes in the challenges contemporary welfare states face. Perhaps the most significant of these come from: changing gender roles and family structures; a shift in the historical coalitions providing political support for welfare state aims; and, importantly, globalization through culture, trade, and immigration (Pierson, 2007; Seeleib-Kaiser, 2008; Kvist et al. 2012). Although, according to Fritzell, Bäckman, and Ritakallio (2012), the Nordic welfare model has been relatively successful at combating the challenges associated with the elderly and unemployed, it has been less successful at targeting what are termed "new social risk groups" - in particular, immigrants and single parent households (see also Bonoli, 2005; Taylor-Gooby, 2004). The prevalence of these groups has increased rapidly over recent years; for example, the percentage of non-native speakers in Helsinki has increased from 7.6% of the population in 2005 to 13.5% of the population in 2014 (SVT, 2016c).

Research suggests that in Finland gaps in education, access to health, and crime are large between native and immigrant populations (Ansala Hämäläinen, and Sarvimäki, 2016, pg. 12). As immigrants come to represent a growing portion of national populations, as they have in Finland like in many other Nordic countries, the principles that have guided the Nordic welfare regime in the past will become tested: "any continuation of the overall widening of income differentials, will ultimately erode the legitimacy of the Nordic model" (Fritzell, Bäckman, & Ritakallio, 2012, pg. 183). While the nature these new social risks will certainly be shaped by far-reaching welfare policies from labor market policies to pensions and healthcare, education plays an integral role in confronting poverty and

inequality. In its focus on younger generations, education promises to provide a long-term approach to addressing part of these issues.

In Esping-Andersen's categorization of welfare states, means-tested social services are prominent in liberal welfare states and at odds with the social-democratic principles characteristic of Nordic countries (Esping-Andersen, 1990, pg. 126). As societies become more heterogeneous and complex, and as seen by the increased incidence of "new social risks" in the Nordic countries, the universalist policies central to the social-democratic welfare states are coming under increasing pressure. Accordingly, new policies have been developed to meet the changing context, often advocating the targeted funding of these new social-risk groups. Whether or not policies employing targeted funding are understood as promoting equality or as a form of means-testing at odds with universalism will largely define whether or not such policies are in keeping with the social-democratic welfare model. As such, by examining the "positive discrimination" school funding policy in Helsinki, this thesis aims to add to the broader discussions surrounding the application of theoretical approaches to contemporary welfare provision.

Whether the "positive discrimination" policy in Helsinki schools extends the universalist principles that have long been the backbone of the Finnish education system (Simola et al., 2009, pg. 5) by allowing individuals from all backgrounds greater independence, or whether the policy will be seen as encroaching on the universality of education provision is in large part a matter of the details of its governance process. As Seeleib-Kaiser concludes in his anthology on transformations in the nature of social policies of welfare states, "we need to move governance structures and the different forms of accountability involved to the centre stage of our research, because it is very likely that they will determine the inclusiveness of welfare systems" (Seeleib-Kaiser, 2008, pg. 221). As such, discussion of the positive discrimination policy in Helsinki will take shape bearing the context of social welfare provision in mind.

4. Governance

4.1. What is governance?

Given that this thesis approaches the institutional context of Helsinki's PD funding policy through a framework on governance, it is vital to operationalize the concept of governance. At its core, in the urban sphere, governance refers to the multitude of processes involved in the organisation and administration of services. As such, it does not seek to attribute the process to any one actor, but encompasses both the formal and informal interactions between the government, markets, families, and individuals (Bevir, 2012, pg. 1).

It is tricky to approach the concept more closely. Not surprisingly, a diversity of understandings exist regarding how to approach the concept. Certain contexts cater to a concept centered around power struggles and neoliberal market forces (Jessop, 2002; Stoker, 2000), others focus on networks (Jones, Hesterly, and Borgatti, 1997; Rhodes, 2000), and still others on procedures and administrative hierarchies (Weber, 2009[1919]; Rothstein & Teorell, 2009). Given the myriad understandings of governance in the literature, fundamental to understanding municipal education governance in Helsinki, then, is to develop a working framework by which to approach the concept of "governance".

For now, given the simplicity of the framework, and its relevance to the concepts discussed in the literature on education governance, the relationship between capacity and autonomy, stemming from an article by Fukuyama (2013), will provide a jumping off point for the theoretical framework for "governance" this thesis[2]. The framework centered around capacity and autonomy allows for the discussion of many of the terms and concepts familiar in the literature rooted in a neoliberal approach, but also retains the flexibility to discuss the intricate relationships between complex networks of stakeholders, and the transparency of processes.

[2] This thesis does not refer to the ouvre of Fukuyama's work on governance, but takes his 2013 paper as a starting point for discussion. The analysis in this thesis will make it possible to reassess the applicability of the theory in the context of this paper.

4.2. Capacity and autonomy

Fukuyama takes "the government's ability to make and enforce rules and to deliver services" as the starting point for his definition for governance (Fukuyama, 2013, pg. 3). This approach carries with it an acute awareness of power relations between actors. As such, it may be seen to distance itself from the impartiality in governance advocated by other scholars (for example, Rothstein & Teorell, 2009). Yet, the dichotomous disagreement and complex array of normative positions surrounding issues relating to education may justify an approach that leaves room for such tensions. Accordingly, Fukuyama's (2013) definition of governance is not founded on political principles themselves, but rather the ability to execute policies founded on any set of these principles. Equally important, the understanding is not built around specific forms or structures of governance, but the characteristics of the particular systems in question. In line with other scholars (Bevir, 2010; Rhodes, 2000; and Stoker, 2000) this understanding of governance can be interpreted to span networks of both government and non-government actors involved in the process. The degree of autonomy between these different actors in relation to their specific capacities is the defining characteristic of Fukuyama's (2013) approach.

Autonomy, as understood in isolation from capacity, centers around the "manner in which the political principal issues mandates to the bureaucrats who act as its agent" (Fukuyama, 2013, pg. 10). For example, in order to ensure strong performance across ethnic group boundaries, municipal authorities may be required to treat all ethnic groups equally in their schools, to allocate 20% of funding towards raising the performance of the children of recent migrants, to ensure that children from refugee families reach a minimum performance level, or to implement a specific curriculum, etc. The nature of the mandate, stemming from the relationship between one actor and another, defines an actor's autonomy. Additionally, given that governance systems can be complex, with (sometimes contradictory) mandates coming from multiple principals. The autonomy of an actor is understood to decrease with both the increased specificity and number of mandates. Moreover, as the autonomy of the agent increases in regards to the principal, the agent can be more responsive to other stakeholders. That said, the power of other stakeholders to make demands on the agent can also reduce the agent's autonomy.

On the other hand, capacity includes not just the financial resources necessary to get things done, but also human capacity. Here, human capacity is a function of the level of education and professionalism of government officials and other stakeholders who play a role in governance (Fukuyama, 2013, pg. 7). Keeping our case study in mind, it will be important to attempt to understand the differences in capacity required at the local and national levels. Although impartiality is not central to this understanding of governance, increased capacity often overlaps with improved impartiality. For example, increased human capacity through principal and teacher professionalism may result in better evidence-use in decision-making; or, transparency of process may reduce the capacity required by central administrators.

The crux of Fukuyama's argument is that the quality of governance "is a result of an interaction between capacity *and* autonomy" (Fukuyama, 2013, pg. 13). The more capacity local authorities have to act in a situation, the more autonomy they should be given. On the other hand, without local capacity to engender the desired outcome, behavior of these agents must be circumscribed. As such, given that the quality of governance is, at least for Fukuyama primarily a function of capacity and autonomy, quality of governance can be increased by either increasing the capacity of bureaucratic actors (generally the more costly of the two options), or reducing the level of autonomy to fit the existing capacity levels of the actors involved (Ibid, pg. 15). Better yet, high levels of capacity would exist in conjunction with high levels of autonomy. In bringing together capacity and autonomy, this framework highlights the importance of both trust and accountability, depending on the characteristics of the government in question. Here, it is important to remember that at each organizational, geographic, or functional level, the characteristics of governments differ. Depending on these differences, each of these component parts requires different levels of capacity and autonomy. For the purposes of this research, it will be vital to keep in mind the relationships between state and municipal governance.

4.3. Governance - why does it matter?

Now that we have a basic idea of what the term "governance" refers to, if the reasons for making governance a matter of central concern are not immediately apparent, I will briefly

highlight four primary reasons that the process of governance as it pertains to school funding in Helsinki holds center stage in this thesis.

The first reason is practical. A policy might be very well thought out, and even potentially effective, but the execution of the policy might fail. In such a situation, it may be more productive to concentrate on improving how the policy is executed rather than finding an alternative policy by which to reach the desired outcomes. On the other hand, we can also imagine that satisfactory outcomes might be achieved in large part regardless of the theoretical design of the policy itself, but instead due to the system of governance in place and the individuals carrying out the policy.

The second reason is primarily political. A focus on the impact of a policy may obscure the process by which outcomes are produced. In particular, questions regarding the partiality of the process, which actors command power in the system, which stakeholders have a say in the decision process, and how performance is sustained might be ignored.

The third reason is epistemological. Given that education serves multiple functions, ranging from preparation for the labour market to moral development – a choice has to be made about what to measure (Hooge, Burns, & Wilkoszewski, 2012; Biesta, 2009). Additionally, even after a decision has been made regarding what to measure it can be difficult to connect the chosen goal with an operationalized measure such as a particular learning outcome (Proitz, 2010). As will be discussed later on, finding a comparable learning outcome is difficult in Finland, where nationally comparable testing is viewed with antipathy (Simola et al. 2009). When data on desired indicators does exist, further complications can arise: as Nichols and Berliner (2009) discuss, as soon as performance indicators are tied to accountability measures in the governance process, indicators can themselves be corrupted, making them hard to interpret.

That said, as Esping-Andersen (1990) makes clear, the evaluation of social policies within welfare regimes must attempt to take into account outcomes as they pertain to social stratification. Yet, without strong theory to explain the governance mechanisms by which

outcomes are realized, there is little that can be learned from a study focusing only on outcomes (Deaton, 2004, pg. 426). It is in large part for these reasons that, in order to understand the distributional impact of social policies, Seeleib-Kaiser (2008, pg. 221) calls for research on governance to play a central role.

5. Education Governance

Education systems refer to the complex structures and interrelationships between the various stakeholders involved in the provision of education (Capano, 2012; Snyder, 2013; Cerna, 2014a). These include, for example, students, parents, teachers, principals, non-governmental actors, municipal leaders, regional leaders, national governments, international organisations, researchers, social organisations, the private sector, etc... - each distributed across various organisational positions and functions. As opposed to governance more broadly, transformations in the discourse surrounding governance of education systems over the last decades are characterised by distinct challenges and trends.

In addition to the character of the system as shaped by these various stakeholders, the specific historical, cultural, and political contexts in each country make the systems of education governance different from one country to another. As such, echoing Fukuyama (2013) writing on governance more broadly, Cerna (2014a, pg. 5) reiterates that for education too, "there is no one-size-fits-all solution" (see also: Capano, 2012, pg. 61). With that in mind, what will be described in the following sections are trends in the governance of education systems in Western countries as well as the theory that dominates the discourse on education governance (often stemming from organisations such as the OECD).

The key themes that emerge as the focus of discussion are: *the organisation of education systems*; *decentralisation*; *accountability, autonomy, and capacity*; *data and the knowledge-base*; and *politics, collaboration, and trust*. These themes can help to understand what happened in the case of the Dever school in Boston, United States, and will be used to bring light to the distinct institutional character of the "positive discrimination" policy used to fund schools in Helsinki.

5.1. The organisation of education systems

Despite enormous variation from country to country, education systems across the world are typically governed by at least three primary levels of organisation: the national level, the local (regional or provincial) level, and the institutional level (Capano et al., 2012, pg. 60). That said, even when a national system does exhibit three levels of organisation, the specific functions of and relations between these levels of government differ greatly between systems. Traditionally, whether structured as top-down or bottom-up systems, relatively clear hierarchies existed between these levels. That said, starting in the late 1980s and 1990s, many education systems in the developed world have become increasingly deregulated and decentralized (Lindblad, Johannesson, & Simola, 2002).

As such, education systems have become such that they are often better characterised as exhibiting multi-level governance, defined by a complex relationship between markets, hierarchies, and networks (Glatter, 2003). As multiple scholars have noted, "governance clearly encompasses more than government" (Glatter, 2003, pg. 47; see also Esping-Andersen, 1990). These networks of stakeholders involved in systems of multi-level governance tend to be more varied than before, with a greater number of stakeholders enjoying increased power, and with the relationships between stakeholders becoming increasingly varied, flexible, and informal (Wilkoszewski & Sundby, 2013; Cerna, 2014a). Despite these changes, and the transformed role for central governments, strong leadership is believed to remain important in setting the vision, direction, design, and strategy at each level of governance (Cerna, 2014a). Accordingly, the behaviours and toolkits of many governments have shifted from steering primarily through rules and legislation, to relying on a more hands-off technique of steering by goals and results (Lindlblad, Johannesson, & Simola, 2002, pg. 237).

5.2. Decentralisation

The transformations in the governance of education systems that took place in the 1980s and 1990s, as marked by deregulation and decentralisation, came with new challenges. Three sets of tensions that have become common across education systems around the world: the tensions between central versus local decision-making, integration and

fragmentation, and competition and cooperation (Glatter, 2003, pg. 47). These tensions bring forth possibilities of education systems with high degrees of regional variation between regions or schools, and the complications such scenarios present as to where the decision-making is most effectively made.

As education systems become more decentralized, national governments find it important to ensure that, even if regional variation exists, student performance in all parts of the country reaches satisfactory levels. Accordingly, rather than removing the need for accountability at the national level, the decentralization of education governance is perhaps better understood as shifting the dynamic of accountability, changing the relationship between central administrators and local stakeholders.

We can get a better sense of how these changes can play out by briefly discussing the case of the United Kingdom, whose policies lie on one extreme of school decentralization. The United Kingdom can be seen as exemplifying a change in the accountability dynamic stemming from decentralisation and deregulation at the national level. In the United Kingdom, the goals of decentralization were to offer greater autonomy at the local level and choice at the individual level. While this was intended to improve the condition of individual parents and students, it had unintended consequences. Biesta (2004) explains that beginning with the 1988 Education Reform Act in the United Kingdom, the relationship between parents and schools began changing into one better understood as between taxpaying consumers and businesses providing public services. Along with this shift in the relationship between parents and schools, Biesta describes that the type of accountability shifted from a democratic approach, in which schools were held as "being answerable to" the people they served, to one in which accountability was understood through its more financial definition as characterised by managerialism (Biesta, 2004, pg. 235). As opposed to serving the political vision of the people, accountability became better understood as an effort to "detect and deter incompetence and dishonesty", taking the choice of outcome indicators used to measure performance for granted (Ibid, pg. 234).

Therein, while the shift took place under the guise of decentralisation, it can also be viewed as extending the power of the central government. Biesta points out the tension as follows: the problem with "the culture of accountability, [is that] the state wants to be held accountable only in terms of the "quality" of its delivery of public services, not in political, let alone democratic, terms" (Biesta, 2004, pg. 249). In this sense, the state may be seen as gaining a monopoly regarding the question of how to measure quality. Simultaneously, in turning over autonomy to the local government in how the performance indicators are reached, the central government eschewed responsibility over how to best go about achieving improvement. The United Kingdom is not alone in this shift; comparable changes can be seen across many developed countries, including the United States and Sweden (Wilkoszewski & Sundby, 2012). This dichotomy between increased local autonomy and greater accountability to the central government can be seen as representative of the tension between local and central decision-making noted earlier by Glatter (2003).

5.3. Accountability, autonomy, and capacity

The characteristics of education systems can be further approached using the concepts of autonomy and capacity (Fukuyama, 2013) discussed in the previous chapter. If local authorities are capable of tackling the challenges of their education system without the involvement of centralized government, government involvement can hinder local effectiveness. On the other hand, while local autonomy is attractive, excessive fragmentation can be ineffective, resulting in inadequate local capacity to tackle the challenges at hand. In the longer term, at least in the literature on education, local capacity building is generally suggested as the path forward for today's education systems (Köster, 2015; Hooge, Burns, & Wilkoszewski, 2012; Møller, 2009; Fuhrman & Elmore, 2004; O'Day, 2002; Busemeyer & Vossiek, 2015).

Capacity building can take place through a variety of channels, including improving human capacity, the knowledge-base, and infrastructure. For both Fukuyama (2013) writing on governance in general as well as other scholars writing on the governance of education systems, human capacity can be increased through improved education and professionalism (Sahlberg, 2011a, 2011b, 2010, 2007; Köster, 2015, Møller, 2009; Elmore, 2002, 2005,

2007; Fuhrman & Elmore, 2004, O'Day, 2002). Through developing teacher and principal professionalism, accountability can be extended past simple school performance results based accountability to what is termed "professional accountability" (Köster, 2015; Hooge, Burns, & Wilkoszewski, 2012; Møller, 2009; Fuhrman & Elmore, 2004; Elmore; 2005; O'Day, 2002). This understanding of accountability shifts the locus of control away from outside pressures, and towards individuals at the local level (Elmore, 2005). For example, instead of responsibility lying at the administrative level, it may be extended to multiple stakeholders, including teachers, principals, and students themselves (Hooge, Burns, & Wilkoszewski, 2012).

That said, however, the shift from results based accountability with power located at the central level to a more decentralized professional accountability not just higher levels of stakeholder education, but also trust between stakeholders (Cerna, 2014b). The degree of trust plays an important role in determining the level of oversight required as well the degree to which two parties are willing to work together. In the context of education systems, these relations can take many forms. For example, a teacher may trust the institution of assessment through which her students' learning is measured; a central administrator may trust school leaders by giving them a higher degree of autonomy; or a school principal may trust that the advice they receive from central administration will help to improve student achievement in their school. To build trust, then requires not just education, but also collaboration, discussion, and alignment of values within organisations (Elmore, 2005).

Then end goal in increasing local autonomy and building local capacity is to allow for school improvement. While performance-based accountability shares this aim, the accountability structure can be too rigid to allow for the experimentation required by longer term, holistic improvement. As Blanchenay and Burns (2015) explain, improvement rests on the ability to experiment and find new ideas and approaches to existing problems. As such, by encouraging risk-taking and experimentation, a shift to professional accountability tends to be seen to enable an alternative to accountability systems based on narrow outcome

indicators (Elmore, 2005; Blanchenay & Burns, 2015see also Burns & Köster, 2016; Hooge, Burns & Wilkoszewski, 2012; Cerna, 2014a).

On the other hand, while a decentralized system based on professional accountability may allow for experimentation, without the leadership of central government improvement can be fragmented - without localities learning from one another's experiences. To this end, for learning and the potential for school improvement that goes with it, we turn to the use of data, and the knowledge-base that stems from it.

5.4. Data and the knowledge-base

In addition to human capacity, as understood through education, professionalism, and trust, effective governance at any level requires a strong knowledge-base (Fazekas & Burns, 2012). In essence, it is difficult to govern an education system without detailed information on developments taking place within it. It comes down to learning. For example, without knowing that inequality in academic achievement between the native and non-native population is growing, there is little that can be done to tackle the issue.

More specifically, knowledge plays four important roles in the governance process: 1) problem definition, 2) identification of policy solution, 3) deriving feedback, and 4) policy implementation (Fazekas & Burns, 2012, pg. 11). For example, depending on the knowledge available to policy-makers, a municipality may identify the unequal performance of children from immigrant parents as compared to native parents as requiring attention, or perhaps the uneven performance of schools in the city, or perhaps the impact of a neighborhood's characteristics on the ability of its students to learn. Once a problem is identified, if the unequal performance of schools in a municipality, knowledge is again required in order to figure out what can be done to improve the situation. Depending on the data gathered, different positions of knowledge will be arrived at, and the problem approached in different ways. After a policy is implemented, knowledge must be acquired in order to evaluate whether or not the policy is effective in combatting the problem. Fourth, the use of knowledge in policy implementation entails the provision of knowledge to stakeholders in order to indirectly influence their behavior. For example, making parents

informed of the performance of schools in a municipality may shape the way in which parents make decisions on where to send their children, and thereby perhaps also incentivize the operation of schools (Fazekas and Burns, 2012, pg. 14). Understanding the processes of knowledge creation and dissemination surrounding these four areas is central to understanding the politics of governance.

