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Data and Decision-Making: The Role of Indicators in Addressing Segregation in Helsinki and Oslo

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Abstract

This thesis discusses the role of indicators in segregation policies in the Nordic countries, specifically focusing on urban planning in Helsinki and Oslo. The use of indicators has gained increased popularity in policy-making, but their role in decision-making is less explored. By applying a qualitative approach, the study first finds that "problem definition" of segregation is significantly different in the two cases. Second, the study finds that the function of indicators are clearly aligned with the problem definition of segregation in each case, whether as a neighborhood problem, or a city-wide issue reproduced in several domains. Third, the study finds that policies in each city emphasize the need for indicators, but that practitioners find the utility of indicators in decision-making to be ambiguous in practice.

Sammendrag

Denne oppgaven utforsker indikatorers rolle i utforming av strategier og tiltak mot segregering i de nordiske landene, med fokus på planlegging i Helsinki og Oslo. Indikatorer har fått et økt fokus i planlegging, men innvirkningen de har på beslutningstaking er lite studert. Gjennom en kvalitativ tilnærming finner studien at "problemdefinisjonen" av segregering er vesentlig forskjellig i de to byene. Videre finner studien at indikatorene understøtter problemdefinisjonen av segregering, som enten et nabolagsproblem, eller en byomfattende utfordring. For det tredje finner studien at behovet for indikatorer er understreket i plandokumenter, men at nytten av indikatorer er i praksis mindre tydelig.

Preface

The beginning of this thesis project started during my internship at Nordregio, during the fall of 2022. Nordregio is a research institute under the Nordic Council of Ministers specializing in regional development, policy and planning. As an intern I was involved in the research project [*Planning for Socially Mixed and Inclusive Neighborhoods*](#), which seeks to deepen the understanding of different types of approaches and interventions for creating more socially inclusive cities in the Nordic countries. The topic of the thesis – the use of indicators to support policy and planning interventions – is among one of five themes in the research project and I am grateful for having been offered the time and space to explore this topic together with members of the urban research team.

For clarification: while the research project of Nordregio and this thesis are topically related and some of the empirical data (interviews) presented here are based on a collaborative effort, these are two separate projects. The views and flaws in this document are my own.

I would like to express my gratitude to my internship mentor at Nordregio, Mats Stjernberg, for taking me on as an intern, providing me with interesting material and insightful discussions. It is a rare pleasure to get to communicate in four languages interchangeably, so Mats, thank you! tuhannet kiitokset! tack så hemskt mycket! og tusen, tusen takk! A big thank you also goes out to the rest of the wonderful people at Nordregio, for what has been the most enjoyable crash course into so many topics ranging from social housing policies in the Nordics, bio-economies in the Baltics, the impact of COVID-19 on borderland communities, historical quirks in planning systems, and so much more.

I also want to express my deepest gratitude to my supervisor at NMBU, Roberta Cucca, for always being encouraging and supportive, offering sound advice, and keeping me from tumbling down too many rabbit holes.

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1. Introduction

The increasing inequality seen globally and its spatial manifestation – segregation – is considered among the biggest urban challenges of the 21st century (United Nations, 2022). From a global perspective, the Nordic countries are considered highly egalitarian with low levels of segregation. While this comparative statement is valid, it offers little insight into the extent or concerns regarding segregation in the respective countries. Over the last few decades, segregation has been increasingly acknowledged on political agendas in Sweden, Denmark, Norway and Finland (Haarstad et al., 2021; Tunstrøm et al., 2016).

In public debates, segregation is often associated with neighborhoods that have developed into areas of concentrated poverty, criminal activity, and social unrest. While these challenges are acute, there are also other reasons for concern. Research has highlighted how segregation also drives inequalities in education (Anderson et al., 2010; Brattbakk and Wessel, 2012), income (Andersson and Malmberg, 2016; Toft, 2017), and health (White et al., 2016; Merlo et al. 2013, Visser et al., 2021). While there are differences in segregation patterns between and within the countries, the growing amount of evidence from recent studies suggests that the Nordics are no exception to the rising trend of segregation globally (Andersson et al., 2018; Kortteinen, 2022; Tammaru et al., 2015). This development profoundly challenges the welfare states' ideals of equality, social mobility, and inclusion.