Of course, the entire branch of epistemology, ripe with debate, is centered on the question of how to understand and operationalize the term knowledge; there will be no easy answer to the question. But, before moving on, it will be helpful to reach a working understanding of the term 'knowledge' as it is relevant within the contexts of education policy and governance. In their influential article, Davenport and Prusak (1998) found their conceptualization of the term 'knowledge' on what they call "data". Put simply, they conceptualize data as a set of discrete facts about events that are as objective as possible (Davenport and Prusak, 1998, pg. 2). This distinction between data and knowledge is common in later literature on education policy (Schildkamp, Karbautzki, & Vanhoof, 2014; Breiter & Light, 2006). Table 1, below, shows examples of different sources and types of data as they pertain to education.

Table 1. Examples of *Input*, *Outcome*, *Process*, and *Context* Data

Input Data	*Prior test results, individual student socioeconomic background indicators, teacher qualifications*
Outcome Data	*School inspection reports, national assessment results, classroom grades, measures of wellbeing, dropout rates*
Process Data	*Curriculum design, time spent in class, days absent, teacher observations, money spent on educational resources*
Context Data	*neighborhood socioeconomic data, the academic composition of the peer group within a school*

Source: Silliman (2015), pg. 4., as adapted from Schildkamp, Karbautzki, & Vanhoof (2014), pg. 18.

Before data can begin to be interpreted as knowledge, however, it must be identified as relevant and organised with a particular goal in mind. Then, although they admit to the fluidity and complexity surrounding the term, knowledge is conceptualized as an understanding developed within an individual as derived from data by relating it to other information they have (Davenport & Prusak, pg. 4). Since it is impossible to look into one's

mind to evaluate understanding, they take knowledge to be evidenced by action. While this framework is certainly open to criticism, it provides one way to approach the data and knowledge used in education governance.

Fazekas and Burns (2012, pg. 9) suggest that, under this conception, knowledge can be derived from various types of data, both those obtained through quantitative and qualitative methodologies. The type of method best suited to obtain knowledge in specific instance will be determined by the uses required of the data. As such, the experiential knowledge gained by municipal authorities, school leaders, and teachers over the course of their professional lives falls under this definition of knowledge. With increased education and professionalism amongst stakeholders, the knowledge-base in the governance process is expanded. Governments can also increase the amount of knowledge in the system by developing infrastructure that facilitates the production of knowledge. The type of knowledge that exists amongst stakeholders in the governance process also restricts the types of decisions that are made and the outcomes of the process. Accordingly, the absence of certain types of data can be a central factor in understanding why certain decisions are made (Fazekas & Burns, 2012, pg. 9).

5.5. Politics, collaboration, and trust

But, knowledge does not come about cleanly, nor does it produce clear or objective results. To begin with, data does not simply exist in the abstract; it must first be collected, organized, and then made sense of in accordance with the values of the various actors involved (Breiter & Light, 2006). Moreover, as Birkland (2014) explains, the processes of knowledge creation and dissemination are highly political. Various actors, often with divergent interests, compete for power in agenda setting. This is a messy process: data-use in policy making is about interpretation, argumentation, and persuasion (Coburn, Toure & Yamashita, 2009).

In turn, the data gathered and the knowledge created depend on the degree to which actors buy-in to the data-use process and on which actors are most successful in promoting their interests. Unless actors - whether municipalities, states, or private organisations - have the

capacity to collect and disseminate data, they cannot use it in the knowledge creation process. For actors lacking adequate capacity for effective data-use, collaboration with other actors is key. For example, municipalities may turn to expertise from universities or other outside partners. This requires, however, not just trust in the outside partners, but also trust in the possibilities for data-use. Developing such trust is easier said than done. For example, a study on the decision-making process in Norway finds that it can be difficult for central administration to change the culture within schools and districts (Hopfenbeck, 2013). This is often particularly difficult in small districts, in which leaders more commonly believe that their situation is unique, and that broader data may not apply to them (Lapiolahti, 2007). Additionally, when multiple actors are involved, problems in communication can exacerbate distrust towards data-use (Mazurkiewicz, Walczak, & Jewdokimow, 2014, pg. 33).

6. Education Governance in Finland, and Helsinki in particular

Although the distinct character of the Finnish education system has been attributed to everything from classroom culture to teacher training, a central piece of understanding the system is its system of governance. While the concepts discussed in this section will in large part be subject to investigation and critique further in the paper, this section serves to provide a sketch of the current understanding of educational governance in Finland, particularly of how municipal level functions.

In line with the earlier review of contemporary literature on theories in education governance, literature from Finland suggests that two key characteristics of the Finnish system are its organisational structure - with particularly strong municipal governments (Simola et al., 2009), and the role played by evaluation and assessment in the processes of knowledge creation and accountability (Kumpulainen & Lankinen, 2012).

6.1. Decentralisation: The state and municipalities

While political power in the United States is divided into three primary levels - federal, state, and municipal - government in Finland is structured into two: state and municipal[3]. The governance of education in Finland is in large part defined by the relationships between stakeholders at these two levels (Simola et al., 2009).

Since World War II, primary education reaffirmed its position as one of the fundamental and universal responsibilities of the welfare state. Following World War II, Vilmi explains that the guiding principle for primary education was educational equality (Vilmi, 2005, pg. 23). That said, until the educational reform from 1972-1975 in which the comprehensive school was introduced, during what Pierson (2007) terms the "Golden Age" of the welfare state, vocational and academic schools were often separate from one another. By the 1980s the logic of the educational discourse began to change. With the strengthening of right-wing politics at the national level, the top-down structure that had existed started to give way as differentiation in educational planning came into effect at the municipal level in the 1980s (Simola et al., 2002; Simola et al., 2009). At the root of this, Simola et al. suggest was a shift in the conceptualization of the fundamental role of education from one they understood as being rooted in equality to one to one rooted in equity: by the new logic emerging at the end of the 1980s, "people were different in terms of capacity, and equality meant the right of every pupil to receive education that corresponded to his/her prerequisites and expectations rather than the delivery of universal Bildung for everybody regardless of his/her sociocultural background" (Simola et al., 2009, pg. 166).

Although this logic of differentiation by municipality contrasts with the universalist principles in welfare provision guiding policies in Finland and other Nordic states after World War II, a large scale survey at the time finds that "educational systems first and foremost are part of public welfare", furthering civic responsibility and equality rather than aiding the economy (Vilmi, 2005, iii). As Simola et al. (2009, pg. 175) explain, this apparent tension in the logic of education provision remains visible in contemporary discourse at the national level: "the economic and social well-being in Finland is founded in

[3] Important to note is that with the upcoming "SOTE uudistus" this is bound to change.

an egalitarian system of public education, providing each citizen, regardless of gender, place of residence, age, mother-tongue, or economic situation quality educational opportunities and the right to develop oneself according to one's abilities and needs" (FEEC, 2003, pg. 15). Where the first part of the quoted sentence emphasises universalism, the later part focuses on differentiation according to ability and needs. While the problematic between the two terms will be examined more thoroughly in later sections of this research, for now, we will mark the above tension, as Simola et al. (2009, pg. 166) do, as one between equality and equity. Emblematic of this shift, writing more recently, Kumpulainen and Lankinen reiterate that "equity has long been a major goal of the Finnish education system" (Kumpulainen & Lankinen, 2012, pg. 70).

As part of this process of differentiation and decentralisation, Simola et al. explain that, "By the early 1990s all traditional forms of control over the teacher's work such as school inspections, a detailed national curriculum, officially approved teaching materials, weekly timetables based on the subjects taught, and class diaries in which the teacher had to record what was taught each hour had been eliminated" (Simola et al., 2009, pg. 7). While the shift towards decentralisation resulted in part from shifts internal to Finnish politics, it was reinforced by the increasingly dominant roles that the OECD, and the logic of "new public management" (Pierson, 2007, pg. 181), played in Finnish education policy discourse beginning in the 1990s (Rinne, Kallo, & Hokka, 2004).

Although, through tax revenue equalization additional grants to municipalities, the state continues to provide up to over half of total municipal revenues, changes in the legal framework further removed power from the state. The Act on Central Government Transfers to Local Government (Law 688/1992) and the Local Government Act (Law 365/1995) eliminated the ear-marking of state funding, and gave municipalities greater independence in choosing how to allocate the funding. While the National Board of Education used to develop the curriculum that was to be used in schools across the country, their control over the curriculum turned into a hands-off steering of the curriculum by setting objectives for learning - namely the minimum number of curriculum hours in each subject - in the National Curriculum Framework, but allowing schools and municipalities

the autonomy to decide how best to go about achieving these objectives (Simola et al., 2009, pg. 6). As a mark of local autonomy in education, the OECD finds that greater than 75% of decisions are made locally (OECD, 2013, pg. 45).

6.2. Decentralisation: The municipality and schools

The same logic of decentralisation that lead to states relinquish power to municipalities in the 1980s took hold at the municipal level the following decade (Simola et al., 2002; Simola et al., 2009). Prior to the 1990s, Kosunen and Seppänen explain that public education at the municipal level promoted a "one school for all" ideology:

> *"The tradition in Finland until the 1990s was to allocate whole-age cohorts to local publicly funded schools on the basis of residence, following the Nordic 'one school for all' ideology: all children, regardless of their gender and social and ethnic background, are to be educated together. This was the principle on which the Nordic welfare state was built, the explicit goal being equality among citizens and long, tuition-free and uniform education as a civil right" (Kosunen & Seppänen, 2015, pg. 2).*

Together with the reforms that came in the late 1990s came the first mentions of parental choice (Kosunen & Seppänen, 2015, pg. 2; Seppänen, 2006; Law 628/1998). Although independent schools had played a peripheral role in Finnish cities for much of the century, education reforms at the municipal level in the 1990s further promoted the decentralisation and differentiation of public schools. The intention of introducing increased choice, explain Kosunen and Seppänen (2015, pg. 2) was to allow students to pursue specialized programs in accordance with their interests and abilities. With large variation between municipalities, however, reforms took shape in different ways from one to another.

In contrast to earlier forms of autonomy within the municipal level, and following the dominant discourse of what Pierson (2007) describes as central to New Public Management, the reforms coming in the 1990s tended to be based on market-oriented principles encouraging school choice (Simola et al., 2002). Yet, these purportedly market-oriented principles have played out differently in the Finnish context than might be expected given experiences with performance-based education in other parts of the world.

Underlying these differences, West and Ylönen (2010, pg. 5) suggest that the focus of market-based reforms in Finland were increased local power and cost-cutting, rather than the drive to increase standards-based educational performance as in the United States and England. Seppänen reaffirms this view, writing that "school choice ... has not been connected to school improvement in Finland" (Seppänen, 2003b, pg. 514).

While municipalities are free from regulation in how they decide to distribute funding, the Basic Education Act of 1998 (Law 628/1998) enforces the position that parental choice is only taken into consideration if local pupils do not choose to attend the particular school. In this sense, West and Ylönen (2010, pg. 9) explain that school finance at the municipal level is unregulated, whereas school access is curbed by legislation. As such, whereas in other countries increased school choice tends to coincide with increased public-private partnership, in Finland "school choice has not been a matter of increased private involvement, but rather choice within the public system" (Seppänen, 2003a, pg. 176).

Nonetheless, research suggests that schools in urban areas in Finland are growing unequal (see for example: Bernelius, 2013; Kosunen, 2016; Kosunen & Seppänen, 2015; Seppänen, 2003b). The growing inequality might be explained by various factors, including growing demographic and socioeconomic differences between neighborhoods (Bernelius, 2013), as well as an enhanced ability for better educated parents to choose selective schools for their children (Kosunen & Seppänen, 2015). As Kosunen explains, although the allocation of pupils to schools is based primarily on location, schools compete for pupils (Kosunen, 2016, pg. 26). Additionally, these inequalities may be driven further by other municipal policies. Despite laws encouraging the prioritization of local schools, larger cities can get around school access regulation by demarcating small catchment areas for schools in the center of the city so that these schools have more space for students coming from outside the catchment area (Seppänen, 2003b, pg. 523).

In light of the increasing prevalence of competition in school choice in Finland, an important question is: "what are families competing over when they fight for study places in certain schools?" (Kosunen, 2016, pg. 84). Although Kosunen (2016) finds that parents

with more social capital are at an advantage in competing for spots for their children in city schools, compared to other national contexts, she argues that it is not obvious what they are competing for: Finnish schools are reputed to offer high quality education across the board. Nonetheless, even though the quality of education may not differ dramatically from school to school, and although there is no clear relationship between particular schools and later educational or labor market outcomes parents seem drawn to compete: "despite the fact that institutional stigmas attached to school choice should not follow pupils to the following stages of education, for some reason many urban families in Finland find it relevant to play the game of school choice" (Kosunen, 2016, pg. 84).

Perhaps more interesting, since no school rankings exist, is what knowledge-base parents use to inform their decisions. Instead of competing for academic reputation, Kosunen (2016, pg. 85) suggests that parents may choose schools for their children on the basis of a "nice social mix", "good enough teaching", and "to avoid the most competitive classes". This finding is echoed by Bernelius (2013), who suggests that ethnic composition of schools is one of the factors driving school choice. More critically, without firm epistemic foundation backing for the notion that inequalities between schools based on *academic* performance exist, Hyötyläinen (2015) cautions against reinforcing the stigmatizing assumptions that low-income or ethnically diverse neighborhoods or schools have a negative impact on the academic performance of their students. As he writes, such research, and the policies they inform, "rests on the seemingly self-evident, but unwarranted assumption that a socio-economically segregated low income neighborhood has explanatory powers for its deepening social deprivation and the decreasing life chances of its inhabitants" (Hyötyläinen, 2015, pg. 16). In order to better understand this problematic, we will now turn to evaluation and data collection in Finnish education governance.

6.3. Evaluating Performance

Along with the autonomy that schools and municipalities received in the 1980s and 1990s to develop their own curriculum and allocate their finances without as many earmarks, a new layer of evaluation was set in place to ensure that schools and municipalities are on their way to meeting the nationally set goals. That said, national monitoring of education in

Finland does not take place as one might assume: since 1991 there has been no national inspectorate for education (Kumpulainen & Lankinen, 2012). Two national level groups in charge of the evaluation of education, one spearheaded by the National Board of Education (NBE) and the other by the Association of Finnish Local and Regional Authorities (AFLRA, in Finnish *Kuntaliitto*) and Ministry of Finance. Yet, "neither of them have real normative power over the municipalities and schools" (Simola et al., 2009, pg. 7). The roles of the two groups are differentiated from one another in that the NBE works with schools and teachers whereas AFLRA works with municipalities and principals. Moreover, despite its national reach, given the constituency of AFLRA, its system of evaluation is founded on the principle of municipal autonomy. A recent report by the European Commision reaffirms this position, stating that in Finland "there are no central regulations on external school evaluation" (European Commission/EACEA/Eurydice, 2015, pg. 18).

Although there is no national *evaluation* of schools, data is collected on the level and direction of national education. Mother tongue (Swedish or Finnish) along with mathematics are assessed systematically using a sample (from 5-10%) of national age cohorts; other subjects are assessed as well, but not in a systematic manner. The aim of these sample-based assessments is to provide actors at various levels with information without creating a culture of rankings. And, while information is not used for strict accountability purposes, schools do receive disaggregated data on their own performance along with some reference data. Kumpulainen and Lankinen explain that a primary purpose of the data is to monitor "equity by ensuring that students achieve roughly the same competencies regardless of characteristics such as residence, gender, and home background" (Kumpulainen & Lankinen, 2012, pg. 76). What the schools do with this data is, however, left entirely open for municipalities to decide.

While Kumpulainen and Lankinen (2012) argue that evaluation in Finland is used for accountability, research and data production, the data is not used for these purposes in the same way as in other countries. A report suggests that compared to other OECD countries, in Finland data from evaluation is used for accountability purposes to a low degree, and used for developing education to a moderate degree (OECD, 2013, pg. 64). This comes in

large part from the incompatibility between Finnish welfare state principles and performance based rankings and accountability; the law protects education providers from the use of evaluations for strict accountability purposes and aims to promote their use to improve learning (Law 628/1998).

With this in mind, evaluation takes place internally. By law, education providers must evaluate the education they provide; however, the specific procedures by which education is evaluated are left open to be decided at the local level (Kumpulainen & Lankinen, 2012; Simola et al., 2009; European Commission/EACEA/Eurydice, 2015). The principal, considered the pedagogical leader of the school, and teachers are trained in the evaluation of education, and along with students themselves, all play an integral role in the process of internal evaluation (Kumpulainen & Lankinen, 2012, pgs. 74-75). This is in line with views on "best-practices" held by many voices in the international community: teacher and principal professionalism allow for a shift to professional accountability (see for example: Köster, 2015; Hooge, Burns, & Wilkoszewski, 2012; Møller, 2009; Fuhrman & Elmore, 2004; Elmore; 2005; O'Day, 2002), and more broad-based improvement than that allowed by accountability based on outputs and grades. Therein, in Finland the professional accountability system is able to encompass areas outside the narrow scope of test-based assessment measures and include areas such as "experiences of success and finding joy" in learning (Kumpulainen & Lankinen, 2012).

6.4. Helsinki

With the above sketch of the organisation and evaluation of education at the national level in Finland, we will shift our focus to the particular case of this study, Helsinki. To situate the discussion, in a country of 5.5 million people (SVT, 2016b), one in nine lives in Helsinki (Sotkanet, 2016). In Helsinki there are 97 primary and comprehensive schools and 30 exclusively lower secondary schools (ages 12-16). While a small portion of these are independent schools (11) (also receiving state funding) and special needs schools (8), the majority are state-run public schools (City of Helsinki, 2016). These schools operate primarily in Finnish and Swedish, the two official languages of Finland, but also (particularly amongst the independent schools) offer education in other languages including

English, French, German, and Russian. Vocational education is also common. In 2015, 64% of students from state-run public schools entered general high school whereas 27% attended vocational high school; in 2000, the comparable numbers were 63% and 20% respectively (SVT, 2016a).

The funding for Helsinki schools comes from national taxes, but is also supplemented by municipal taxes. Since earmarks on government spending were removed in 1992 and 1995, municipalities have been free to decide how to allocate funding - as long as they meet the minimum number of course hours for each subject as set in the National Curriculum Framework (*opetussuunnitelma*). The overall level of funding for education in Helsinki is determined by the City Council (*kaupunginvaltuusto*). The School Board (*opetuslautakunta*), made up of eleven members of the City Council, then determines how the funding is distributed between schools in the city. While a relatively complex model is used to allocate funding to the schools, apart from "positive discrimination" funding, at its core, funding is proportional to the number of students enrolled at a school[4]. Within schools, principals are in charge of deciding how the budget is spent. In most schools in Helsinki, the decisions of the principal are then ratified by the governing board of each school, generally composed of the principal, teachers and other staff, parents, and often a student.

Apart from merely allocating the funding, the School Board also makes other municipal level decisions that impact education in the city. Ideas and propositions for new policies come forth through presentations to the School Board, generally by members of the Helsinki Department of Education, but also occasionally by the School Board members themselves or other experts. A third component of the administration of municipal education governance in Helsinki, is the Helsinki Department of Education. While the City Council and School Board are made up of elected representatives, the Department of Education is made up professionals. The role of the Department of Education in the

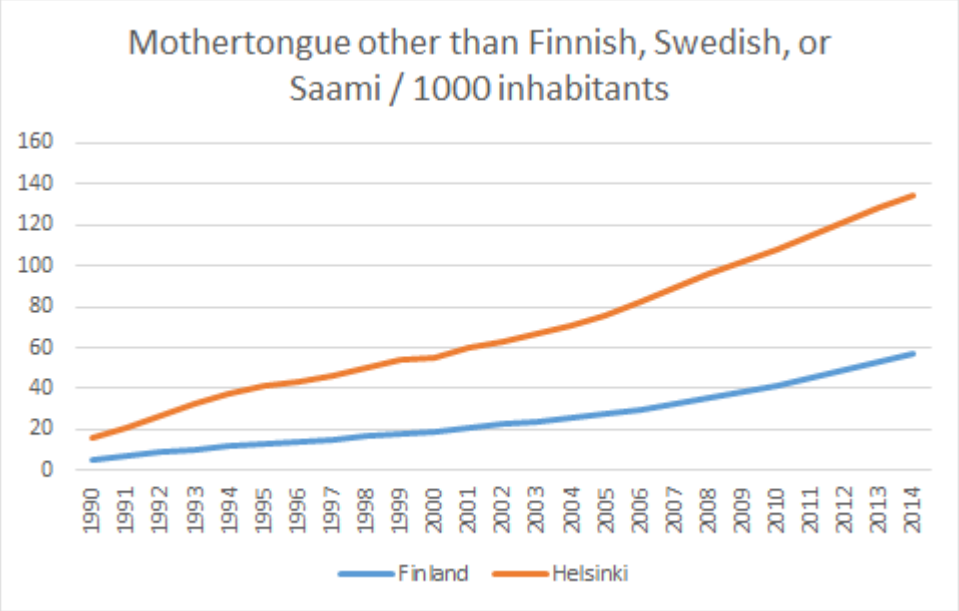
[4] All members of the School Board who were interviewed for this thesis noted that although the model was unnecessarily complex, apart from PD funding, funding is basically allocated on a per pupil basis. The funding is made complicated by the earmarking of funding for specific purposes, such as the rent of premises, etc...

governance process is to provide stakeholders with information and resources regarding education in the city.

As part of the process of decentralisation of school governance of Finland in the 1990's, the logic of choice advocated by proponents of new public management took hold, and students and parents were granted greater school choice within the city of Helsinki. By the end of the decade, however, city officials began to fear that greater inequalities might develop as a result of the direction the policies had defined. By the turn of the century, studies suggested that both the best and the worst performing schools, as measured by test scores, could be found in the city (Kuusela, 2006; 2010). In particular, the growing inequalities between different geographic areas of the city had risen to importance among city officials and they began to search for policy measures with which to combat the recent developments (Kuusela, 2004, pg. 5).

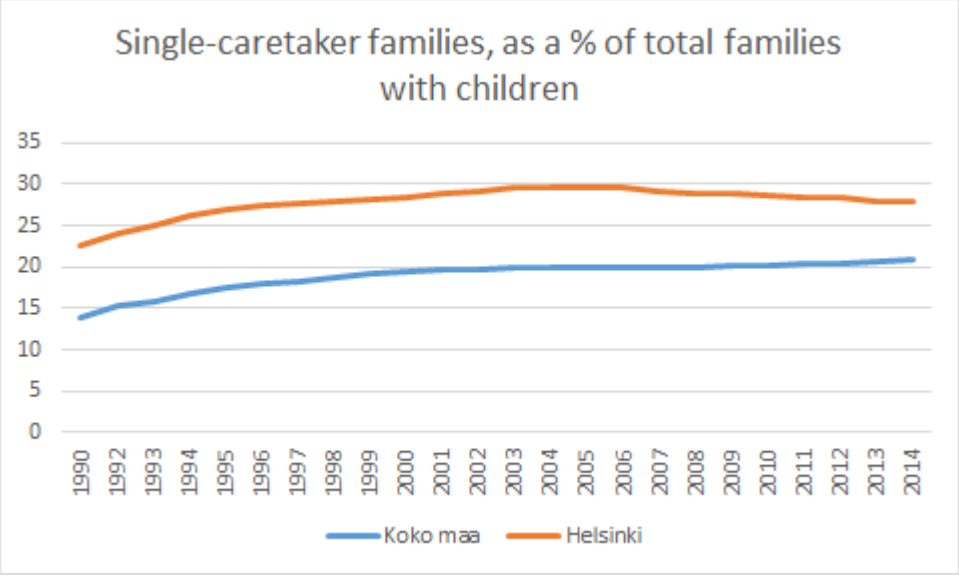
This fear of changes taking place within the city comes at the same time as Helsinki, as compared to Finland at large, experienced increases in the prevalence of "new social risk groups" - particularly immigrants and single-parent households. This can be seen in Figure 1 and Figure 2, below. As Figure 1 shows, while the the number of non-native Finnish, Swedish, or Saami, speakers has grown both nationally and within Helsinki, the portion of non-native speakers nationally resembles that of Finland fifteen years ago. Perhaps more drastically, as shown in Figure 2, the portion of single-caretaker households nationally lags Helsinki by about 25 years. Given Helsinki's position in Finland as the municipality experiencing many of the new social risks ahead of the rest of the country, Helsinki is sometimes seen as a laboratory for developing new means with which to confront some of the challenges associated with the changing socioeconomic context in Finland.

Figure 1.



Source: Graph made using data from Sotkanet.fi (2015): data for Figure 1 comes from indicator 187 titled 'Native language other than Finnish, Swedish, or Lappish per 1000 inhabitants'.

Figure 2.



Source: Graph made using data from Sotkanet.fi (2015): indicator 74 titled 'Single parent families, as % of all families with children''.

6.5. "Positive discrimination" in Helsinki school funding

While the concept of 'positive discrimination' (PD) had been little explored in the Finnish context prior to the late 1990s, the concept had been widely explored in other countries - notably the United States - as a response to inequalities in urban areas and sparked interest within the municipal government. In the first publication on the concept by the City of Helsinki, positive discrimination is defined as "the allocation of greater support to those in greater need" (Lankinen, 2001, pg. 5). Applied on the spatial dimension, positive discrimination was understood as the allocation of greater support to those areas in greater need. Such thinking had the potential to mark a major shift in the prevailing universalist logic, upon which a flat rate of per pupil funding (although with additional funding for students with special needs) had been in place across the board.

In 1998, under the umbrella of the City of Helsinki's strategy to prevent social exclusion, a working group was formed to investigate what a school funding model based on 'positive discrimination' might look like (Lankinen, 2001, pg. 8). The same year, the Education Department became the first part of the municipal government to develop a model for positive discrimination. In practice, what was developed was a model that awarded financial support to a portion of Helsinki schools based on the socioeconomic characteristics of the inhabitants within the catchment area of the school. This was voted on in the School Board and the preliminary model was implemented in 1999.

In the preliminary model, the eight neighborhood characteristics identified as a basis for positive discrimination funding in Helsinki were: the share of single-caregiver households, the share of rental apartments compared to total housing stock, the share of the 15+ year old population with low levels of education, the share of the population living in public rental housing, the unemployment rate within the area, the share of population receiving welfare support, the number of new children in child protection, the earnings of families with children (Lankinen, 2001, pg. 9). This preliminary model was in use through 2007, after which a newly updated model, designed by Venla Bernelius (see Bernelius, 2013), then a doctoral student in Geography at the University of Helsinki, was implemented.

The newer model, like its predecessor, aims to support learning in schools without tying school performance as measured by test scores to financial support. Instead, the model creates a PD index for schools based on characteristics that have been shown to correlate with school performance in Helsinki for several years (Bernelius, 2013, pg. 175). The idea behind choosing to focus on school characteristics that correlate with academic performance over a several year period is to bring stability to the results. This strategy also promises to have the benefit of dodging some some of the problems with misaligned-incentives shown to stem from tying academic performance to school funding, as we saw in the case of the Dever school in Boston, and as noted by countless other studies (see, for example: Lingard & Sellars, 2013; Gorard, 2010; Biesta, 2009; Mintrop & Sunderman, 2009; Jennings & Rentner, 2006; Koretz, 2008; Gillborn & Youdell).

Bernelius chisels away the area-based characteristics employed by Lankinen (2001) to just three: the level of education amongst parents, average family income, and the share of non-native Finnish or Swedish speakers. These characteristics are measured by the percentage of adults without education past basic schooling in the catchment area, the average income per resident in the catchment area, and the percentage of non-native speakers at the school. An additional school-based measure complements the three characteristics above: the number of students from outside the catchment area who attend a school compared to the number of students who leave the catchment area to attend school elsewhere (Bernelius, 2013, pg. 175).

In addition to changes in the structure of the model, the funding for the policy was increased significantly between the years 2008 and 2012. Still, however, the budget allotted to PD funding remains relatively meager, at a total of 3.7 million euros (0.6% of the total annual budget of Helsinki schools) (City of Helsinki, 2014, pg. 81), with the amount schools receive ranging from approximately 3,000 euros to 120,000 euros per year (School Board member B, 25.2.2916). Including both elementary schools and lower secondary schools, the number of students in schools receiving PD funding was 15,786 in 2014, with the average annual per student support level in Finnish speaking schools at 113 euros and 150 euros in Swedish speaking schools (City of Helsinki, 2014, pg. 81).

Given the notions of equality and universality deeply ingrained in the social-democratic values of the Finnish welfare state, the measurement and ranking of school quality is viewed with distrust and antipathy. As such, there is an intentionally marked absence of comparable test scores from school to school within the city (Simola et al., 2009; Kosunen, 2016), making the measurement of the effectiveness of PD funding difficult. While other indicators, such as the percent of students from each lower secondary school who attend academic high school rather than vocational high school are collected, all such indicators are heavily guarded by the municipal Department of Education.

Perhaps not surprisingly, while the new system of PD funding has already been in place for nearly eight years, its effectiveness is yet to be quantitatively assessed. That said, the City of Helsinki organized a questionnaire by which principals were able to self-report the use of PD funding. The City received responses from 44 principals, who by and large reported that they had goals for how to use the PD funding and that the funding was helping them reach the stated goals. Based on this study, the City of Helsinki is satisfied with the system of PD funding. The PD index values will be recalculated for 2017 (City of Helsinki, 2014).

7. Research Methodology and Data

This chapter outlines the sources of data and methodology used for the research in this thesis. It begins by sketching out the approach used, combining qualitative and quantitative data, to respond to the overarching research question. Then, it goes into detail on how the qualitative data was collected. After describing the data-collection process, the methods by which the data will be analysed, as well as questions of research ethics, are addressed. Next, this chapter turns to the quantitative data and methods. It describes the data and the process by which it was acquired, as well as discusses the framework by which it is analysed.

7.1. The research task

As discussed in the introduction, the primary questions this thesis attempts to respond to are: How do institutional factors shape the PD funding policy in Helsinki? And, what are the results of the policy? To approach these broader questions, these overarching questions are broken down into sub-questions:

1. How do stakeholders interpret the aims of the PD funding policy?
2. What knowledge-base supports the governance of the policy?
3. How are the various stakeholders involved with PD funding held accountable?
4. How do schools use the increased funding to achieve the aims of the policy?
5. What sorts of measurable results are achieved by the policy? And other results?

A combination of qualitative and quantitative research methods are employed to respond to these questions. The data on which the responses are built comes from interviews held with city officials, school principals, and classroom teachers as well as quantitative data, coming from Statistics Finland (SVT, 2016a).

7.2. Qualitative data

7.2.1. The interviews

The interviews took place between 17.2.2016 and 11.4.2016, and typically lasted between half and hour and an hour. The interviews were held in Finnish, being transcribed, and then translated (by me) into English afterwards. The interviews were semi-structured; while the interviews followed a predefined set of interview questions, as the interviewer, I occasionally used reflexive interviewing techniques to respond to the statements of the interviewee. The interview questions can be found in both Finnish and English in Appendix I. The results from the interviews are analysed in the following section using content

analysis, pulling together the responses from the voices of the different stakeholders involved.

7.2.2. City officials: School Board

The interviewees amongst city officials are all members of the School Board. The School Board consists of 11 members, representing the major political parties in Finland. Initially, the goal was to interview a representative from each of the major parties present in the school board. After 9 members were contacted, 3 agreed to be interviewed (the remaining two members belonged to parties already represented). School Board member A is a member of the National Coalition party (*kokoomus*), and has served on the School Board for three years. School Board member B has been involved in the City Council for decades, but joined the School Board two years ago, and is a member of the Green party (*vihreät*). School Board member C belongs to the Left party (*vasemmisto*) and has been a member of the board for six years. While it was not possible to interview a representative of each major party, the sample includes parties to the left and to the right of the political spectrum.

7.2.3. Schools: principals and teachers

Of the 46 state-run public schools with upper-secondary teaching in Helsinki, 22 receive positive discrimination funding. From the 22 schools receiving PD funding, 4 principals were interviewed for this study. Two of these principals came from schools near the top of the list in terms of per pupil PD funding, the other two schools received more modest levels of PD funding. The schools, principals, and teachers interviewed for this thesis remain anonymous.

Schools to be used in the study were chosen on the basis of recommendations from the School Board members interviewed. Six principals were contacted, of whom five agreed to participate in the research; the sixth was unsure that interviewing them would be helpful, and therefore declined to participate, but suggested another principal, who then agreed to participate in the study. The school from which the principal did not think it would be beneficial to be interviewed received one of the lowest levels of PD funding of all Helsinki schools. One of the five principals who was willing to participate asked to respond to the

interview questions via email, but then never returned the questionnaire. The rest were interviewed in person.

When I contacted the principals, I asked them if they could identify teachers from each of their schools whom I could contact for the research. Since the interviews took place in the middle of the school day, it was often difficult to find time to meet with teachers. Three teachers were interviewed in person, while six were asked to respond to the questions by email. Responses from teachers asked to respond via email never found their way to my inbox. While the teachers were able to provide important insights into the context in which PD funding operates, inasmuch as they knew little about the policy itself, their voices are notably absent in the discussion of the policy in the following chapter.

7.3. Quantitative data

7.3.1. Thinking about measurement

Measuring the impact of positive discrimination funding requires some kind of an outcome indicator for the impact of the additional funding. Typically, in countries such as the United States, the United Kingdom, and other OECD countries, evaluation centers on performance indicators - namely test scores from standardized tests. Other times, particularly in more recent studies, a broader range of outcome indicators are used - including health indicators, dropout/completion rates, criminality rates, later-life income, and measures of happiness (see for example: Dobbie & Fryer, 2013).

That said, the use of any quantitative performance indicators in research and policy comes at a cost. Already many years ago, Campbell (1979) warned that "the more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor" (pg. 85). Not surprisingly, Jennings (2012) finds that accountability systems shape the patterns of data use in education systems. Economists such as Baker et al. (2002), explain that accountability regimes based on incomplete measures of performance provide frameworks of incentives that can distort behaviour. In addition to what might under some

circumstances be deemed innocent changes of behaviour, at other times policy recipients may cheat or explicitly exploit loopholes that exist in policies (Mintrop & Sunderman, 2009).

When these challenges are paired with the incompatibility between the Finnish welfare state principles of universalism and equality and performance-based rankings, it may not be surprising that actors in the Finnish education system are reluctant to gather comparable quantitative data for use in their decision making processes. While schools in Finland do participate in national standardized test-based assessments, these are administered through small samples with academic subjects varying from year to year, and do not allow for comparison of schools within municipalities or over time (see: Kumpulainen & Lankinen, 2012).

One source of data used in research on the education system in Finland are exams taken by males as part of the compulsory military service (see: Pekkarinen, Uusitalo, & Kerr, 2009). Since the tests have remained more or less unchanged for decades, paired with data from the national registry, they provide a powerful source for research. For the purposes of this paper, however, not enough time has elapsed between the implementation of PD funding for military exam performance to be a relevant indicator.

Within Helsinki, evaluation takes place internal to schools, and is documented through qualitative reports available to the Department of Education and School Board. Quantitative data is collected at the school level, for example through year-end grades in courses. Since grading practices differ from school to school, these are not, however, comparable between schools.

Although incredibly crude, one of the few indicators that allows for comparison of lower secondary school (*yläaste*) performance at the municipal level is the percentage of students from each school who enroll in general high school and vocational school from each lower secondary school. University researchers experienced with the Helsinki school system, confirmed the appropriateness of this measure, and that it was one of the few comparable

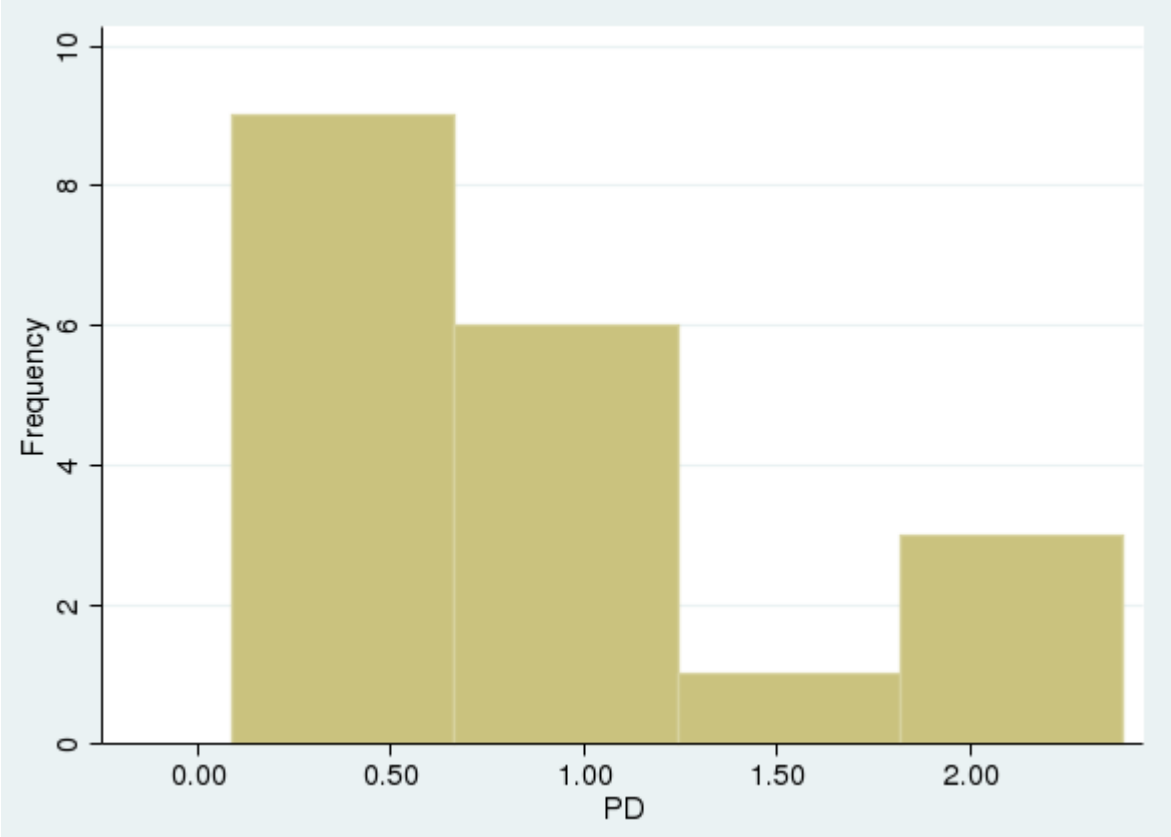
quantitative measures available. Together with values from the "positive discrimination index" used in the model of school funding as re-calculated by Venla Bernelius (2013), a plausible outcome measure - such as the percentage of students enrolled in further study - allows for some, albeit rough, estimation of the impact of PD funding.

7.3.2. The data

The Helsinki Department of Education granted access to the data used in this research. The PD-index values for both elementary and lower-secondary schools come from them (Helsinki Department of Education, 2016). Since the quantitative portion of this research focuses on outcomes of the transition between lower secondary school and further education, only the data on lower-secondary schools is used in this research.

The Department of Education calculates PD-index values for 46 of the lower-secondary schools in Helsinki. The PD-index values for the schools included in the data set range between -2.40 and 2.14. Schools with positive PD-index values receive no PD funding; as such, 19 of the 39 schools receive PD funding. The PD-index values for these schools range between -0.09 and -2.40. Accordingly, some schools receive more than 20 times as much PD funding per pupil than other schools. Converted to positive values, the distribution of PD-index values for schools that receive the funding is shown in the histogram below.

Figure 3. Frequency distribution of PD-index values for schools receiving PD funding



Data source: Helsinki Department of Education (2016).

The outcome measures, the percentage of students from each school continuing to either general high school (*lukio*) or vocational high school (*ammattikoulu*) the next year, after graduating from lower secondary school (*yläaste*) were compiled for this research for the years 2000-2013 by Statistics Finland (SVT, 2016a). Additionally, 2015 data from the Department of Education is used to supplement the data from 2000-2013. Once schools that did not have sufficient observations before and after the 2008 PD funding was implemented were dropped, there remains data on 39 schools over the 2000-2013 year period.