The policy responses and strategies to address problems of segregation have differed significantly between the Nordic countries. Granted the idiosyncrasies in planning instruments, housing systems and historical migration patterns, some differences are to be expected. Nevertheless, these contextual factors are only part of the explanation. A recent analysis of segregation policies in the Scandinavian countries¹ found that differences in factual, explanatory, and normative claims about segregation have led to distinct problem definitions (NIBR, 2018). In other words, both approaches and strategies towards tackling segregation also differ because the challenge is diagnosed differently in each country.

This thesis is a comparative study that examines the role of indicators in affecting the trajectories of policy making towards urban segregation in two Nordic capitals - Oslo, Norway and Helsinki, Finland. The thesis explores how data from indicators is collected and applied,

¹ Scandinavia refers to Norway, Sweden and Denmark.

compares the case study's strengths and weaknesses, and identifies their biases and their potential consequences on policy making towards tackling segregation.

Indicators are the quantifying and categorization of regional and demographic data, which in turn helps to both identify existing issues and makes it possible to make more informed decisions in addressing them. As states have a long history of using demographic data to inform policies, indicators have also been referred to as "purposeful statistics" (Horn, 1993, p. 7), and form part of a set of "diagnostic tools" in urban planning and policy making.

While there is a long research tradition of how to quantify social conditions and segregation, there are few empirical studies documenting their actual use and potential impact on planning decisions and outcomes. In addition, frameworks of categorization and the process of being categorized are both subjective: who belongs with whom, and thereby differs from others are contentious questions. In this way, how indicators become tools to support policy has less to do with existing data, and more to do with the decisions that determine what makes them purposeful. In the case of measuring segregation, the demarcation of geographical areas, construction of social groups, and criteria for critical thresholds can have serious consequences on how segregation is understood.

The thesis focuses on these cities because the consequences of segregation in Norway and Finland have not been as divisive as in cities in Denmark and Sweden. Indeed, the entrenchment of segregation is also not as serious. However, growing and more diverse populations in both Oslo and Helsinki may mean indicators could have an important role in governance, therefore the opportunity to reckon with current practices could widen our understanding of specific demographic needs, and identify potentials and limitations of indicators. As such, these case studies are a topic worthy of investigation, and might contribute as a springboard for future discussions to this emerging research area.

The research agenda is outlined below.

1.1 Research agenda

The main research question of the study is: **What is the role of indicators in segregation policies?**

To support the analytical process, four sub-questions have been proposed:

Sub-question 1: **How is segregation defined as a policy problem?**

Segregation is a complex phenomenon that can be understood in various ways, across different domains and dimensions. Its mechanisms and outcomes are also contingent on various drivers.

Sub-question 2: **How does the definition of segregation correspond to indicators? How do indicators shape how segregation is understood?**

Different methods and indicators will be applied depending on how segregation is defined. The choice of methods will in turn reinforce how segregation is understood.

Sub-question 3: **How are indicators used in decision-making?**

A current expectation towards planning is that decision-making follows a knowledge-based approach. At the same time, policy-making are windy processes where final decisions are ultimately value judgments operating within distinct planning systems.

Sub-question 4: **How can indicators inform policy?**

Drawing on academic literature and findings from the two cases I will discuss how indicators might support, or even challenge, current policy aims.

1.2 Relevance

A few weeks ahead of the Swedish general elections in 2022, an article with the headline “Is segregation increasing in Sweden?” appeared in Dagens Nyheter, the national newspaper of record. The answer to the headline was summarized in three points at the bottom of the article:

1. *The conclusions about the extent and development of residential segregation depend on which measure we use.*
2. *The distribution of non-Europeans born across residential areas has not become more uneven since 1990. However, the group of non-Europeans born in Sweden has increased significantly – from 2 to 11 percent.*
3. *Socio-economic housing segregation has increased over time. The size of the increase varies between different studies. According to one analysis, segregation increased from 1990 until the early 2010s. After that, development seems to have stopped.*

(Dagens Nyheter, 21.08.2022, translated from Swedish)

This article helpfully demonstrates two pertinent themes of my thesis. Firstly, the summary’s first point explicitly recognizes the subjectivity of measures, by demonstrating how two of the most common measurements for segregation arrive at different conclusions. For researchers, this is far from news: debates around which quantitative methods (and the theories that support them) provide the most accurate description of segregation have been so persistent that the term “index wars” was coined to describe three decades of scholarly discussion (Peach, 1975). As will be addressed in the next chapter, these debates have not come to a consensus and are still ongoing. As such, my aim is not to engage further in these methodological discussions of which indicators are the “best”, but rather take a qualitative approach to discuss the actual selection, use, and potential consequences of indicators.