While the data will be analysed more carefully in the following section, in order to get a sense of the variation in the data set, the data is briefly described here[5]. The average enrollment in further education directly after lower secondary school has increased by 6%

[5] Data comes from SVT (2016a). For more detail, see tables 6-8 in Appendix II.

between 2000 and 2013 in the schools included in this study. That said, the increase has not been constant over time: half of this increase took place before 2002. Much of this increase in total enrollment in further education comes from increased enrollment in vocational education; the average school level enrollment in general high school has remained quite constant.

Additionally, differences in these outcome measures between schools were large in 2000 and continue to be large in 2013[6]. In 2000, as many as 48% of students in one school did not continue to either high school or vocational school in the year following their graduation from lower secondary school. At the same time, this number was as low as 4% in other schools. By 2013, the situation had improved significantly: no more than 23% of students from any one lower secondary school did not enroll in either vocational or general high school directly upon graduation from lower secondary school.

7.3.3. The differences-in-differences setup

A differences-in-differences model is commonly used in the estimation of impacts of changes in educational practice (for example, the paper by Pekkarinen, Uusitalo, & Kerr (2009) uses such an approach). The application of the models employed to examine PD funding in Helsinki in this paper are discussed together with the results in the following chapter. At its core, the difference-in-differences approach examines differences in the outcomes of, in this case, schools that are impacted by a change to those that are not. Since about half of the schools in Helsinki do not receive PD funding, the set of schools not receiving PD funding can be used as a control group. Assuming that apart from the implementation of PD funding, both sets of schools (those that receive PD funding and those that do not) exhibit parallel trends in other regards, changes in the control group can be understood to provide a counterfactual for the schools that do receive PD funding. As such, the basic model can be formalized as follows:

[6] Data comes from SVT (2016a). See descriptive statistics in Appendix II, Tables 6-8.

Equation 1.

$$O_{ist} = a + vX_s + wY_t + bZ_{st} + e$$

In the above model the left-hand variable, O, measures the outcome in question. The three outcome variables used in this thesis are: the percentage of students from each school who enroll in either general or vocational high school the year following their graduation from lower secondary school, the percentage who enroll in general high school, and the percentage who enroll in vocational high school. The variable X takes the value 0 if a school does not receive PD funding, and the value of the school's PD index if a school does receive PD funding. Y is a dummy variable with the value 0 or 1 depending on whether or not the school receives PD funding that year; years before 2009 are given the value 0, years are given the value 1 starting from 2009. The variable Z is created by interacting the two previous variables. The most important coefficient in this model is coefficient "b", which measures the change in post lower secondary school enrollment by PD index level. If the model is interpreted so that there is a causal relation between PD funding and school performance, the bigger "b" is, the more effective PD funding is.

While Equation 1 provides the basic structure of the differences-in-differences setup used in this paper, the model can be modified slightly based on further assumptions. The model in Equation 1 assumes that the impact of the funding is constant across all years that schools receive PD funding. We might, however, believe that the impact of the funding increases from year to year up to a certain point. Let me explain: the first cohort that graduates lower secondary school is only impacted by PD funding for one year, whereas the second cohort is impacted by the increased funding for two years, the third cohort for three, and so on. This logic has been seen to apply in the context of other reforms (Borman, et al., 2003). Moreover, while the new funding model was implemented in 2008, the level of funding was increased between the years 2008 and 2012 (City of Helsinki, 2014, pg. 81). As such, there is still stronger reason to assume that the impact of the funding should not be constant across years.

Accordingly, if we assume an increasing impact of PD funding from year to year, we could interact the number of years a school receives increased funding with the variable of interest in the model. The only change between Equation 1 and Equation 2 (below) is that an additional variable, the number of years that PD funding has been in place, is interacted to form the third variable in the equation, variable A.

Equation 2.

$$O_{ist} = a + vX_s + wY_t + bA_{st} + e$$

If we let go of the assumption that the error term of the outcome variable in question is constant over time, we can use a model with year fixed-effects. These allow the error term to vary from year to year. Similarly, school fixed effects allow the error term to vary at the school level. These can be added to the model through dummy variables for each year and school, as shown in Equation 3 below. Maintaining the increasing impact of PD funding from Equation 2, this can be seen in Equation 3.

Equation 3.

$$O_{ist} = a + bA_{st} + \textit{ year fixed effects } + \textit{school fixed effects} + e$$

Lastly, by interacting the variable for accumulated PD with the fixed effects for year, the equation allows the year fixed effects to vary between schools receiving and not receiving PD funding. This equation is seen below in Equation 4.

Equation 4.

$$O_{ist} = a + bA_{st} * \textit{ year fixed effects } + \textit{school fixed effects} + e$$

The results obtained from running these three regression equations will be presented and discussed in the following chapter.

8. Results

8.1 How do stakeholders understand the PD funding policy?

8.1.1 The context of the funding

The construction of the PD index itself defines the areas in which PD funding operates. As described earlier, the index is composed of the average level of parent education, average total family income, and the share of non-native Finnish or Swedish speakers in the catchment area as a measure of students who come to the catchment area for schooling versus those who leave the area. That said, understanding the context as seen through the perspectives of the different stakeholders involved further illuminates the policy.

At the municipal level, authorities fear the trend towards higher degrees of segregation. It is in part this fear behind the politics of PD funding. When asked to explain what they mean by the term segregation, one school board member explains that "*it's related to the different levels of socioeconomic situations from area to area",* but adds that these differences are in large part a result of decisions made by the City of Helsinki: *"these result in large part from the decisions the city has itself made - decisions on what type of housing developments are built on city land"* (School Board member A, 17.2.2016). This statement is telling. The areas in which PD funding operates tend to have more public housing and higher levels of socioeconomically worse off inhabitants. More interestingly, however, the School Board members do not mention or even suggest that the schools in these areas might be worse than other parts of town.

The principals who were interviewed reiterate these points. When asked to describe their schools, all four principals explained that their schools are pretty normal, with the one major difference being the greater number of special resource classes in the school - as many as one in four classes (Principal B, 30.3.2016). In part, the challenges these schools face have to do with language; in one school, for example, 40% of students came from immigrant backgrounds (Principal A, 29.3.2016). But, as principals explain, the types of support students in special resource classes vary: while some students need help

strengthening their Finnish language skills and becoming accustomed to the culture, other students come from families in which education is not valued, with a lack of trust towards the school administration, and without support for education in their homes (Principal B, 30.3.2016).

Like the School Board members, the principals also suggest that the root of the socioeconomic differences between schools results "*in larger part, from decisions the city makes about urban planning - where and how much social and rental housing is built compared to owner-occupied housing"* (Principal B, 30.3.2016). Tied to this point, all the principals note that the students from their schools come from the catchment area. While families have some degree of choice regarding which school to send their children to, almost no students from outside the allotted catchment area come to these schools at which interviews were conducted. These schools are neighborhood schools.

While the challenges the schools face stem from the diversity of their students' needs, teachers and principals explain that, because their schools have dealt with a diversity of student needs for far longer than other schools, they have developed ways to confront these challenges. One teacher, for example, explains that "*Since we've had students with immigrant backgrounds for so long, we've managed to develop our teaching to cater to these demographics"* (Teacher C1, 11.4.2016). A principal reiterates this point, explaining that instead of organizing more traditional parent's evenings, the school has had to be creative: "*In order to address these challenges, we've arranged Somali food for the parent's night, and we might organize a father-son soccer game"* (Principal A, 29.3.2016). As we move to the further sections, then, a takeaway is that in the eyes of the stakeholders interviewed, schools receiving PD funding are not seen as the point of blame. These schools have not, as many schools in the United States have, acquired the label "failing school".

8.1.2. The aims of the funding

For both the school board members and principals, at its core, the purpose of PD funding is to provide schools with extra support with which to tackle some of the additional

challenges they face. Despite the general agreement, however, there is some disagreement over its details.

Interestingly, especially when compared to the United States, none of the School Board members suggested that the policy is explicitly intended to further the *academic* performance of students. Instead, the stakeholders interviewed understood the aims of the funding to be more holistic. One School Board member explains that the goal of the funding is to ensure that "*everyone remains part of society*" (School Board member A, 17.2.2016); another School Board member explains that the goal of the funding is to make sure that every child's "*journey sets off on the right footing*" (School Board member C, 29.2.2916). But even here there is notable variation; the first statement emphasises the outcome - that everyone remains part of society, whereas the second emphases the starting point. The slight differences of emphasis in these two statements highlight some of theoretical disagreement in Finnish education discourse (see, for example, section 6.1 of this thesis or Simola et al., 2009, pg. 166). Of course, outcomes are closely linked to starting points, and as one of the School Board members explains, "*we fund those with a weaker background as their starting points - so that they have the opportunity to more equal endpoints/outcomes"* (School Board member C, 29.2.2916). How to understand PD funding in the historical context of Finnish education policy will be returned to in the discussion of the paper.

While the School Board members' understandings of the aims of PD funding remained relatively vague, the principals understood the aims of the funding in more concrete terms, though also with considerable variation. Depending on the principal, the intended emphasis of the aims of the policy ranged from improved learning outcomes, as measured by tests, to improved welfare. One principal explains that he understood the aim of PD funding to be "*To improve learning outcomes. On nation-wide tests, such as PISA for example, our school scores below average. We'd like to improve our scores. ...Also, to improve the well-being and motivation of our students - and to prevent harassment amongst the students"* (Principal C, 11.4.2016). On the other end of the spectrum, another principal understood the aims with a different point of emphasis:

> *"welfare, in the context of this school, refers primarily to three areas - health, social well-being, and academic progress - we want to ensure that our students have access to health related resources, aren't using drugs, etc..., to make sure they have friends, aren't missing from school, and that they are prepared for the next step of education"* (Principal A, 29.3.2016).

Moving forward with the quantitative section of this paper, it is vital to keep in mind the variation in understandings regarding the aims of the funding. Interpreting one outcome indicator as representative of the impact of the policy would be misguided.

Despite some previous attempts to provide schools facing challenges with more resources, PD funding is new in the Finnish context in its longer-term approach. As School Board member B explains, *"attempts to tackle inequality came in the form of projects, but you know, they start and stop all the time - PD funding would become the norm, and provide a long term way to meet the needs of these areas"* (School Board member B, 25.2.2016). An important aim of the funding is to provide this longer term approach to tackling these issues. As such, any evaluation of PD funding must make note of the long-term approach underlying the funding model.

8.1.3. The roots of the challenges

Digging deeper, the stakeholders attribute the challenges motivating PD funding to be rooted at different levels. For example, the level of the challenge can be attributed to student level differences, family level differences, school level differences, neighborhood level differences, or decisions the city has made. While these cannot be completely separated from one another, it is important to understand where different actors perceive the challenges to be rooted since depending on which of these is seen as the focus, they might approach the issues differently.

The perceptions of the roots of the challenges vary in emphasis between different School Board members. One School Board member explains:

> "*the intention was to account for the child's environment - in the US this has to do much more with the neighborhood - in Finland a child's environment is much more centered around the family, of*

course the neighborhood can play a role - for example if a child grows up in an apartment block where nobody has a job, they begin to see this as the norm" (School Board member B, 25.2.2016).

Here, we see that while both the home environment, and the neighborhood context, are seen to impact the students learning, as this School Board member understands, the extent of the impact of the neighborhood is downplayed. On the other hand, another School Board member seems to understand the roots of the challenges to operate more at the neighborhood level. School Board member A explains that "*The PD funding model aims to prevent segregation - it's related to the different levels of socioeconomic situations from area to area"* (School Board member A, 17.2.2016). In this description, the roots of the challenge seem to be found less in the family background of the students, but in the characteristics of the area.

Similar tensions can be seen between different principals. Different principals see the challenges PD funding seeks to confront as rooted in at least three different locations: the student level, family background, and the school and area. For example, with an emphasis on the student level, one principal explains that the welfare and language are of primary importance (Principal A, 29.3.2016); another focuses on the family level, "*It's about leveling the impact of family background - so that everyone can progress in their studies"* (Principal D, 12.4.2016); still another focuses on the area level, "*to ensure that students have the same opportunities to learn as in other areas"* (Principal B, 30.3.2016). As we can see, however, these categories are not mutually exclusive. Instead, all are closely tied to one another - with the health and welfare of a student closely tied to their family, and the types of families that live in an area closely tied to the reputation of the area.

As mentioned earlier, what all School Board members and principals agree on and brought up on their own accord, however, is that the concentration of the challenges encountered by schools receiving PD funding are in large part caused by decisions the city has made concerning where to build different types of housing.

8.2. What knowledge-base supports the governance of the policy?

8.2.1. Data and the knowledge-base

Data and the knowledge-base play an important role both in the formulation of policy as well as the evaluation and assessment of it. The knowledge-base drawn from in the process of PD funding comes from a range of sources, including both academic research as well as professional experience and daily observation. That said, the types of knowledge used in different parts of the policy-process vary considerably. Referring back to Table 1, the knowledge-base behind the governance of PD funding relies heavily on context data, also drawing from input and process data. On the other hand, outcome data appears to be notably absent.

In the ideation process for PD funding, the knowledge-base was largely informed by research evidence, both from abroad and from Finland. According to members of the School Board, the idea for the PD funding model was first developed at a general City Council meeting, as part of its strategy against social exclusion (see also: Lankinen, 2001, pg. 8). Although School Board members agreed that there was no precedent for a PD funding model in Finland, they suggested that similar models had been successfully implemented overseas in places like Germany (School Board member C, 29.2.2016). Although a preliminary PD funding was developed already in 2001 by a member of the City of Helsinki Urban Facts, the model in use today comes from a collaboration between the City and a researcher at the University of Helsinki (see: Bernelius, 2013). This model, based on area-based factors correlated with academic performance in Helsinki during the early 2000s, was seen to employ an improved evidence-base.

Importantly, the data employed in this model comes from prior results in Finland, not from the current performance of Helsinki schools. Part of the idea here, explains the chairman of the School Board, is that *"We know that certain indicators tend to generally predict high-performance, and other indicators predict lower-performance - these indicators of course work at a general level, not at an individual level"* (School Board member B, 25.2.2016). As described in the section on targeting resources, however, the PD-index used in the

model, composed of these various indicators does not map onto the intended target group perfectly: the intended target group is a mixture of both empirics and politics.

In the evaluation and accountability process for PD funding, the School Board gets budget reports from each school. These budget reports show process data, indicating how money is spent. This data provides the main source of information for assessing the PD funding policy. Yet, as noted in the above section, the School Board lacks the capacity to go through each of these budget reports in adequate detail. In a sense, while the data exists, and is in the hands of the School Board, it is not always translated into knowledge. In part, this may result from the trust in the professional judgement of principals. And although it may seem that this reliance on trust, results stands in opposition to the use of data, such a belief may be unfair. The trust School Board members have in principals stems from both their experiences working with the principals of schools, and a knowledge of the training that principals go through. These experiential data points should not be lightly discounted.

Moreover, it is founded in the deep distrust of existing outcome measures. As a School Board member explains, using quantitative outcome measures in the assessment of PD funding *"hasn't even come to mind. The existing measures of education are not comparable, and the incentives could be wrong. It would require a centralized/standardized test - and students in don't generally receive any quantitative grades or take tests during their elementary education.*" (School Board member B, 25.2.2016). Here, we see that not only do comparable measures not exist, but that if such measures did exist, basing the evaluation of schools on such measures could lead to undesired behavior.

At the school level, there exists a similar absence of tying the evaluation of PD funding to outcome data. Principals describe that they decide their budgets, including how to use the PD funding, based on previous years' budgets, their own experience, and conversations with teachers and staff at their schools. This includes detailed knowledge of process and context data, as well as some knowledge of input data. Although principals do have knowledge of outcome measures - both through quantitative indicators such as dropout

rates, national assessment results, and qualitative data - principals do not report tying their assessment of and decisions relating to the allocation of PD funding to outcome indicators. As one principal describes:

> "*There is no data on the impact of the PD funding. That would have required taking baseline measures before the funding was implemented. But the PD funding is very important. Without it the education our school provides would weaken. Everything comes down to "I feel" statements - but, I certainly do feel that if we didn't have PD funding, we would have to let go of our special needs teachers, and this would have a significant impact on the operations of the school.* (Principal B, 30.3.2016).

8.2.2. Data access

In addition to the interviews which provided information on data-use in the policy process, my own experience obtaining data for this research is informative regarding the use of quantitative data in the evaluation of and in research on Helsinki schools, particularly surrounding PD funding. As mentioned in the preceding chapter, access to comparable outcome data for Helsinki schools and school-specific PD index values that determine school funding was initially denied. And as described in the chapter on education governance, the knowledge-base and availability of data informing decision making is an integral part of the governance process. The initial denial of access to data - from the Department of Education provides, in itself, a valuable data-point for insight into the principles and practices guiding school governance in the city.

This process produced at least two notable takeaways: 1) the Department of Education and the City of Helsinki are cautious in both granting access to as well as using and interpreting quantitative data on educational outcomes, and 2) lower secondary school leaving indicators in the City of Helsinki had not previously been compiled longitudinal use. The first of these points might have multiple explanations. First, it may be academic, rooted in a belief that it is difficult to interpret and come to conclusions based on quantitative measure of social outcomes. Second, it may have to do with the political process; PD funding is a politically sensitive issue, it may be counterproductive to assess it using quantitative

indicators. Third, in more practical terms, if the data were to become public, areas receiving PD funding may come under threat of further stigmatization. The second takeaway also illuminates the process of education governance in Helsinki: schools are not, and have not been, assessed quantitatively. Moreover, despite the much touted open access to data in Finland, the data management system does not make such research easy.

8.3. How are the various stakeholders involved with PD funding held accountable?

8.3.1. Decision-making and autonomy

In line with the background section on education governance in Finland, School Board members assert that the national level primarily influences education at the municipal level through the National Education Plan, which sets goals for schools but allows municipalities and schools to autonomy regarding how these goals are achieved (School Board member B, 25.2.2016). These goals do not come in the form of quantitative measures, but largely through requirements for numbers of classroom hours in a variety of courses.

At the municipal level, ideas and policy proposals are presented in front of the School Board and then voted on. While these presentations can come from School Board members themselves, they often come from the professional staff in the Department of Education. As the School Board members describe, there has been little disagreement between members regarding the existing PD funding policy. There was a consensus amongst the School Board members that as long as the funding was used to benefit the students, it should not be earmarked.

PD funding is allocated at the school level, as determined by the characteristics of the school and catchment area. But depending on the perceived needs of individual schools funding is used differently within each school. The principals interviewed as part of this research unanimously believe that one of the strengths of PD funding, as opposed to other types of funding the schools receive, is that it is not earmarked. This provides principals autonomy by which to use the funding as they see fit. While principals are responsible for coming up with a plan of how to use the additional funding, before their decision is

implemented, it is voted on by the school governing board, made up of the principal, teachers, staff, parents, and also a student representative.

8.3.2. Accountability, capacity, professionalism, and trust

The formal process of accountability between the City and schools for PD funding functions primarily through budget reports sent by principals of schools to their district chiefs and the school board. The budget reports work to ensure that money is spent on students, rather than to provide perks for staff. Within the school, the principal is held accountable to the multiple stakeholders involved by the process through which the budget is ratified by the governing board in the schools. It seems that the accountability process for PD funding does not reach past the principals to teachers. The teachers who were interviewed reported that they were not explicitly held accountable to uphold the aims of PD funding, but that there was a general expectation that they perform their duties in a professional manner.

While the mechanics of the accountability process are relatively straightforward, the concepts at play are more complex. For example, the members of the School Board hold slightly different understandings of the notion of "accountability" in the PD funding process. For the member from the National Coalition party, accountability was understood in reference to assessing its effectiveness in terms of outcomes: *"the National Coalition party (Kokoomus)... tends to try to ensure that the money that is spent on support funding is spent as effectively as possible in creating results"* (School Board member A, 17.2.2916). In sharp contrast, the members from the Green and Left parties focused more on the process, understanding accountability in reference to values - ensuring that money was spent for the right reasons. The member from the Left party explains that accountability hinges on the transparency of the process. In their understanding, accountability in the PD funding process is ensuring that funding is allocated in accordance with the agreed upon models (School Board member C, 29.2.2016).

These differences in conceptual understanding between School Board members are reflected in differences in trust. The National Coalition observes that the accountability

process *"maybe it could be better",* explaining that the School Board lacks capacity to read through all the reports from schools: "*the school board has paid very little attention to these reports - we should pay more attention to them - there's just so many schools …"* (School Board member A, 17.2.2916). On the other hand, the member of the Green party reported trust in principals, noting that the amount of money being spent was too small to expect any kind of measurable impact in terms of outcomes. Moreover, they fear that if outcomes based accountability were implemented, "*the incentives could be wrong"* (School Board member B, 25.2.2016). The principal's professional judgement is given priority over outcome-based incentives from top-down actors.

Despite the increased differentiation between schools and the greater emphasis on school choice that has developed since the 1990s in Helsinki, information on PD funding is not publicly available to a key stakeholder group: parents. As such, they are, apart from their representation on the governing boards of schools, left out of the accountability process. Interestingly, while the member of the School Board from the Green party espoused trust in principals, the same trust does not extend to parents. They explain that making the information on PD funding available to parents "*might lead to parents shopping between schools, and removing their children from "bad" schools"* (School Board member B, 25.2.2016). When asked for any last thoughts on PD funding, a principal echoed the sentiment:

> "*You know, it has the ability to stigmatize the area - the money comes for "bad" areas - so if the information is talked about a lot in the public realm, it could tar the reputation of the area. But it's good that it's not so talked about. There's no reason to keep it secret, but it's not the type of thing that should be a focus of public conversation - not for the school's reputation, but for the families who live here, or who might live here"* (Principal C, 11.4.2016).

8.4. How do schools use the increased funding to achieve the aims of the policy?

8.4.1. Using the funding, targeting resources

By design, the PD funding policy targets resources at the school level. But, as a School Board member goes on to explain, the intended target group for PD funding is closely tied

to politics. Getting the PD index to map onto the intended target group can be difficult. Although "*we can say "those who are least well off" and you'll know what I mean - those who have a background that requires more resources*", the School Board member explains that such a group can be hard to identify: "*it's not just lower income areas, certain areas have a lot of lower income families - these might include parents who are studying or academics"* (School Board member B, 25.2.2016). Beyond indicators for income and education, one of the School Board members suggests that targeting the of resources could be benefited by using indicators for the political attitudes of residents in an area, they note, however, that making such criteria part of the formal model would be politically incorrect (School Board Member B, 25.2.2016).

Once these resources are allocated to schools, the ways in which these resources are used within specific schools determines which groups students benefit from the policy. By far, the most common use of the funding among principals who were interviewed was to hire additional staff, particularly trained special resource staff. But, there is lots of variation between schools. In one school, half the PD funding went to computers and technology to enhance digital learning. The principal explained that "*These digi-programs lower the reliance on academic language skills"* (Principal A, 29.3.2016). Two of the other principals who were interviewed added that a small portion of the funding goes towards cultural events, such as theater, and the transportation to these events. They note that for some of their students this may be the only time in their lives they will go to the theater.

Part of the reason they use funding towards transportation to these cultural events is practical, and has less to do with the immediate aims of PD funding. A principal explains:

> "*Since we are located in the periphery of the city, few cultural centers are nearby. If we want to go to them, we immediately have to pay 800e to transport the students there, other schools in the center of town don't have to do this - they can walk to these cultural centers. ...it impacts them, where they move, what kinds of things they are exposed to"* (Principal B, 30.3.2016).

What this alludes to is that not only the socioeconomic characteristics of the area a school is in, but also its physical location, can impact the costs and challenges a school faces.

Students in a school located nearer to the city center can walk to such cultural centers, thereby reducing the costs associated with cultural visits. Although the lack of earmarking allows schools receiving PD funding to tackle these additional challenges, the additional costs imposed on schools as a result of their physical location in peripheral areas prevent schools from using the PD funding to target the initial aims of the policy.

When principals were asked whether within the school funding is channeled to specific populations of students, they uniformly replied - not explicitly. In the case of cultural visits for example, a principal explained that, "*for cultural trips, the funding does not target any specific group of students - it's used evenly"* (Principal D, 12.4.2016). With the notion of equality in mind, another principal makes the lack of a specific target population explicit: *"No, no, the money is used across the board. It improves everyone, not just immigrant students, or those in danger of marginalization, or those with other challenges"* (Principal C, 11.4.2016). Part of the logic in their responses seems to hinge on the notion that by avoiding a direct target group for the funding, no student or group of students would be made aware of their position as requiring greater need, and that they would not become further marginalized.

That said, some of the principals interviewed voiced that although the funding is not directed towards specific populations, the nature of the uses of the funding does, in a sense, impact the students with the greatest levels of needs the most. For example, one principal explains that *"There is no explicit target group for the funding within the school. But since the funding is used, in large part, on special needs teaching, there are certain students who see the most benefit from the funding"* (Principal B, 30.3.2016). These responses suggest that the ways in which PD funding resources are used in individual schools will in large part shape whether or not they are further tarted within the school.

8.5. Outcomes of the policy

8.5.1. Testing the differences-in-differences assumptions

At its core, the differences-in-differences setup employed in this research measures changes that occur between two groups after a point in time. If we accept certain assumptions, the framework allows for interpreting these changes as stemming from a factor with a causal impact on one of these groups. The primary assumption for interpreting PD funding as having any type of causal impact on school performance is that the control (schools that do not receive PD funding) and treatment groups (schools that receive PD funding) as specified in the model follow parallel trends prior to the implementation of the funding. This requires that, even if there are vast differences in outcomes between schools that receive PD funding and schools that do not, the development of these outcomes follows parallel trends prior to the treatment.

One simple test for this first assumption is to present the data graphically. In Figure 4, lower secondary schools in Helsinki are divided into three groups: schools that do not receive PD funding, schools that receive lower levels of PD funding, and schools that receive higher levels of PD funding. As we might expect, the rate of enrollment in further education (either vocational or general high school) in the following year is highest in schools that do not receive PD funding and lowest in schools that receive the highest levels of PD funding. This confirms that the PD index, composed of area-based factors maps onto school performance - at least to some degree. This is in line with Kauppinen (2007; 2008), who suggests that the choice of general high school versus vocational high school correlates with the affluence of the neighborhood in which students attend school, with students in affluent neighborhoods less likely to enroll in vocational school.

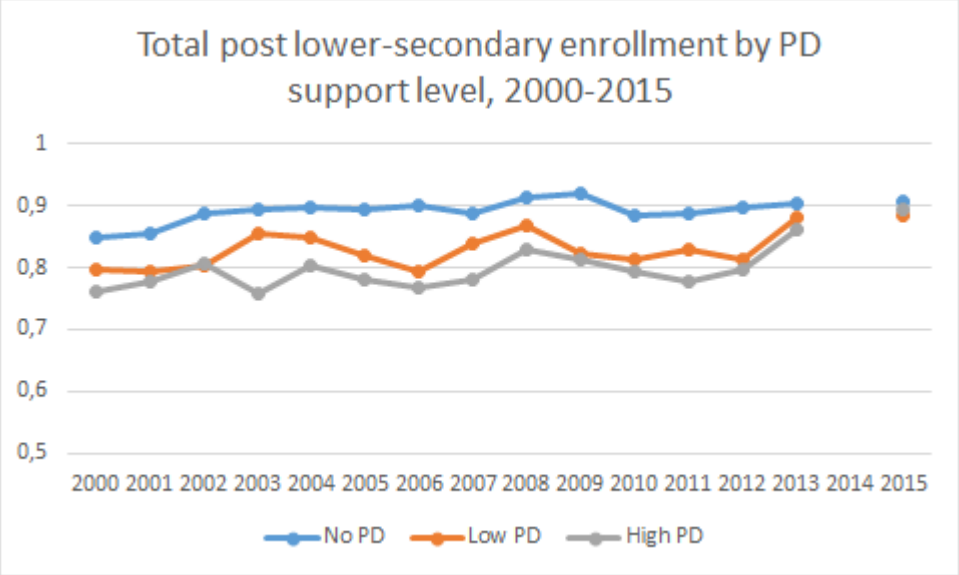
More importantly, the assumption in the empirical setup in this paper requires that the trends in school performance are parallel prior to the implementation of PD funding. The new funding model was implemented in 2008, with the first cohort of students impacted being those who graduate lower secondary school in 2009. Looking at the years 2000-2009, we see that the trends in the three groups of schools are roughly parallel. In Figures 4 and 5,

we see that similar trends are captured for post lower secondary school enrollment in both vocational and general high school respectively.

One exception from the parallel trends assumption, looking at Figure 5 and Figure 6, is that the choice of enrolling in vocational versus general high school becomes more polarized in 2005. This suggests that a change in the municipal education may have taken place in 2005. Given that the change takes place before the policy change in question in this study, and the trends remain parallel after between 2005 and 2009, the change should not impact the analysis in this study. This exception from the parallel trends may be of interest for later research.

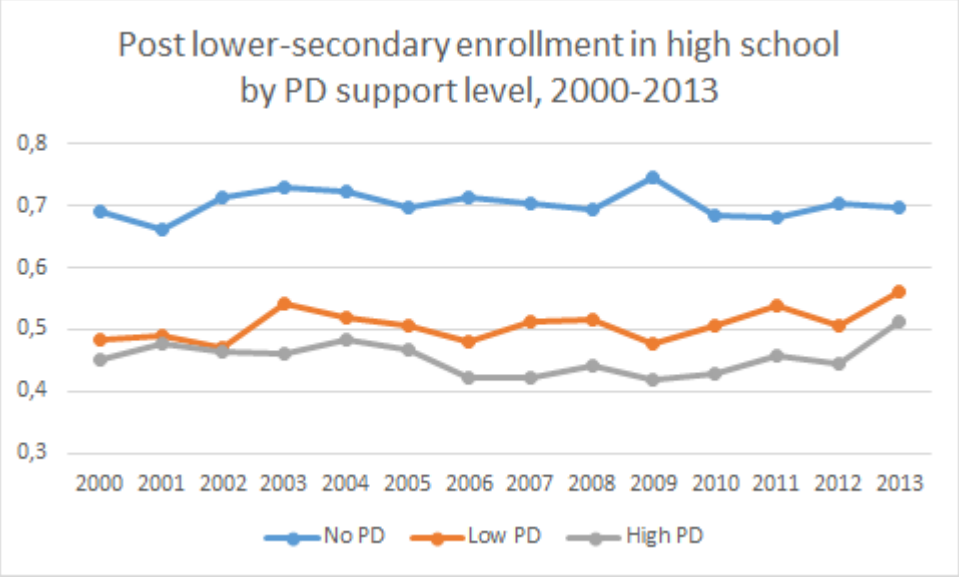
Trends in post lower secondary school enrollment by PD support level

Figure 4.



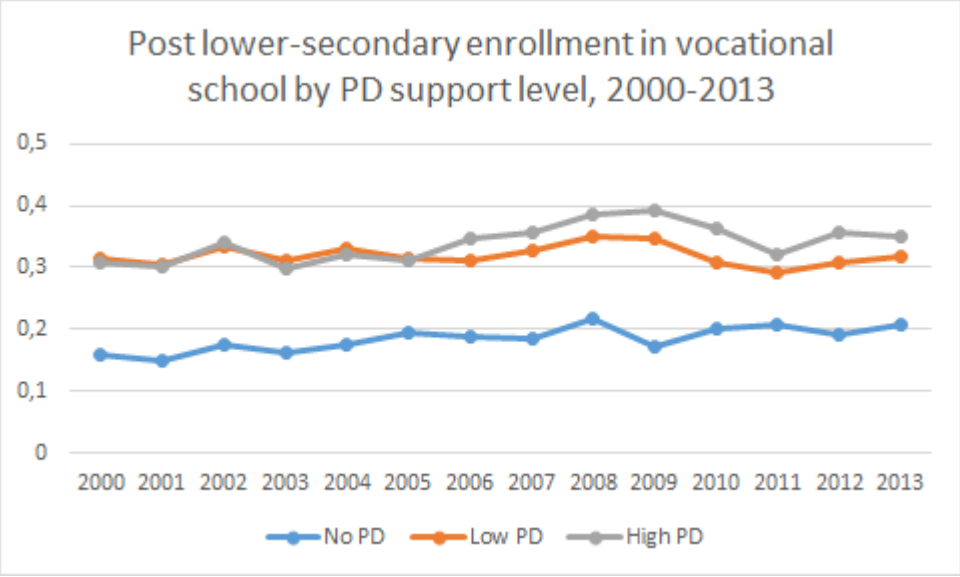
Source: This graph is constructed by combining data from Statistics Finland (SVT, 2016a) with data from the Helsinki Department of Education (Helsinki Department of Education, 2016).

Figure 5.



Source: This graph is constructed by combining data from Statistics Finland (SVT, 2016a) with data from the Helsinki Department of Education (Helsinki Department of Education, 2016).

Figure 6.



Source: This graph is constructed by combining data from Statistics Finland (SVT, 2016a) with data from the Helsinki Department of Education (Helsinki Department of Education, 2016).

Another important assumption for the difference-in-difference model is that there are no other changes that coincide with the implementation of PD funding. This assumption

cannot be tested for empirically, but must be approached theoretically, building from knowledge of the context and institutions involved.

In regard to this assumption, at least two possible worries come to mind. First, if community members in the areas receiving PD funding are aware that their local schools receive additional funding, more parents might choose to send their children to these local schools. This story would suggest that more children from families with higher socioeconomic backgrounds might attend schools receiving PD funding. According to previous research in Finland (for example Bernelius, 2013), higher parent education and income levels are associated with higher academic performance in their children. As such, if this assumption stands, we might expect the academic performance of schools receiving PD funding to increase. In any case, however, this would not necessarily go against the aims of the PD funding policy; students from families with higher socioeconomic statuses may have positive peer effects on other students in their classes (Sacerdote, 2011).

At the same time, however, some research suggests that residential areas in Helsinki are becoming more differentiated by socioeconomic factors (see Yousfi & Vilkama, 2010, pg 246 for an overview of this research). For example, as mentioned earlier, the immigrant population in Helsinki grew from 6.7% in 2005 to 13.5% in 2014 (SVT, 2016c); if a majority of this growth occurred in areas receiving PD funding (the percentage of immigrants is a determinant of PD the index value), the growth in immigrant populations may not be even across areas receiving PD funding and those not. If this is the case, we might expect that the underlying trends in socioeconomic characteristics do not follow the parallel trends the model requires. While there may be some truth to both of these stories, the implications of the two go in opposite directions: one would suggest to interpret the difference-in-differences results as an upper-bound of the impact of funding, the other as a lower-bound. Since it is hard to disentangle these two possible scenarios, it is important to remain cautious when interpreting the results obtained from the models.

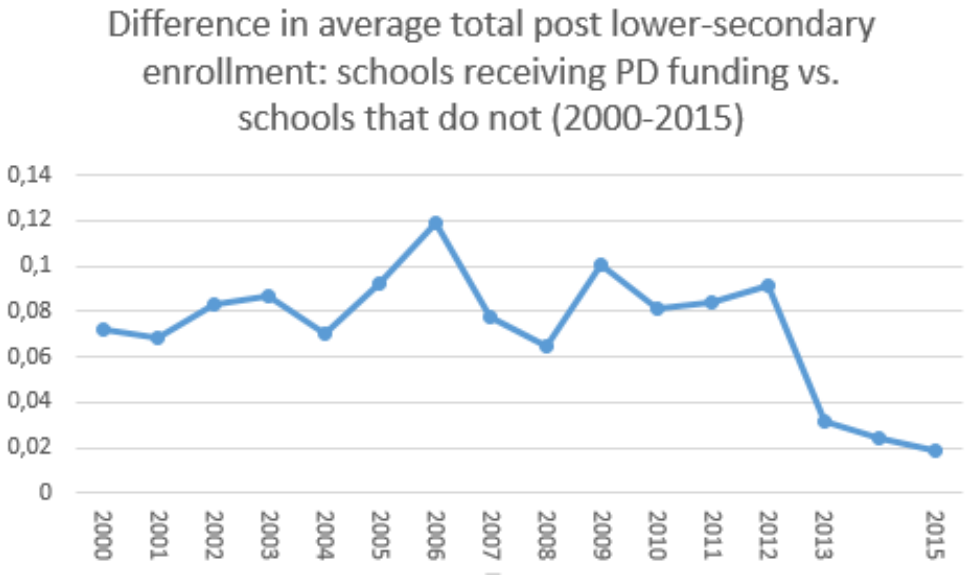
An additional challenge that the differences-in-differences model employed in this paper runs into is that while the PD-index allows the model to gauge relative levels of funding

between schools, there is no data on the magnitude of the funding. While the magnitude of the funding was increased between the years 2008 and 2012, these increases in the magnitude of the funding are invisible in the regression model this thesis employs. That said, Equations 2 and 3 allow for an increasing impact of PD funding with time. But, as described earlier, there may be other reasons to allow for an increasing impact of PD funding - even holding the annual level of funding constant.

8.5.2. Results from the models

Before turning to the regression results, it may be informative to return to the graphs presented in Figures 4-6. In Figure 4, we see that although the trends in enrollment in either vocational or general high school are relatively parallel prior to 2009, after 2009 the trends between schools receiving PD funding and those not receiving PD funding begin to converge. Despite initial differences between these two groups of schools of roughly ten percentage points, by 2015 these groups of schools are separated by only a hair. Figure 7, below, confirms this, showing the difference in total post lower-secondary enrollment between schools with and without PD funding. As the graph shows, the difference shows slight growth but is quite stable until 2013, when it drops noticeably. This is more or less when we would expect to observe the impact of PD funding.

Figure 7.



Source: This graph is constructed by combining data from Statistics Finland (SVT, 2016a) with data from the Helsinki Department of Education (Helsinki Department of Education, 2016). The data point for the missing year (2014) is extrapolated from the surrounding data so not to show a '0' in the graph.

Looking at Figures 4 and 5, however, we see that the hierarchical ranking between these groups of schools persists with respect to both vocational and general high school when examined in isolation. From these graphs we also see that much of the improvement in total post lower secondary enrollment in education for schools receiving PD funding comes from increased enrollment in general high school; the trend in vocational school enrollment has remained relatively stable. This may be unexpected or even counterintuitive; we might expect that the student on the cusp of enrolling in education the year following their graduation from lower secondary school rather than not enrolling is more likely to enroll in vocational high school. Since these results come from school level data, however, it is impossible to know where these changes result from. One possibility is that although more students like the one discussed above are choosing to enroll in vocational school following their graduation, other students who would have enrolled in vocational school are now choosing to enroll in general high school.

Tables 2-5 (below) report the results from the difference-in-difference regressions. Each table includes three regressions, holding the equation used the same but changing the

outcome variable in question between total post lower-secondary school enrollment in further education, enrollment in general high school, and enrollment in vocational school. For details on how the equations in the tables below are constructed, refer to the earlier section describing the quantitative methods used in this paper.

The results from the regressions, particularly those in Table 2 and Table 3 are in broad consensus. First, they suggest that the PD index used in this study maps onto school performance. The results in the first row of both Table 2 and Table 3 show that prior to 2009 students in schools with a PD index value of 1 are nearly 8 percentage points less likely to continue to further education the year following their graduation from lower-secondary school than students in schools that do not receive PD funding. Disaggregating high school and vocational school enrollment, we see that prior to 2009 students in schools with a PD index value of 1 are about 18 percentage points less likely to enter high school than students in schools that do not receive PD funding; instead, they are about 10 percentage points more likely to enroll in vocational school.

The coefficient of interest, "*Constant PD*", in the regression pictured in Table 2 suggests that, after the implementation of PD funding, students in schools receiving PD funding increased enrollment in either vocational or general high school by about 4 percentage points compared to students in schools that did not receive PD funding. In columns 2 and 3 the same coefficient shows that this change stems largely from increased high school enrollment. The results in Table 3 are similar to those in Table 2, though the fit of the model, as measured by the R-squared, is slightly improved. This suggests that the strength of the relationship between PD funding and post lower-secondary school enrollment increases after 2009. The change in the units used to measure the value of the PD index between Table 2 and 6 makes the coefficient harder to interpret; while the maximum PD value in the regressions from Table 2 is 2.4, in Table 3 it is 16.8. That said, all these results are significant at the 1% level.