Furthermore, while topically engaged with improving understanding of political issues around the election, this article identifies how different indicators can draw different conclusions and how they can be used to support different political narratives, but stops short of pointing out what the choice of indicator would mean for policy outcomes – if anything at all. From contextualizing its position as the highest-circulated newspaper in Sweden, I think this

unreported link is important because it highlights how the consequential relationship of using indicators to make policies may not be so widely understood.

1.3 Positioning in research literature

Broadly speaking, the academic discussion on the use of indicators in governance can be divided into two strands. On one side is a critical stance that considers the technocratic use of statistics and rational methods as a means to achieve political and epistemic authority (Morse, 2013). In this view the indicators limit public discussion, transparency and invalidate other types of knowledge. Undoubtedly, further scrutiny is needed on the policy implications of increasing indicators and the move towards “governance by data” (Bartl et al., 2019).

On the other side is a more optimistic stance that considers indicators as a necessary tool to clarify goals, support decision making and ensure progress. This strand of literature has accelerated with the pursuit of providing a range of development measurements used by institutions across territorial scales, from supranational organizations such as the United Nations, European Union, OECD to national, regional and local institutions, across private and public sectors alike.

The main pursuit on the “advocacy side” of indicator research is to advance scientific validity and increase policy-relevance (Lehtonen et al., 2016). An emerging field within indicator research has, however, challenged some of the underlying assumptions of the purely instrumental value of indicators in policy making (Turnhout et al., 2007; Lyytimäki, 2019). These studies have highlighted that the intended functions and actual use of indicators are not necessarily aligned, and that indicators might have other unintended roles. This thesis is positioned in this emerging field, adding to the empirical literature of how indicators influence policy formulation. The thesis does not aim to suggest a “correct” or better use of indicators, nor does it attempt to evaluate segregation policies. Adopting a less normative perspective the thesis examines the link between the two.

To keep the scope at a manageable level, I will not dwell on the broader dynamics between knowledge, power and technology. The approach is rather pragmatic, based on the assumption that indicators can be both legitimate and valuable tools in policy-making while acknowledging

their potential to shape political narratives and normative ideas. In doing so, particular attention will be given to the experiences of policy-makers and what they, as expert users, perceive to be the biggest benefits, limitations and possible risks of indicators. In this way I hope to provide lessons that can be of interest to planners and other policy-makers and to contribute to the discussion of how segregation is operationalized and addressed in planning.

1.4 Scope

To narrow the scope, the cases focus on planning at the municipal level (both cities operate as municipalities). Two things should be mentioned here. First, planning is not the only public sector that addresses segregation. For instance, policies from other sectors such as immigration/integration, public health and labor also address social exclusion and segregation in Norway and Finland (Stjernberg et al., forthcoming Nordregio report, 2023).

Second, municipal planning in Norway and Finland are embedded within a larger hierarchical planning system, meaning municipalities respond to national and regional guidelines. Higher levels of planning will, however, not be discussed at length as neither country has specific guidelines of how to address segregation. As such, the municipalities are at liberty to develop strategies as they see fit. At the time of writing, central authorities in both countries are, however, currently considering their role in tackling segregation, recognizing that municipalities might not have sufficient means to do so, and the development of national indicators is therefore on the political agenda (ibid). Comparing the national indicators will be an interesting topic for future research.

1.5 Structure of thesis

The thesis is structured into seven chapters. In Chapter 1, I have outlined the background, research agenda, relevance and scope of the research project. Chapter 2 forms the theoretical foundations, whereas Chapter 3 describes the methods and limitations of the study. Chapter 4 presents the empirical findings from the Helsinki case followed by the Oslo case in Chapter 5. Comparisons and discussions of the findings are presented in Chapter 6. Chapter 7 summarizes and concludes the research findings.