The regression model in Table 4 assumes the same logic as that in Table 3: that the impact of PD funding increases with the number of years it has been in place. Compared to the

models in Tables 2 and 3, however, the model in Table 4 includes year fixed effects. This allows the error term for the regressions to vary by year. Allowing for this variation, the coefficient "*Accumulated PD*" suggests that students in schools receiving PD funding experience an increase in total post lower-secondary school enrollment after 2009 compared to students in schools not receiving PD funding. When the model is modified slightly in Table 5, the model fit improves, with only minor changes to the coefficient estimates. These results are significant at the 1% level. Again, given the units for the level of PD funding, it is hard to interpret the magnitude of these results. When a variable covering the full spectrum of the PD index, as calculated also for schools that do not receive PD funding, is added to the model it is dropped from the model as an omitted variable due to collinearity.

Table 2. Regression results, with constant yearly impact of PD funding (see Equation 1)

	(1)	(2)	(3)
VARIABLES	Total	High school	Vocational
PD value	-0.077***	-0.182***	0.102***
	(0.007)	(0.010)	(0.008)
After 2008	-0.020	-0.103***	0.075***
	(0.013)	(0.022)	(0.017)
Constant PD	0.041***	0.073***	-0.036**
	(0.013)	(0.022)	(0.017)
Constant	0.882***	0.680***	0.205***
	(0.004)	(0.007)	(0.005)
Observations	561	521	521
R-squared	0.206	0.453	0.330
Adj R-squared	0.202	0.449	0.326
SER	0.0846	0.127	0.0988

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3. Regression results, with increasing impact of PD funding (see Equation 2)

	(1)	(2)	(3)
VARIABLES	Total	High school	Vocational
PD value	-0.078***	-0.179***	0.101***
	(0.006)	(0.010)	(0.008)
After 2008	-0.022*	-0.096***	0.069***
	(0.011)	(0.019)	(0.015)
Accumulated PD	0.012***	0.021***	-0.001**
	(0.003)	(0.006)	(0.004)
Constant	0.882***	0.680***	0.205***
	(0.004)	(0.007)	(0.005)
Observations	561	521	521
R-squared	0.224	0.456	0.330
Adj R-squared	0.219	0.452	0.327
SER	0.0837	0.127	0.988

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4. Regression results, with increasing impact of PD funding and year fixed effects (see Equation 3)

	(1)	(2)	(3)
VARIABLES	Total	High school	Voc.
2001	-0.017	0.010	-0.004
	(0.018)	(0.017)	(0.015)
2002	0.011	0.006	0.028*
	(0.018)	(0.017)	(0.016)
2003	0.038**	0.032*	0.004
	(0.018)	(0.017)	(0.015)
2004	0.049***	0.028*	0.019
	(0.018)	(0.017)	(0.015)
2005	0.035**	0.008	0.023
	(0.017)	(0.017)	(0.015)
2006	0.033*	0.007	0.021
	(0.018)	(0.017)	(0.015)
2007	0.037**	0.002	0.031**
	(0.017)	(0.017)	(0.015)
2008	0.069***	0.003	0.061***
	(0.017)	(0.017)	(0.015)
2009	0.050***	0.004	0.043***
	(0.018)	(0.017)	(0.015)
2010	0.026	-0.012	0.035**
	(0.018)	(0.017)	(0.015)

2011	0.025	-0.002	0.025
	(0.018)	(0.017)	(0.015)
2012	0.029	-0.002	0.029*
	(0.018)	(0.017)	(0.016)
2013	0.061***	0.021	0.039**
	(0.018)	(0.018)	(0.016)
2014	-	-	-
2015	0.067***		
	(0.019)		
Accumulated PD	0.007***	0.005	0.001
	(0.002)	(0.003)	(0.003)
Constant	0.815***	0.590***	0.228***
	(0.013)	(0.012)	(0.011)
Observations	561	521	521
R-squared	0.446	0.849	0.750
Adj R-squared	0.388	0.832	0.722
SER	0.0741	0.0702	0.0635

Table 5. Regression results, with increasing impact of PD funding and year fixed effects interacted with PD funding (see Equation 4)

VARIABLES	(1) Total	(2) High school	(3) Vocational
2001	-0.017	0.010	-0.004
	(0.018)	(0.017)	(0.015)
2002	0.012	0.006	0.027*
	(0.018)	(0.017)	(0.016)
2003	0.038**	0.032*	0.003
	(0.018)	(0.017)	(0.015)
2004	0.049***	0.027*	0.019
	(0.018)	(0.017)	(0.015)
2005	0.035**	0.008	0.023
	(0.017)	(0.016)	(0.015)
2006	0.033*	0.007	0.021
	(0.018)	(0.017)	(0.015)
2007	0.037**	0.002	0.031**
	(0.017)	(0.016)	(0.015)
2008	0.069***	0.003	0.061***
	(0.017)	(0.016)	(0.015)
2009	0.051***	0.019	0.025
	(0.019)	(0.018)	(0.017)
2010	0.033*	-0.005	0.032*
	(0.019)	(0.018)	(0.016)
2011	0.040**	0.000	0.034**
	(0.019)	(0.018)	(0.016)

2012	0.036*	0.000	0.026
	(0.019)	(0.018)	(0.016)
2013	0.058***	0.015	0.036**
	(0.019)	(0.018)	(0.016)
2014	-	-	-
2015	0.061***	-	-
	(0.019)		
Accumulated PD	0.008***	0.008**	0.002
	(0.003)	(0.004)	(0.003)
Accumulated PD 2009	-0.003	-0.039**	0.041**
	(0.020)	(0.018)	(0.017)
Accumulated PD 2010	-0.010	-0.012	0.003
	(0.010)	(0.010)	(0.009)
Accumulated PD 2011	-0.014**	-0.005	-0.009
	(0.007)	(0.007)	(0.006)
Accumulated PD 2012	-0.006	-0.006	0.000
	(0.005)	(0.006)	(0.005)
Accumulated PD 2013	0.000	-	
	(0.005)		
Accumulated PD 2014	-	-	-
Accumulated PD 2015	-	-	-
Constant	0.814***	0.590***	0.228***
	(0.013)	(0.012)	(0.011)

Observations	561	521	521
R-squared	0.452	0.851	0.755
Adj R-squared	0.389	0.833	0.725
SER	0.0741	0.070	0.0631

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

8.5.3 Level of funding

Two central questions policymakers must consider in the evaluation of PD funding are: 1) does the funding target the right thing? and 2) is the level of funding adequate? While both questions can be approached both conceptually and empirically, they are, just as any policy question is, rooted in politics. The previous sections of analysis have primarily dealt with issues related to the first of these two questions. That said, the second question has been touched upon through the discussion of trust between School Board members and principals in the accountability process and in the discussion on data and the knowledge-base.

The discussion concerning the level of PD funding in the School Board seems to be highly politicized, with an apparent lack of input from either other stakeholders or empirical evidence. From the perspective of the Chairman of the School Board, a member of the Green party, the funding level is insufficient. They explain that, "*But it's been a huge disappointment to see how little funding, how small a proportion of funding is allocated to this targeted funding ... when we start to think about how big the differences are*" (School Board member B, 25.2.2016). In the above explanation we see that in their view, the appropriate level of funding has to do primarily with redistributive concerns, rather than merely the effectiveness of the funding. On the other hand, for the National Coalition member, the the redistributive concerns are second to effectiveness. Aware of the tension in the School Board, they describe that *"the left-leaning parties tend to always demand more and more support funding"* (School Board member A, 17.2.2916).

Oddly enough, when asked whether or not the existing level of funding was sufficient to meet the challenges their schools faced, principals of schools receiving PD funding unanimously replied that the level of funding was adequate. They noted that PD funding only constituted a small portion of their overall funding, and that their finances were more impacted by the general economic climate. That said, all principals were thankful for the existence of the funding, and believed that their schools would not be the same without it. And, perhaps not surprisingly, they all voiced that they would be happy if the level of funding increased, but that it was not necessary as things were.

The apparent differences in response between School Board members compared to the principals might be explained by the different roles each actor plays: one political, the other more practical. In virtue of its political nature, the discourse in the School Board should not be expected to find resolution. At the same time, while the principals are more practically oriented, their consensus regarding the level of funding should not be taken as proof that the funding level is most effective as it stands. Any response to the question requires further empirical evidence.

9. Discussion and further research

9.1. Returning to the research questions

What sorts of measurable results are achieved by the policy? And other results?

Between 2007 and 2015, the difference in post lower-secondary school enrollment between schools receiving PD funding and schools not receiving the funding decreased by 75%. Put simply, of the roughly 1,754 students graduating from schools receiving PD funding each year, roughly 105 more students continue directly to further education than prior to the implementation of the funding[7]. The results from the difference-in-difference model

[7] This is a crude estimate. 15,786 students were enrolled in schools receiving PD funding in 2014. The exact number varies slightly year to year, with each cohort varying slightly in size. That said, the average size of each cohort is a little under 1,754 students. From these students, the 6 percentage point increase in post lower-secondary enrollment in further education in these schools compared to other schools in Helsinki translates to an increase of 105 students continuing their education straightaway each year.

suggest that at least part of the changes in post-graduation trajectories may be attributed to PD funding. Principals report that they have noticed the impact of PD funding in their schools; given the variety of ways that the funding is used, it is likely that the funding has an impact in other areas as well. These results from the Finnish context go against the research of Hanushek (1997) who argues that, at least in the context of the United States, increasing school resources does not improve school performance. This should not be all that surprising, since Hanushek's argument has come under attack from researchers in the United States as well (see for example, Darling-Hammond, 2013, pg. 77).

That said, while differences in post lower-secondary school enrollment between schools have nearly been eliminated, differences in other areas remain. For example, in 2015 schools receiving PD funding send an average of 16 percentage points less students to general high school (versus vocational school) compared to schools that do not receive the funding.

In addition to examining the results of the policy, however, this thesis set out to understand how the institutional factors shape the PD funding policy in Helsinki. In large part, it is likely these factors that explain the mechanisms behind the positive impact of the funding this research observes. But, looking forward, it is also through critical reflection on these institutional factors that outcomes of the policy might be improved. Below, the the institutional factors surrounding PD funding will be discussed, following the research questions outlined in an earlier chapter.

How do stakeholders interpret the aims of the PD funding policy?

Considering the PD funding policy more broadly, city-level policy makers and principals both seemed to hold the provision of additional resources targeted to those schools with greater need in line with their values. How targeted policies fit into the Nordic welfare state outlined by Esping-Andersen (1990), however, depends in large part on how Nordic welfare state principles are formulated. If a greater emphasis is placed on equalizing starting points, universalist policies might be considered most appropriate. On the other

hand, if a greater emphasis is placed on outcomes, universalist policies will generally be considered inadequate, and targeted policies may be required[8]. That said, it may be easier to fit targeted funding policies into the Nordic welfare states' conceptual frameworks than to realize similar funding policies politically. While the Nordic welfare states have historically been characterised by high benefit levels, this has relied upon "cross-class solidarity", by which the benefits were received universally (Esping-Andersen, 1990, pg. 25). If groups of voters feel that targeted benefit policies are against their interests, they may not mobilize politically around such policies to the same degree as universal policies. For now, policymakers in Helsinki actively try to keep the discussion of PD funding minimal. How viable PD funding models can become in the Finnish context will depend on the extent to which voters across parties will be willing to stand behind them.

Despite broad consensus with the PD funding policy among central stakeholders in Helsinki that starting points should be leveled, there remains disagreement over details. The various stakeholders involved seem to have slightly different understandings of the specific aims of the policy. Need is a difficult concept to define, and even more difficult to operationalize in the context of politics. As such, in the practice of PD funding, the definition seems to be left somewhat open to interpretation. Different School Board members hold slightly different understandings of the policy. Moreover, so do principals. This, along with the fact the funding is not earmarked, and principals are given the autonomy to use the funding as they see best, provide PD funding with the flexibility by which to tackle different types of challenges. According to principals and members of the school board, these challenges range from the additional support required by particular types of students - such as those who are non-native speakers - to the impact of family background, and the effect living in a certain neighborhood has on its youth. Seeing as different stakeholders attribute the roots of the challenges faced by schools receiving PD funding to different issues, the flexibility PD funding allows schools is important.

[8] That said, the story is not so simple. In the above description, the term "starting point" is under-conceptualized. An equal starting point may refer to providing everyone with the same resources despite family background, or providing everyone with the same resources accounting for family background. Following the second understanding, targeted funding mechanisms should, again, be considered in line with the Nordic welfare state principles.

What knowledge-base supports the governance of the policy?

The flexibility of the PD funding process is, in part, closely linked to the uneven data-use and knowledge base at the various points in the policy process. While research evidence was cited as important in the ideation for the policy and was used to develop the PD index used in the funding model, similar evidence is not used to follow up on the funding policy. Instead, it is more or less assumed that schools will use the PD funding effectively, with the holistic and long-term improvement of the school in mind. For this, principals rely primarily on their high level of education and the experiential knowledge they have gained over the years.

The de-emphasis on data-use in later stages of the policy process makes for certain disadvantages. Although the funding has already operated for nearly eight years in its current form, there remains little evidence by which to assess whether it has succeeded in targeting resources effectively. As Fazekas and Burns (2012, pg 11) explain, this can be a vital part of data-use. The quantitative and qualitative portions of this research suggest that the policy may have a positive impact on the schools receiving additional funding, but important questions remain. The quantitative portion of this research focused only on one type of indicator - enrollment in further education the year following graduation. Impacts of the policy in other areas are left unmeasured. Additionally, without micro- student-level data, it is nearly impossible to tell which group of students the policy most benefits - students who are already doing well, students at the margin between continuing to further education or not, or those who leave lower-secondary school without plans to continue their education. Further, the lack of micro-level data makes it difficult to compare the students in need of support in schools receiving PD funding with similar students in schools that do not receive the funding.

Perhaps more important still, the lack of data-use after the policy was implemented has made it difficult to learn about what worked versus what did not from the experience. As Burns and Köster (2016) argue, a central role of data use is in strategic thinking for longer

term planning. Since principals used different strategies to tackle inequality in each of their schools, it could have been possible to compare and learn from these different efforts. This could have provided valuable information to both school- and city-level actors hoping to tackle similar challenges in the future. As other Kumpulainen and Lankinen (2012, pg. 77) warn, it is more timely than ever to examine differences in educational performance between cultural, linguistic, and ethnic groups. Without data and resources to follow the evolution of educational differences between these groups, it will be difficult to think strategically and plan ahead. Moreover, this type of strategic thinking requires a willingness to face up to the inequalities in the Finnish education system, rather than assume that the system treats all students equally.

How are the various stakeholders involved with PD funding held accountable?

Perhaps most distinctive about the PD funding model in place in Helsinki is the system of accountability between stakeholders. In sharp contrast to the United States and the United Kingdom, standardized tests are not used to measure school performance or tied to accountability pressures. Instead, in line with Fukuyama's (2013) basic framework for governance, principals are both well trained and have a high level of autonomy. Although principals are held accountable through budgetary reports, providing process data to the Department of Education and School Board, these administrative levels sometimes lack the capacity to go through the reports. In addition to the inadequate capacity at the municipal level to go through the reports, the other reasons data is not used in the accountability process are more intentional. In accordance with Biesta (2009), the School Board and Department of Education recognize the difficulty of finding an appropriate outcome measure to follow; and fear that outcome based accountability mechanisms may distort the behavior of principals. As such, by anchoring the support funding in relatively stable context indicators, the municipality is able to provide sustained support to areas that might need the funding without distorting their incentives.

Both the freedom given to school principals as to how money is spent and the lack of an outcomes based accountability process are founded on the high degree of trust in the

professionalism of principals and teachers. Principals are expected not only to better equipped to identify the challenges specific to their school than outside actors, but are also trusted to develop relevant measures by which to tackle these challenges. That said, principals are kept in check by the school's governing board, composed of a diverse network of stakeholders. The system of professional accountability (see: Köster, 2015; Hooge, Burns, & Wilkoszewski, 2012; Møller, 2009; Fuhrman & Elmore, 2004; Elmore; 2005; O'Day, 2002) and high levels of trust between actors (Cerna, 2014b) allow principals in Helsinki to invest in longer term improvements - for example, information technology infrastructure - rather than focusing their efforts on improving test outcomes in the shorter term. The flexibility and trust central in the execution of the policy prevent the distortion of incentives and the gaming of the system that has all too often been seen to follow it in countries like the United States and the United Kingdom.

And, how do schools use the increased funding to achieve the aims of the policy?

Central to the issues addressed in the above research questions is, of course, how the additional funding is actually used. Depending on how the policy is interpreted at the local level, resources will be used in different ways. The most common use for the funding in the schools included in this study was on hiring additional staff - particularly special resource teachers. These additional teachers target support to students requiring special assistance. Other uses of funding included information technology infrastructure, cultural activities, and transportation for school trips. The reasons for different uses in funding reflected the priorities of particular schools, but also were tied to balancing the overall budget. For example, one school located far from the city center used part of the additional funding to cover transport fees for school trips, another school used the funding to upgrade its IT-infrastructure.

The different uses for PD funding reflect the flexibility of the support, and the high degree of local autonomy given to school principals. Another reason the uses of PD funding can differ between schools may be due to differences in the interpretations of what the funding is intended to be targeted towards: non-native Finnish speakers, students from lower socio-

economic backgrounds, or students who require additional help due to other reasons. As explained by Glatter (2003), given the various aims of and possible tensions between different stakeholders located across levels of governance, it may be important to clarify any confusion regarding the intended aims of PD funding. Additionally, tied to the issues related to the knowledge-base employed in the process, some principals acknowledge that their decisions regarding where to allocate resources could be better informed by research evidence.

9.2. Relating the research to broader themes

9.2.1. Targeted funding and the Nordic welfare state

As discussed earlier in this paper, the research on welfare states suggests that while the universalism characteristic of the model was successful in combatting what are considered "old social risks", it is less successful when it comes to "new social risks". Over recent years, in Finland, the size of "new social risk" groups, namely non-native speakers and single-caretaker families, have grown. Nonetheless, with the recent proposal of a flat universal basic income, support for the hallmark of Nordic welfare thinking remains enthusiastic.

How targeted policies fit into Nordic welfare thinking depends in large part on how Nordic welfare state principles are formulated. If a greater emphasis is placed on equalizing starting points, universalist policies might be considered most appropriate. On the other hand, if a greater emphasis is placed on outcomes, universalist policies will generally be considered inadequate, and targeted policies may be required. That said, the story is not so simple. In the above description, the term "starting point" is under-conceptualized. An equal starting point may refer to providing everyone with the same resources despite family background, or providing everyone with the same resources accounting for family background. Following the second understanding, targeted funding mechanisms should, again, be considered in line with the Nordic welfare state principles.

The area-based targeted PD funding in Helsinki is one of the few policies in the recent Finnish education governance that can be seen to diverge from the traditional understanding of universalism. If, as new social risk groups grow in their relative importance, targeted funding policies become commonplace, there is a lot to learn from the case of PD funding in Helsinki schools. As the analysis of the results in the previous section suggests, central to the successful implementation of a targeted welfare policy is identifying the desired target group. This can be tricky. To start, the root of the challenges must be identified, the appropriate target group must be conceptualized, data must be used to identify the group in question, and a way to channel the funding to this group has to be developed. As Seeleib-Kaiser notes, the governance of any targeted funding policy will be key (Seeleib-Kaiser, 2008, pg. 221). Depending on the institutions in place, the impact of the PD funding on issues surrounding equality will vary.

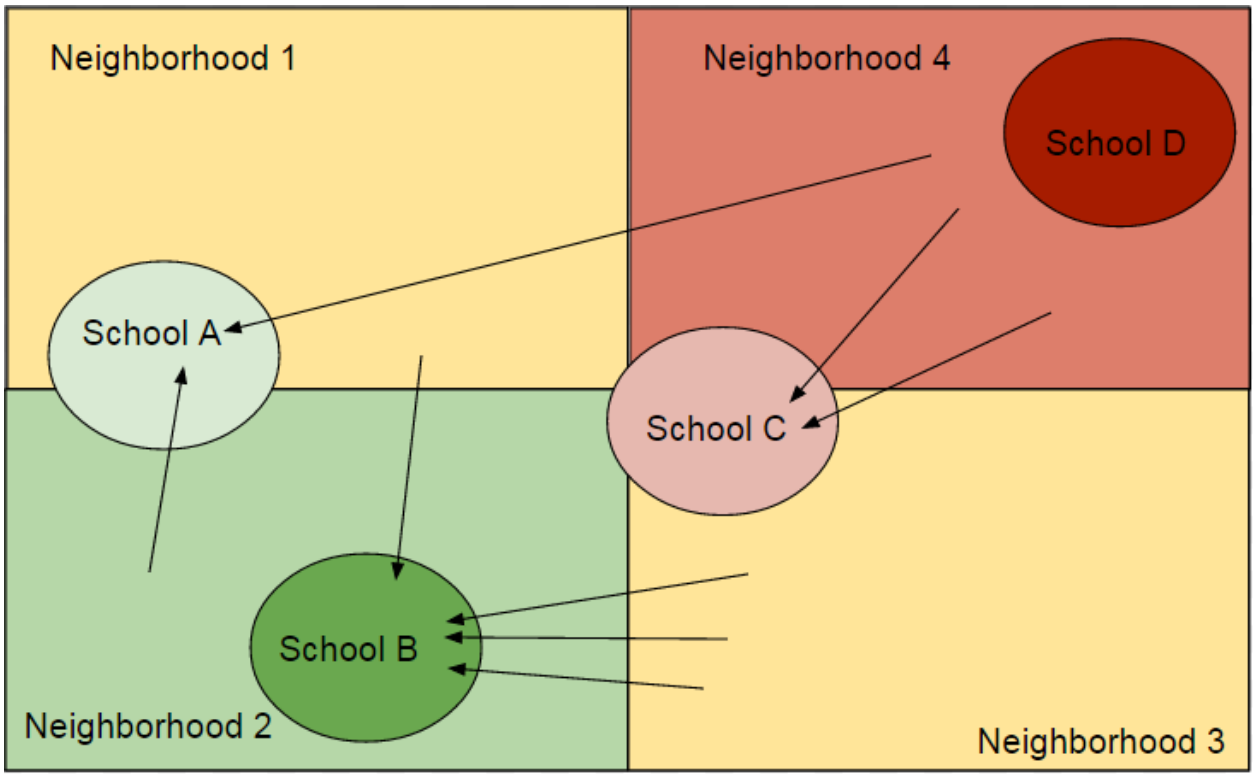
All said, it may be easier to fit targeted funding policies into the Nordic welfare states' conceptual frameworks than to realize similar funding policies politically. While the Nordic welfare states have historically been characterised by high benefit levels, this has relied upon "cross-class solidarity", by which the benefits were received universally (Esping-Andersen, 1990, pg. 25). If groups of voters feel that targeted benefit policies are against their interests, they may not mobilize politically around such policies to the same degree as universal policies. Perhaps one reason that PD funding was politically feasible is that while it breaks from universalism by targeting specific schools, it operates universally within these schools - without explicitly targeting particular groups of students.

9.2.2. Area-based funding, Helsinki schools, and "neighborhood effects"

Although the PD funding policy in Helsinki operates at the school level, the funding model is constructed using area-based characteristics. As the quantitative analysis performed as part of this research shows, area-based characteristics do map onto educational attainment as measured by enrollment in further education following graduation from lower-secondary school quite well. Whether or not the area-based approach is the most effective means of targeting resources towards those in most need, however, remains an open question.

Figure 8 (below) helps to visualize the differences between different levels of data that could be used to allocate funding. The colors are used to represent the level of a socioeconomic indicator - perhaps composed of similar variables as the PD index - where the darkest shade of red signals the most need and the darkest shade of green the least. The arrows in the figure represent students who choose to attend school outside their neighborhoods (catchment areas). The figure shows that while socio economic indicator values at different levels of measurement - student, school, or neighborhood - certainly overlap, they can also differ from one another. If, for example, the PD value for School D is calculated using the socio economic characteristics for the neighborhood it is located in, the calculation will overestimate the school level socioeconomic characteristics.

Figure 8. Neighborhoods, Schools, and Students.



Note: In this figure darker shades of red represent lower socio economic characteristics, as measured, for example by the PD index; darker shades of green represent higher shades of socio economic characteristics. The arrows refer to students who attend schools outside their neighborhoods or allotted catchment areas.

As opposed to the neighborhood-based PD index, for example, the model used to allocate PD funding could be constructed using data on the students who attend each school. Assuming that some level of sorting takes place as a result of the school choice policies in place in Helsinki (Bernelius & Vaattovaara, 2016), there is reason to believe that the differences in socioeconomic family background characteristics between the student populations of schools are greater than the differences between catchment areas. If, as some of the principals who were interviewed suggest, socioeconomic family background characteristics are primary to neighborhood factors in contributing to differences in educational outcomes in the Helsinki context, they should lay the foundations of the model rather than neighborhood level characteristics. To determine whether or not this is the case, however, requires further research. Yet, as Hyötyläinen (2015) warns, and as several interviewees brought up, attributing the roots of the challenge at the neighborhood level may result in undesired stigmatization.

If the roots of differences between educational attainment are not so much a result of family background as opposed to differences in neighborhood or school level characteristics, however, other levels of data should be preferred. Adults in the neighborhood might play a more important role in a child's education than the child's parents. Or, parents of other children in the school may have a more important role than a child's own parents. In each of these cases, identifying this relationship is key. If neighborhood level characteristics are of primary importance, identifying the mechanisms by which "neighborhood effects" impact student performance will be central to developing effective policy measures. For example, if students lack positive role models in the neighborhood, increased workplace visits might warrant attention. In these cases, the focus on catchment area characteristics is justified.

Of course, family, school, and neighborhood level characteristics probably each play a role in shaping children's' educations. Another option, then, would be to design a targeted funding model constructed using characteristics from each category. While such a model may be preferable, its construction may be constrained by the availability of good data.

9.3. A brief comparison: Helsinki and Boston

This thesis opened by presenting a sketch of an attempt to improve the performance of a low-performing school in the United States. Like PD funding which operates at the municipal level in Helsinki and provides extra resources to schools situated in low-income and immigrant dense neighborhoods, the turnaround in Boston also aimed to improve the performance of a specific school located in a low-income neighborhood. But, compared to the PD funding policy in Helsinki, the example from Boston illustrates a markedly different approach to tackling a similar problem, one echoing the argument from Hanushek (1997): instead of providing greater resources to schools, the approach in Boston attempted to improve results by incentivizing school performance and constructing strict accountability standards. While more research would be required in order to judge the institutional characteristics against one another, stark points of contrast between the two systems can be briefly described.

Autonomy and accountability. In Helsinki, school principals were given full autonomy to allocate resources as they saw fit - as long as the funding was intended for their students benefit. Likewise, in Boston, the principal of the school was given autonomy to organise their school as they saw best. That said, whereas the Deborah McCormack school was held accountable to the state through demonstrated improvement in test-scores within a strict period of time, principals of schools in Finland were held accountable to the municipality through written reports, detailing what the additional funding was spent on.

Data-use and trust. In Boston, the accountability process was informed by data collected annually on school performance through standardized tests. In the case of the Deborah McCormack school, this data was relied on over principal testimony. In contrast, in Helsinki quantitative data on school performance is sparse - intentionally so; instead, data comes largely from written reports and sample-based quantitative data not suited for comparisons and school rankings. This difference seems to be underwritten by a high level of trust between the municipality and schools in Helsinki, and mistrust between educational administrators in Boston.

Additionally, the design of the policy responses in the two cases reflects on the different welfare state contexts. In the Boston case, in what Esping-Andersen (1990) would classify as a liberal context, an individual school is singled out for reform. Moreover, the response comes through market logic - a system of accountability threats and incentives. In Helsinki, in line with the universalist ethos described by Esping-Andersen the problem is recognized to be system-wide, requiring a municipality-wide response. And, in contrast to Boston, accountability threats and incentives are not relied upon. Instead, the policy builds on the trust of stakeholders who are already in place in the system.

While the research from this paper does not provide explicit evidence for judging one system over the other, the research suggests that the two approaches - one focusing on changes in the process of governance, the other focusing on providing increased resources to schools - cannot assessed in isolation. The impact of changes in the process of education governance is closely linked to the school resources - and vice versa: the impact of increased school resources is closely linked to the process of education governance.

9.4. Further research

There is a lot of research left to be done on the topics touched on in this paper. To close, this section outlines some of them. To begin, the research in this paper highlights the importance of identifying the roots of the challenges PD funding seeks to tackle. This requires further research on the applicability of the concept of "neighborhood effects" to the Finnish context. This research can take many forms: conceptual work on what is meant by the concepts used (for example: "neighborhood effects"), further interviews with stakeholders familiar with the challenges schools and students face (including interviews with students themselves), and quantitative work that better identifies the causal impact of various factors on school performance (neighborhood, peer group, family background, etc.). Such conceptual work will also help to assess how the analysis in this study might apply to other municipalities in Finland.

In addition to more research on the foundations for the policy, expanding the number of interviews, particularly with principals, will provide a better understanding of the mechanisms by which the policy operates. These interviews could concentrate on two central areas: 1) how different principals use PD funding within their schools, and 2) what types of data might be collected to better follow the impact of similar future policies. The first of these areas will help to better identify the population that PD funding reaches, and can shed light on the effectiveness of PD funding in its function as a form of targeted funding. Additionally, the first of these areas can help to illuminate what types of spending are most effective. The second will help to identify how data can be harnessed to learn from existing policies, thereby improving future policies.

Further, while this thesis provided some insight as to the impact of PD funding, there remains much for further research. Using a similar differences-in-differences setup, research on the impact of PD funding on other outcome indicators is important to evaluate the policy more holistically. Additionally, while this thesis focused exclusively on school level data, pairing school level data with student level data will help to identify where the impact of the policy is most felt. Moreover, adding student level data to the mix will help to better identify the roots of the challenges faced by schools receiving PD funding and whether they are best targeted at the student, family, school, or neighborhood level.

Although the research in this thesis suggests that PD funding has had some impact on the schools receiving the funding, it provides little information for a cost-benefit analysis of the policy. Such an analysis would require, more than the relative levels of additional funding schools receive, the euro amounts of extra funding schools receive. Such information would not be difficult to add to the framework set up in this thesis. That said, even with euro measures of the costs of PD funding, a cost-benefit analysis would be incomplete without a richer set of outcome measures than are included in this study.

In addition to combining student level data with other existing outcome indicators, outcome indicators that will become available in upcoming years will shed light on the longer-term impact of PD funding. For example, indicators in areas such as labor market performance,

criminal activity, and family life can illuminate potential benefits of the policy outside academic performance and thereby contribute to a better informed cost-benefit analysis of other similar policies.

10. References

Ansala, L., Hämäläinen, U., & Sarvimäki, M. (2016). Slipping through the Cracks of a Welfare State: Children of Immigrants in Finland. *VATT Institute for Economic Research Working Papers*, (72).

Baker, E. L., Linn, R. L., Herman, J. L., & Koretz, D. (2002). Standards for educational accountability systems. *Los Angeles: National Center for Research on Evaluation, Standards, and Student Testing, Policy Brief, 5*.

Bernelius, V. (2013). Eriytyvät kaupunkikoulut: Helsingin peruskoulujen oppilaspohjan erot, perheiden kouluvalinnat ja oppimistuloksiin liittyvät aluevaikutukset osana kaupungin eriytymiskehitystä.

Bernelius, V., & Vaattovaara, M. (2016). Choice and segregation in the 'most egalitarian' schools: Cumulative decline in urban schools and neighborhoods of Helsinki, Finland. *Urban Studies*, *1*, 17.

Bevir, M. (2012). *Governance: A very short introduction* (Vol. 333). Oxford University Press.

Biesta, G. J. (2004). Education, accountability, and the ethical demand: Can the democratic potential of accountability be regained?. *Educational theory*, *54*(3), 233-250.

Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education)*, *21*(1), 33-46.

Birkland, T. A. (2014). *An introduction to the policy process: Theories, concepts and models of public policy making*. Routledge.

Blanchenay, P., & Burns, T., (2015). Policy Experimentation in Complex Education Systems. *OECD Working Paper*.

Bonoli, G. (2005). The politics of the new social policies: providing coverage against new social risks in mature welfare states. *Policy & politics*, *33*(3), 431-449.

Borman, G. D., Hewes, G. M., Overman, L. T., & Brown, S. (2003). Comprehensive school reform and achievement: A meta-analysis. *Review of educational research*, *73*(2), 125-230.

Breiter, A., and Light, D. (2006). Data for school improvement: Factors for designing effective information systems to support decision-making in schools.*Educational Technology & Society*, *9*(3), 206-217.

Burns, T. F. Köster (eds.) (2016). *Governing Education in a Complex World*. Educational Research and Innovation. OECD Publishing. Paris.

Busemeyer, M., & Vossiek, J. (2015). *Reforming Education Governance Through Local Capacity-building*. OECD Publishing. Paris.

Campbell, D. T. (1979). Assessing the impact of planned social change. *Evaluation and program planning*, *2*(1), 67-90.

Capano, G., Rayner, J., & Zito, A. R. (2012). Governance from the bottom up: complexity and divergence in comparative perspective. *Public Administration*, *90*(1), 56-73.

Cerna, L. (2014a). The Governance of Innovation in Education. *Tanulmányok*. Neveléstudomány. 2014/2.

Cerna, L. (2014b), "Trust: What it is and Why it Matters for Governance and Education", *OECD Education Working Papers*, No. 108, OECD Publishing. http://dx.doi.org/10.1787/5jxswcg0t6wl-en

City of Helsinki (2014). Helsingin kaupungin tarkastuslautakunta: Arviointikertomus 2013. Tarkastusvirasto. ISSN 2323-8135.

City of Helsinki (2016). Helsingin peruskoulut lukuvuosi 2016-2017. Opetusvirasto. http://www.hel.fi/static/liitteet/opev/Helsingin_peruskoulut2016_2017.pdf . Accessed February 2nd, 2016.

Coburn, C. E., Toure', J., & Yamashita, M. (2009). Evidence, interpretation, and persuasion: Instructional decision making at the district central office. *The Teachers College Record*, *111*(4), 1115-1161.

Darling-Hammond, L. (2013). Inequality and school resources. *Closing the opportunity gap: What America must do to give every child an even chance*, 77.

Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business Press.

Dobbie, W., & Fryer Jr, R. G. (2013). *The medium-term impacts of high-achieving charter schools on non-test score outcomes* (No. w19581). National Bureau of Economic Research.

Elmore, R. F. (2005, June). Accountable leadership. In *The Educational Forum* (Vol. 69, No. 2, pp. 134-142). Taylor & Francis Group.

Elmore, R. F. (2002). Bridging the gap between standards and achievement: The imperative for professional development in education. *Secondary lenses on learning participant book: Team leadership for mathematics in middle and high schools*, 313À344.

Elmore, R. F. (2007). Let's Act Like Professionals. *Journal of Staff Development*, *28*(3), 31-32.

Esping-Andersen, G. (2013). *The three worlds of welfare capitalism*. John Wiley & Sons.

European Commission/EACEA/Eurydice (2015). Assuring Quality in Education: Policies and
Approaches to School Evaluation in Europe. Eurydice Report. Luxembourg: Publications Office of the European Union. doi:10.2797/65539 (EPUB)

Fazekas, M., & Burns, T. (2012). Exploring the complex interaction between governance and knowledge in education. CERI Working Paper. OECD Press. Paris.

FEEC (2004). Koulutuksen arvioinnin uusi suunta: Arviointiohjelma 2004–2007 [New directions
in educational evaluation: Evaluation programme 2004–2007]. Helsinki: University
of Helsinki, Koulutuksen arvointineuvoston julkaisuja 1.

Fritzell, J., Bäckman, O., & Ritakallio, V. M. (2012). Income inequality and poverty: do the Nordic countries still constitute a family of their own?. *Changing social equality The Nordic welfare model in the 21st century*.

Fukuyama, F. (2013). What is governance?. *Governance*, *26*(3), 347-368.

Fukuyama, F. (2004). Why there is no science of public administration. *Journal of International Affairs*, *58*(1), 189-201.

Fuhrman, S., & Elmore, R. F. (Eds.). (2004). *Redesigning accountability systems for education* (Vol. 38). Teachers College Press.

Galef-Brown, I. (2015). EMAIL INTERVIEW RESPONSES, YET TO CITE

Gillborn, D., & Youdell, D. (1999). *Rationing education: Policy, practice, reform, and equity*. McGraw-Hill International.

González-Sancho, C., Vincent-Lancrin, S. (2015). Transforming education by using a new generation of information systems. *OECD/CERI Working Paper. Draft*. June 9th, 2015.

Gorard, S. (2010). Serious doubts about school effectiveness. *British Educational Research Journal*, *36*(5), 745-766.

Hanushek, E. A. (1997). Assessing the effects of school resources on student performance: An update. *Educational evaluation and policy analysis*, *19*(2), 141-164.

Helsinki Department of Education (2013). Helsinki City Education Department in Figures 2013. Published online. http://www.hel.fi/static/opev/virasto/op_tilasto_2013_en/index.html . Accessed April 21st, 2016.

Helsinki Department of Education (2016). Yläaste PD-Indexit. Received electronically through private correspondence 4.1.2016.

Hooge, E., Burns, T., & Wilkoszewski, H. (2012). Looking beyond the numbers: stakeholders and multiple school accountability. OECD Publishing. Paris.

Hyötyläinen, M. (2015). On Cause and Effect: The Poverty of Finnish Segregation Research. Unpublished draft.

Jennings, J. L. (2012). The effects of accountability system design on teachers' use of test score data. *Teachers College Record*, *114*(11), 1-23.

Jennings, J., & Rentner, D. S. (2006). Ten big effects of the No Child Left Behind Act on public schools. *Phi Delta Kappan*, *88*(2), 110.

Jessop, B. (2002). Liberalism, neoliberalism, and urban governance: A state–theoretical perspective. *Antipode*, *34*(3), 452-472.

Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A general theory of network governance: Exchange conditions and social mechanisms.*Academy of management review*, *22*(4), 911-945.

Kauppinen, T. M. (2007). Neighborhood effects in a European city: Secondary education of young people in Helsinki. *Social Science Research*,*36*(1), 421-444.

Kauppinen, T. M. (2008). Schools as mediators of neighborhood effects on choice between vocational and academic tracks of secondary education in Helsinki. *European Sociological Review*, *24*(3), 379-391.

Koretz, D. (2008). Test-based educational accountability. Research evidence and implications. *Zeitschrift für Pädagogik*, *54*(6), 777-790.

Kosunen, S., & Seppänen, P. (2015). The transmission of capital and a feel for the game Upper-class school choice in Finland. *Acta Sociologica*, 0001699315607968.

Kosunen, S. (2016). Families and the Social Space of School Choice in Urban Finland. Doctoral Dissertation. University of Helsinki.

Köster, F. (2015). The Role of Teacher Review for Professional Accountability and Trust towards Teachers. *OECD Working Paper*.

Kumpulainen, K., & Lankinen, T. (2012). Striving for educational equity and excellence. In *Miracle of education* (pp. 69-81). Sense Publishers.

Kuusela, J. (2010). MetrOP–alueen kouluista toisen asteen yhteishakuaineiston perusteella. Teoksessa Rimpelä, Matti & Venla Bernelius (toim.): Peruskoulujen oppimistulokset ja oppilaiden hyvinvointi eriytyvällä Helsingin seudulla: MetrOP–tutkimus 2010–2013. Geotieteiden ja maantieteen laitoksen tutkimuksia B1, 38–43. Yliopistopaino, Helsinki.

Kuusela, J. (2004). Raportti Helsingin oppimistulosten arviointien ja kouluterveyskyselyjen yhdistämisestä. *Helsingin kaupungin opetusviraston julkaisusarja A, 3*, 2004.

Kuusela, J. (2006). Temaattisia näkökulmia perusopetuksen tasa-arvoon. Oppimistulosten arviointeja 2006: 6. Opetushallitus, Helsinki. 144 s.

Kvist, J., Fritzell, J., B. Hvinden, O. Kangas. (2012). *Changing social equality: the Nordic welfare model in the 21st century*. Policy Press.