A note on terminology

This thesis makes frequent use of the term “Nordic countries” or simply “the Nordics.” The common definition includes Denmark, Finland, Norway, Sweden, Iceland as well as Faroe Islands, Greenland and Åland. Given the smaller populations on Iceland and the autonomous islands, segregation in these places has not received as much political or academic attention. I will however make several references to research from Denmark, Finland, Norway, and Sweden. For practicality I have chosen to use the term Nordics as a shorthand for these four countries.

2. Theoretical foundations

This chapter introduces the theoretical concepts that will support the analysis of the empirical data and provide a framework for discussion. The first part reviews literature on segregation, while the second part presents theories from indicator research, addressing policy implications in general and challenges with segregation indicators in particular.

Both areas of research contain a vast body of literature and it has been a challenge to limit the selection. The literature on segregation was especially difficult to narrow down. In the end I have chosen breadth over depth and the chapter will provide snippets from an eclectic selection of literature. Whilst the systematic approach to segregation studies and many of its seminal theories can be traced back to the sociologist of the Chicago School in the early decades of the 20th century, I draw predominantly on literature from the last couple of decades that focus on Nordic and Western-European contexts. A selection of articles from Helsinki and Oslo are included, but the chapter is not intended to provide a systematic overview of the research literature.

2.1 What is segregation?

In urban studies and sociology the term segregation is commonly associated with *residential segregation*, which can be defined as: “the degree to which two or more groups live separately from one another, in different parts of the urban environment” (Massey and Denton, 1988, p. 282). In this thesis I use the term segregation to refer to both residential segregation and *spatial segregation*, the latter being a broader definition that applies to the spatial patterns in the distribution of entities of any kind (Rasse, 2019). This definition is useful as it places residential segregation as one of many lenses to study segregation. As several scholars have recognized, segregation is not limited to the residential domain, but tends to be reproduced in multiple domains of life such as education, work, leisure, transport and other activity spaces (Piekut, 2021; Boterman & Musterd, 2016). Although I expect policymakers in planning to be most concerned with residential segregation (and therefore a considerable part of this chapter is dedicated to the subject) a broader definition is fitting given the first subquestion: How is segregation defined as a policy problem?

2.1 Dimensions of segregation

Segregation research has typically focused on studying groups along three dimensions: ethnicity/race, socio-economic status/class or demographic characteristics (age, gender, household composition etc.). The latter dimension did not appear as particularly relevant in the case studies as the empirical data did not touch upon this topic and therefore I will only address socio-economic and ethnic segregation.

2.2 Why does segregation matter?

While some researchers argue that segregation is inherently neither good nor bad (Rasse, 2019), high levels of segregation have detrimental consequences on the individual and society.

The detrimental and unequal burdens that segregation has on individuals relate to studies of *neighborhood effects*. This topic concerns how social and environmental conditions of the neighborhood affect outcomes in life, for instance social mobility, health related issues and educational attainment (Brattbakk, 2014). While neighborhood qualities and socio-economic characteristics of groups frequently correlate, there are various theories as to how and especially to which extent neighborhoods affect individuals. In Helsinki, one study found no effect on the completion of secondary education, but found an effect of the type of education (Kauppinen, 2007), indicating “softer” neighborhood effects. In Norway, Brattbakk (2014) and Brattbakk and Wessel (2013) found small but significant effects of neighborhood deprivation on educational achievement and income. While most studies have focused on the negative effects of disadvantaged areas, studies on affluent neighborhoods show a similar relation, that affluence in the neighborhood increases positive outcomes in life (Toft & Ljunggren, 2016).

In addition to concerns over neighborhood effects, political attention has been triggered by the consequences that extend beyond those felt by segregated minorities. Most publically, civic movements, social unrest and riots have underlined the insidious effects of segregation on society's broader political, social, and economic health. Incidents of violent riots in Swedish cities, of which some had fatal outcomes, have conjured images of worst-case scenarios among the other Nordic countries, nick-named as “Swedish conditions” (Haarstad et al., 2021). The

exclusion of groups through segregation is increasingly considered a threat to social cohesion which can lead to “parallel societies”. In Oslo and Helsinki this impending risk seems to have been amplified by media and political debate rather than grounded in research (Farner Rogne et al., 2022; Andersen, 2019; Kirsi, 2020).

2.3 Drivers of segregation in the residential domain

2.3.1 Socio-economic segregation

Socio-economic segregation in the residential domain refers to the settlement patterns that emerge in the distribution of population groups based on differences such as income, education, occupation, and social status. Widely researched, the underlying causes have been ascribed to the impact of larger structural forces in society in combination with individual choices of households. Here, I will draw on a recent article which identifies five structural factors that shape segregation patterns, namely the organization of housing systems, housing policies in combination with urban morphology, migration dynamics, area-based interventions, and social inequality (Haandrikman et al., 2021). It should be noted that these are not strict categories, but overlapping mechanisms that work together.

First, the organization of housing systems has implications on segregation as different as different tenure forms have different qualities and conditions for access. Therefore the stratification in tenure forms can be a driver of segregation. Generally speaking small shares of social housing tend to be associated with higher levels of socio-economic segregation (Musterd, 2005). With the liberalization of housing systems in Europe the influence of markets has increased over time. These changes have, in particular, increased the mobility of the more affluent groups. The link between housing segmentation and segregation is, however, not predictive. For instance, Arbaci (2007) has found that the Nordic welfare states have lower housing market segmentation but, simultaneously, a relatively high degree of spatial segregation. She argues that the structure of the building and housing sector with large builders, developers, and owners has promoted the development of large urban areas with homogeneous tenures and building types, which has promoted spatial segregation of tenures.

Second, the way in which housing policies combined with urban morphology have driven segregation has been particularly evident in suburbs. During the 1960s and 1970s era, many European cities developed large housing estates along the urban fringes, including Helsinki and Oslo. While these areas attracted younger native populations at first, several estates have been partially replaced by more disadvantaged groups over time (Ljunggren, 2017; Stjernberg, 2019). Large renewal projects in more recent decades, have on the other hand been characterized by high property prices. The segregation of affluent households is therefore more driven by choice, such as preferences for high-quality housing, affluent neighbors and location, while the poorest groups generally end up in more disadvantaged neighborhoods with cheaper housing.

Third, higher levels of wealth distribution is often linked to lower levels of socio-economic segregation, meaning populations in more liberalized countries are often more segregated than those of welfare states with stronger redistribution policies (Haandrikman et al., 2021). However, the relationship between social inequality and socio-economic segregation is not always linear (Arbaci, 2007). For instance, despite major increases in wealth disparities, the pattern and level of socio-economic segregation can remain stable (Haandrikman et al., 2021). Similarly, cities with the highest income inequalities are not necessarily the most segregated (ibid). While socio-economic inequalities can – and often do – reinforce segregation, increasing inequality is not always spatially mirrored. Therefore social inequality alone can not be considered a predictable indicator of segregation.

Fourth, the interrelations of migration flows and segregation has also been studied. For instance, large increases in migration flows over shorter spans of time have been shown to contribute to both socio-economic and ethnic segregation (Haandrikman et al., 2021). The link between migration and segregation may be also related to the cities' global connectedness (Musterd et al., 2016; Sassen, 2001). The more connected a city is, the more it attracts affluent workers for high-profile jobs in companies and international institutions but also low-skilled workers to the consumer service sector.

Fifth, initiatives that target resources to specific geographical areas to alleviate disadvantages, known as area-based interventions (ABIs), can affect segregation. This is however largely dependent on the aims, organization and execution of ABIs. For instance, interventions that are directed towards increasing social mix, through tenure conversion or new housing construction have not always been successful in reducing segregation (Haandrikman et al., 2021). Tenure

mix, is however not always a goal in ABIs, and interventions can have a compensatory goal of improving public services or physical conditions (Andersen & Brattbakk, 2020). In either case ABIs can also lead to displacement of lower income groups, whether by intentional tenure conversion, or through gentrification processes that follow from increased attractiveness of physical upgrades in the areas (Ekne Ruud, Barlindhaug, & Balke Staver, 2019).