Lankinen, M. (2001). *Positiivinen diskriminaatio: mitä se on?*. Helsingin kaupungin tietokeskus.

Law 628/1998. Basic Education Act.

Law 688/1992. Kuntien valtionosuuslaki. [The Act on Central Government Transfers to Local Government].

Law 365/1995. Kuntalaki. [Local Government Act].

Lingard, B., & Sellar, S. (2013). 'Catalyst data': perverse systemic effects of audit and accountability in Australian schooling. *Journal of Education Policy*,*28*(5), 634-656.

Mann, M. (1984). The autonomous power of the state: its origins, mechanisms and results. *European journal of sociology*, *25*(02), 185-213.

Mazurkiewicz, G., Walczak, B., & Jewdokimow, M. (2014). Implementation of a New School Supervision System in Poland. OECD Education Working Papers. 1993-9019 (online)

Mintrop, H., & Sunderman, G. L. (2009). Predictable failure of federal sanctions-driven accountability for school improvement—and why we may retain it anyway. *Educational Researcher*, *38*(5), 353-364.

Møller, J. (2009). School leadership in an age of accountability: Tensions between managerial and professional accountability. *Journal of Educational Change*, *10*(1), 37-46.

Nichols, S. L., & Berliner, D. C. (2005). The Inevitable Corruption of Indicators and Educators through High-Stakes Testing. *Education Policy Research Unit*.

O'Day, J. (2002). Complexity, accountability, and school improvement. *Harvard educational review*, *72*(3), 293-329.

OECD (2013). *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*. OECD Press. Paris.

Pekkarinen, T., Uusitalo, R., & Kerr, S. (2009). School tracking and intergenerational income mobility: Evidence from the Finnish comprehensive school reform. *Journal of Public Economics*, *93*(7), 965-973.

Pierson, C. (2007). *Beyond the welfare state?: the new political economy of welfare*. 2007 Edition. Penn State Press.

Prøitz, T. S. (2010). Learning outcomes: What are they? Who defines them? When and where are they defined?. *Educational assessment, evaluation and accountability*, *22*(2), 119-137.

Rhodes, R. A. (2000). *Governance and public administration* (pp. 54-90). Debating Governance: Authority, Steering and Democracy. Oxford: Oxford University Press.

Rinne, R. (2000). The globalisation of education: Finnish education on the doorstep of the new EU millennium. *Educational review*, *52*(2), 131-142.

Rinne, R., Kallo, J., & Hokka, S. (2004). Too eager to comply? OECD education policies and the Finnish response. *European Educational Research Journal*, *3*(2), 454-485.

Rothstein, B., & Teorell, J. (2008). What is quality of government? A theory of impartial government institutions. *Governance*, *21*(2), 165-190.

Rothstein, B. (2011). *The quality of government: Corruption, social trust, and inequality in international perspective*. University of Chicago Press.

Sabin, M. (2015, April 8). Sabin on the Dever McCormack School. Bostonians for Youth Gala. April 8th, 2015. As transcribed: http://www.trinityinspires.org/principal-mike-sabin-illustrates-the-needs-of-the-dever-mccormack-school/. Accessed: October 28th, 2015.

Sacerdote, B. (2011). Peer effects in education: How might they work, how big are they and how much do we know thus far?. *Handbook of the Economics of Education*, *3*, 249-277.

Sahlberg, P. (2007). Education policies for raising student learning: The Finnish approach. *Journal of Education Policy*, *22*(2), 147-171.

Sahlberg, P. (2010). The secret to Finland's success: Educating teachers. *Stanford Center for Opportunity Policy in Education*, 2.

Sahlberg, P. (2011a). *Finnish lessons*. Teachers College Press.

Sahlberg, P. (2011b). The Professional Educator: Lessons from Finland. *American Educator*, *35*(2), 34-38.

Schildkamp, K., Karbautzki, L., & Vanhoof, J. (2014). Exploring data use practices around Europe: Identifying enablers and barriers. *Studies in educational evaluation*, *42*, 15-24.

Seeleib-Kaiser, M. (Ed.). (2008). *Welfare state transformations: comparative perspectives*. Palgrave Macmillan.

Seppänen, P. (2003a). Miten ja miksi kouluvalintapolitiikka tuli Suomen peruskouluun 1990-luvulla?: kouluvalinnan lainsäädäntömuutokset sekä perustelut ja kritiikki kansainvälisessä valossa. *Yhteiskuntapolitiikka-YP 68 (2003): 2*.

Seppänen, P. (2003b). Patterns of "public-school markets" in the Finnish comprehensive school from a comparative perspective. Journal of Education Policy 18, no. 5: 513–31.

Seppänen, P. (2006). *Kouluvalintapolitiikka perusopetuksessa: suomalaiskaupunkien koulumarkkinat kansainvälisessä valossa*. Suomen kasvatustieteellinen seura.

Silliman, M. (2015). The Use of Data in the Governance of Education Systems (Working Paper).

Simola, H., Rinne, R., & Kivirauma, J. (2002). Abdication of the education state or just shifting responsibilities? The appearance of a new system of reason in constructing educational governance and social exclusion/inclusion in Finland. *Scandinavian Journal of Educational Research*, *46*(3), 247-264.

Simola, H., Rinne, R., Varjo, J., Pitkänen, H., & Kauko, J. (2009). Quality assurance and evaluation (QAE) in Finnish compulsory schooling: a national model or just unintended effects of radical decentralisation?. *Journal of Education Policy*, *24*(2), 163-178.

Sotkanet.fi (2015). Indicator: 74, 127, and 187. *Statistical information on welfare and health in Finland*. Published by the National Institute for Health and Welfare. https://www.sotkanet.fi/sotkanet/en/index

Snyder, S. (2013). The simple, the complicated, and the complex: educational reform through the lens of complexity theory.

Stoker, G. (2000). *Urban Political Science and the Challenge of Urban Governance* (pp. 91-110). Debating Governance: Authority, Steering and Democracy. Oxford: Oxford University Press.

SVT [Suomen virallinen tilasto] (2016a). Sijoittuminen koulutuksen jälkeen [verkkojulkaisu].
ISSN=1798-9442. Helsinki. Tilastokeskus [viitattu: 14.7.2016]. Saantitapa: http://www.stat.fi/til/sijk/index.html

SVT [Suomen virallinen tilasto] (2016b). Väestön ennakkotilasto [verkkojulkaisu]. ISSN=1798-8381. Helsinki: Tilastokeskus [viitattu: 1.2.2016]. Saantitapa: http://www.stat.fi/til/vamuu/index.html

SVT [Suomen virallinen tilasto] (2016c). Väestörakenne [verkkojulkaisu]. ISSN=1797-5379. Helsinki: Tilastokeskus [viitattu: 24.8.2016]. Saantitapa: http://www.stat.fi/til/vaerak/

Taylor-Gooby, P. (2004). *New risks, new welfare: the transformation of the European welfare state*. Oxford University Press.

UNESCO (2015). *The Education for All Global Monitoring Report*. UNESCO Publishing. Paris.

Vaznis, J. (2013, September 20). Schools facing takeover reflect on obstacles. Boston Globe. Retreived from https://www.bostonglobe.com, October 28th, 2015.

Vilmi, V. (2005). *Turvallinen koulu: suomalaisten näkemyksiä koulutuspalvelujen kansallisesta ja kunnallisesta priorisoinnista*. Jyväskylän yliopisto.

Weber, M. (1978). *Economy and society: An outline of interpretive sociology*. Univ of California Press.

Weber, M. (2009). Politics as a Vocation. First published 1919. *From Max Weber: essays in sociology*. Routledge.

West, A., & Ylönen, A. (2010). Market-oriented school reform in England and Finland: School choice, finance and governance. *Educational studies*, *36*(1), 1-12.

Yousfi, S. & Vilkama, K. (2010). Chapter 5: Regional settlement patterns and migration dynamics among immigrants in Finland. In *Immigration, housing and segregation in the Nordic welfare states*. Department of Geosciences and Geography, University of Helsinki.

Appendix I. Interview questions, in English and Finnish

Interview Questions (English):

City of Helsinki officials, members of the school board:

- My research centers on school funding. To begin, let's address the relationship between the state and the municipality. Does the municipality receive funding for schools from the state? If so, how much? And on what terms? Does the state monitor the city's performance on education?
- Within the city of Helsinki, how is money allocated between schools?
- Helsinki has employed a "positive discrimination" model of school finance ((since 2001)). When was it introduced? Why?
- Were there any precedents for such a model? Where did the idea come from?
- Where was the decision to introduce the model made? In the city council?
- Were there any disagreements/criticisms of the plan?
    - What were the criticisms?
    - At which point in the decision process did these arise?
    - Who made the criticisms? A political party... etc?
- How does it work? What are its goals?
- What data is the model calculated on?
- When the model was first implemented in 2001, the eight sources of data for the model were ... has the model changed? If so, how?
- Did these changes require new data to be gathered at the municipal level?
- What was the political process like in determining the changes in the model? Who had say in the process? School leaders, city politicians, parents?
- How did the idea to use the model first emerge?
- Is the model and data publicly available? Who has access to it? Principals? Parents?
- As an American, I have to ask, are there incentives for schools to improve their performance using the finances?
- How are schools held accountable to use these additional PD resources effectively?

- Despite Finland's reputation for both high quality education and equality in performance results, the best and worst schools in the country are claimed to be in Helsinki. Does the city have any other policies to combat the uneven performance of schools?
- How does PD funding fit within the framework of these other policies?
- As more and more immigrants from various cultures come to call Helsinki home, is there a way to monitor performance of students from these various groups?
- As part of this research, I will also interview principals in schools receiving PD funding, can I have access to a list of schools receiving funding? Are there any schools you recommend I get in contact with? /if so why?

School Principals
Context:

- Could you tell me about your school?

- How does it compare to other schools in Helsinki?
- Where do your students come from? Are they local?
- What are the strengths of your school?
- What are the primary challenges your school faces? What do they stem from?
- Do these differences between your school and other schools stem from differences in the neighborhood? What about the challenges your school faces?

PD funding:

- Your school receives PD funding. Can you tell me about what this funding is?
- What are its aims?
- Did the funding come with any specific guidelines for its use?
- How is the funding used in your school?
- How were these uses decided upon?
- Is there a target population of students?
- Have you observed an impact on specific groups of students?
- Have levels of funding changed over the last years? How have these changes impacted your school?
- Does the city hold you accountable by asking you to demonstrate what the funding is used for?
- What data/metrics do you use to demonstrate effective use of funding?
- What are the consequences of failing to sufficiently demonstrate its effective use?
- Do you see the current level of funding as sufficient to meet the challenges your school faces?
- Do you have anything to add regarding PD funding?

Teachers

Context:

- Could you tell me about your school?
- How does it compare to other schools in Helsinki?
- Where do your students come from? Are they local?
- What are the strengths of your school?
- What are the primary challenges your school faces? What do they stem from?
- Do these differences between your school and other schools stem from differences in the neighborhood? What about the challenges your school faces?

PD funding:

- Your school receives PD funding. Can you tell me about what this funding is?
- What are its aims?
- Did the funding come with any specific guidelines for its use?
- How is the funding used in your school?
- How were these uses decided upon?
- Is there a target population of students?
- Have you observed an impact on specific groups of students?
- Have levels of funding changed over the last years? How have these changes impacted your school?
- Are you held accountable to demonstrate how you meet the aims of PD funding?
- What data/metrics do you use to demonstrate effective use of funding?
- What are the consequences of failing to sufficiently demonstrate its effective use?
- Do you have anything to add regarding PD funding?

Haastattelu kysymykset (Suomeksi) (Interview questions in Finnish)

Opetuslautakunta:

- Ennenkun kyselen tarkemmin koulujen rahoituksesta olisi varmaan hyvä saada selville miten opetuslautakunta yleensä toimii. Miten uusia ideoita yleensä tuodaan esiin ja kehitetään?
- Kuka on vastuussa kehittää tarkempia suunnitelmia: ulkopuoliset asiantuntijat vai lautakunnanjäsenet?
- Miten asioista sit päätetään? Äänestämällä?
- Onko mahdollisuuksia muokata päätösten yksityiskohtia?

- Tutkimukseni keskittyy koulutuksen rahoitukseen. Mistä Helsingin koulujen rahat tulevat? Ja kuka niiden määrästä päättää?
- Tukeeko valtio Helsingin kunnan koulutusta?
- Millä termeillä? Seuraako valtio Helsingin koulujen menestystä tai kehitystä?
- Päättääkö opetuslautakunta koulutusrahojen käytöstä, vai missä asiasta päätetään?
- Minkä perusteella Helsingin sisällä päätetään kuinka yksittäisiä kouluja rahoitetaan?

- Helsingillä on käytössä "positiivisen diskriminaation" rahoitusmallin ((since 2001/2007)). Voisitko kertoa vähän siitä mallista?
- Mitkä sen tavoitteet ovat?
- Oliko samankaltaisia malleja käytetty ennemmin Helsingin kaupungissa? Mistä idea tänne tuli?
- Miten PD rahoitusmallin käytöstä päätettiin? Opetuslautakunnassako?
- Oliko siitä erimielisyyksiä?
    - Minkälaisia?
    - Missä kohtaan erimielisyykset tulivat ilmi?
    - Ketkä (puolueet) toi näitä ilmi? Ajoiko tietyt poliittiset puolueet näitä?
- Kun mallin ekaksi otettiin käyttöön vuonna 2001, se perustui: "yksinhuoltajien osuus lapsiperheissä, vuokra-asuntojen osuus asuntokannasta, matalan koulutustason osuus yli 15v., kaupungin vuokra-asukkaiden osuus asukkaista, alueen yleinen työttömyysaste, toimeentulotukea saaneiden osuus, lastensuojelun piiriin tulleet uudet lapset, lapsiperheiden tulot" - mitä varten mallia muutettiin vuonna 2007?
    - Ketkä muutoksesta päätti?
- Miksi malli ei perustu testituloksiin tai vastaaviin?
    - Vaikuttaako datan (testitulosten) pula mallin nykyiseen tilaan?
- Seuraako opetuslautakunta koulujen oppimistuloksia systemaattisesti?
    - Miltä vaikuttaa?
- Onko malli julkaistu avoimesti kaikkien nähtäväksi?
    - kenellä on lupa nähdä mallia? rehtoreilla? vanhemmilla? oppilaille?
- Amerikkalaisena minun on kysyttävä jos rahoituksen mukana on kannustimia?
    - pidetäänkö kouluja "accountable" (velvollisia?)

- Vaikka Suomen koulutusta pidetään olevan huipputasoa, sekä maan parhaiten pärjäävät koulut että sen heikoimmin pärjäävät koulut löytyvät Helsingistä. Onko kaupungilla muita tapoja tukea heikoimpien koulujen menestystä?
    - Miten PD rahoitusta käytetään näiden muiden konstien avuksi?

- Sanooko "tavallista-paremmat oppimistulokset" hanke mitään? Onko sen tuloksia käytetty kehittämään PD rahoitusmallia?
- Osana tätä tutkimusta aion myös haastatella noin viiden koulun rehtoria - Onko joitain kouluja tai rehtoreita joihin suosittelet minun ottavan yhteyttä?

Koulujen rehtorit

Konteksti kysymykset:
- Voisitko kertoa minulle teidän koulustasi?
- Miten se erottuu muista Helsingin kouluista?
- Mistä koulun oppilaat tulee (oppilaanottoalueelta vai kauempaa)? Missä he asuskelevat?
- Mikä on teidän koulun vahvuus?
- Mikä on teidän koululle haasteellisinta? Mistä nämä haasteet johtuu?

PD rahoituksesta:
- Koulu saa PD rahoitusta. Voitko selittää mitä tämä on?
- Mitkä sen tavoitteet ovat?
- Tuliko rahoituksen kanssa mitään tarkempia määräyksiä liittyen rahan käyttöön?
- Miten tätä rahoitusta käytetään tässä koulussa?
- Miten rahan käytöstä (esim opetus-avustajiin, tai resursseihin) päätettiin?
- Onko koulun sisällä tarkempi kohderyhmä tälle rahoitukselle (esim he ketkä eivät osaa Suomea yhtä hyvin, etc...)?
- oletko huomannut että nämä kohderyhmät ovat parantaneet oppimis-saavutuksia sen jälkeen kun PD rahoitus otettiin käyttöön?
- onko rahoituksen määrä vaihdellut vuosien mukaan? Miten tämä on vaikuttanut koulun käytäntöön?
- Pitääkö kaupunki/opetuslautakunta koulua velvollisena (accountable) näyttämään/todistamaan rahan vaikutuksia? Millä tavalla?
- mitä aineistoa käytätte raportoimaan rahan käyttöä? /kenelle?
- Onko mitään seurauksia jos ette pysty näyttää mitä rahalla on saatu aikaan?
- Onko teidän mielestä PD rahoituksen määrä riittävä koulun haasteisiin?
- Onko mitään lisättävää PD rahoituksesta ja sen hallinta-prosessista?

Opettajat

Konteksti-kysymykset:
- Voisitteko kertoa minulle koulustasi? Miten se eroaa muista Helsingin kouluista?
- Mistä koulun oppilaat päämääräisesti tulevat (oppilaanottoalueelta vai kauempaa?)?
- Mikä on teidän koulun vahvuus?
- Teidän silmissä, mikä on teidän koululle haasteellisinta? Mistä nämä haasteet johtuu?

PD rahoituksesta:

- Koulu saa PD rahoitusta. Voitko selittää mitä tämä on?
- Mitkä ovat sen tavoitteet?
- Miten tätä rahoitusta käytetään tässä koulussa?
- Miten rahan käytöstä (esim opetus-avustajiin, tai resursseihin) päätettiin?
- Onko koulun sisällä tarkempi kohderyhmä tälle rahoitukselle (esim he ketkä eivät osaa Suomea yhtä hyvin, etc...)?
- oletko huomannut että nämä kohderyhmät ovat parantaneet oppimis-saavutuksia sen jälkeen kun PD rahoitus otettiin käyttöön?
- Tuliko rahoituksen kanssa mitään tarkempia määräyksiä tai muita velvoitteita?
- Miten opettajia pidetään velvollisina siihen että te saavuttavat koulun tavoitteet liittyen PD rahoitukseen?
- Onko mitään seurauksia jos ette pysty näyttää mitä rahalla on saatu aikaan?
- Onko teidän mielestä PD rahoituksen määrä riittävä koulun haasteisiin?
- Onko mitään lisättävää PD rahoituksesta ja sen hallinta-prosessista?

Appendix II. Descriptive statistics on post lower-secondary enrollment in Helsinki

Table 6. Total school level lower secondary school enrollment in further education (vocational and high school) upon graduation, Helsinki 2000-2013

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015
Mean	0.82	0.82	0.85	0.86	0.86	0.85	0.85	0.85	0.88	0.87	0.84	0.85	0.85	0.89	0.88
Min.	0.52	0.63	0.68	0.37	0.62	0.63	0.63	0.46	0.74	0.70	0.65	0.59	0.62	0.77	0.76
Max.	0.96	0.96	0.97	0.96	1.00	0.97	1.00	0.99	0.98	0.97	0.97	0.96	0.98	1.00	0.97

Table 7. School level lower secondary school enrollment in high school upon graduation, Helsinki 2000-2013

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mean	0.59	0.60	0.61	0.63	0.62	0.60	0.59	0.59	0.59	0.60	0.58	0.59	0.59	0.62
Min.	0.21	0.31	0.26	0.20	0.24	0.28	0.22	0.20	0.23	0.17	0.23	0.21	0.29	0.30
Max.	0.87	0.89	0.88	0.92	0.93	0.87	0.90	0.88	0.87	0.91	0.91	0.86	0.90	0.86

Table 8. School level lower secondary school enrollment in vocational school upon graduation, Helsinki 2000-2013

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mean	0.23	0.23	0.25	0.23	0.25	0.25	0.25	0.26	0.29	0.27	0.27	0.25	0.26	0.27
Min.	0.05	0.05	0.02	0.02	0.04	0.04	0.06	0.05	0.06	0.06	0.04	0.08	0.07	0.09
Max.	0.53	0.52	0.51	0.59	0.52	0.51	0.45	0.51	0.58	0.54	0.46	0.44	0.51	0.54