2.3.2 Ethnic segregation in the residential domain

Ethnic segregation refers to the segregation of minority and majority groups along dimensions of ethnicity, race and religion. In the European segregation literature, studies tend to focus on the unequal access to goods, services, and opportunities that ethnic minorities and immigrant groups face compared to the native majority population. In the Nordic countries a clear concern has been the documented tendency of immigrants and their descendants to be overrepresented in underprivileged areas (Andersson et al., 2010). This kind of double segregation is also the outcome of several mechanisms that vary between contexts.

The length of residence in the host country often correlates with income levels, where income is typically lowest among newly arrived groups (Andersson et al., 2010). The clustering of ethnic minorities is therefore partly linked to their socio-economic status and access to different housing. Besides material resources the access to housing can also be influenced by discrimination, social networks and the transparency of housing systems (ibid).

While some studies suggest that minority groups show a preference to “self-segregate”, the moving patterns of majority populations should not be underestimated (Kauppinen & van Ham, 2018). Indeed, “white flight” (native out-migration) and “white avoidance” (native in-migration) as a response to increasing neighborhood diversity is in many cities found to be a stronger driver of segregation than the selective intra-urban migration patterns of minority groups, including Helsinki (ibid). In Oslo the concentration of the predominantly native and wealthy in some areas has given rise to the concept of “golden ghettos” (Ljunggren et. al., 2017).

From a policy perspective successful mixing of ethnic groups is often seen as desirable as regular interaction between different ethnic groups is believed to foster trust, reduce prejudice and promote integration (Andersson et al, 2018). However, in some cases, the opposite effect

has also been documented (ibid), where particularly fast changes in residential composition has led to alienation among both minority and majority groups.

2.4 Conceptualizing segregation – debates in the 21st century

This section sheds light on some of the more recent discussions on how segregation is measured and conceptualized. Most relevant to the thesis are two areas of research: spatial concerns relating to scale, and the domains of segregation outside the residential sphere.

2.4.1 Scales

Residential segregation has traditionally been studied at a single spatial scale: on national, metropolitan regions, cities, or census tracts, as statistical data is commonly obtained at different administrative levels. A big issue is that different scales provide different outlooks on the level of segregation. In general, the smaller the area, the more segregated it seems. This problem is known as the modifiable areal unit problem (MAUP). To overcome this problem, multiscale methods have been developed, made possible by the increasing access to geocoded information. These have made it possible to study the same characteristics of the neighborhoods from a multiscale perspective (Andersson et al., 2018).

Using a multiscale approach Andersson and Malmberg (2015) found that role models, norms, and peer effects on educational outcomes are three times greater in the smallest individualized neighborhoods than within administrative boundaries in Sweden. Similarly, a study on voting behavior in the UK found that the most significant differences in voting turnout followed social classes, but that these were detected only at the smallest scale levels, according to the socio-economic status of their individualized neighborhood (MacAllister et al., 2001). For urban and regional policy-makers a particularly interesting finding was made by Krupka (2007) in a study that challenges commonly held views of segregation being mainly a big-city problem. By using smaller areas of analysis the relative difference in segregation between metropolitan areas and smaller towns proved to be smaller than assumed.

There are also theoretical arguments that support the multiscale approach. Fowler (2015) argues that segregation is inherently multiscale – a continuous function where smaller units are embedded in larger spatial contexts. Over an individual's life course, the size of the

neighborhood relevant to the individual may increase, and depending on the type of segregation, different scales may apply. While the local level may be the most appropriate scale level for children, larger spatial scales become more important later in life when activities and social networks extend beyond neighborhood borders (Andersson and Musterd, 2010). In a related manner segregation outside the residential domain has evolved into a rich area of research.

2.4.2 Domains – Beyond residential segregation

Social lives are not constrained to one dominant space. If we assume “social bubbles” are a concern then it is relevant to study how segregation might occur in various types of spaces outside of the neighborhood, such as work, leisure, transport, and other activity spaces. In this section research from one domain, schools, will briefly be addressed.

School segregation refers to the uneven distribution across schools of pupils on the basis of inequalities in terms of socioeconomic, ethnic or other characteristics (Boterman et al., 2019). Schools have the potential to foster social integration and promote inter-group interaction. This opportunity can be hindered by how school uptake is organized but also the migration behavior of parents who associate a school's socio-economic composition and catchment area with its quality of education. This behavior, known as 'flight' or 'avoidance', perpetuates segregation within both schools and neighborhoods, as particularly middle-class parents relocate once their children reach school age. 'School-shopping' intensifies segregation and amplifies the differences in education, further widening the gap between students from different socio-economic and ethnic backgrounds. In Helsinki and in Oslo, selective school shopping and increasing segregation of children has been documented, despite the fact that the pedagogical quality vary little between schools (Bernelius & Vaattovaara, 2016; Bernelius & Vilkkama 2019; Cavicchia & Cucca, 2020).

2.5 Indicators and policy-making

Indicators can be defined as *“variables that summarise or otherwise simplify relevant information, make visible or perceptible phenomena of interest, and quantify, measure,*

and communicate relevant information" (Lehtonen et al., 2016). Essentially, indicators are a set of parameters that provide ways to assess and communicate concerns that are not directly measurable.

Indicators have a long history in policy-making, but their popularity and development has been described as recurring in "waves" responding to currents in the policy climate (Lehtonen, 2015; Wong, 2006). For instance, national economic indicators gained traction in the aftermath of the Great Depression, with particularly GDP gaining global adaptation after World War II, as countries were trying to rebuild wealth. A following wave occurred in the 60s and 70s with the "social indicator movement" which aimed to provide a more comprehensive understanding of well-being and progress beyond purely economic measures, giving rise to "quality-of-life" indicators. Another wave emerged in the late 80s, charged by the increasing environmental concerns and multinational efforts to define goals for sustainable development. This is still the biggest endeavor today, but there has been a shift in the preferences of indicators. Reflecting the rise of New Public Management in the 90s, descriptive indicators have increasingly been replaced by more performance oriented indicators (Bartl et al., 2019). In other words indicators today are not only used as a tool to capture and analyze information about conditions in society, but are becoming more oriented towards specific policy concerns with the intention to enhance the understanding of processes and derivation of the strategies themselves (Wong, 2006).

2.5.1 Types, functions and roles of indicators

There are many kinds of indicators stemming from a range of disciplinary backgrounds and theoretical underpinnings. A general expectation is that indicators promote rationality in policy-making by providing reliable and objective information. At the same time the formulation and choice of indicators draws on deliberate ideals of what needs to be measured and understood. Wong (2006) argues that it is precisely this duality that makes indicators so popular as a tool in policy-making: *"the interface between technical and normative rationality makes indicators attractive to policy-makers because the concepts to be measured can be shifted, and the indicators used can be adjusted. There is thus a certain degree of flexibility in the deployment of indicators that is very suitable in coping with the continuously changing problem definitions in policy discourses"* (p.190).

This duality is also reflected in two dominant strands of indicator research. On one side there are continuous efforts to increase the scientific robustness of indicators and develop new sophisticated methods, while on the other side there are debates of how to make indicators more policy-relevant (Lehtonen et al., 2015). In both cases the perceived problem relates to an “intrinsic” quality of indicators with the underlying assumption that the better the indicator the more it will be used. A new perspective has emerged within the literature, arguing that these efforts to improve indicators overlook an important aspect, namely that the intended function of indicators is not necessarily aligned with use (Turnhout et al., 2007; Lyytimäki, 2019). In consequence “better” indicators might not lead to increased policy uptake. Nevertheless, indicators might perform other roles through indirect and unintended pathways, meaning indicators should not necessarily be dismissed.

To support the analysis I will draw on a theoretical framework proposed by Lehtonen (2015). Developed with environmental and sustainability indicators particularly in mind, its strength lies in its simplicity and applicability to policy indicators in general. The framework proposes that there are three types of indicators: descriptive, performance and composite indicators (table. 2.1)

- **Descriptive indicators** are datasets without specific intended use. Examples of descriptive indicators could be poverty rates, unemployment rates, or crime statistics. While these are the most “straightforward” types of indicators, the absence of a concrete policy target does not imply neutrality nor objectivity.
- **Performance indicators** compare indicator values against a standard, normative scale, benchmark or target to measure how well someone or something is performing. As such indicators are designed to strengthen accountability, but can also serve other functions typically attributed to policy evaluation and policy improvement. By design, performance indicators are developed with an intended use in mind and as such they signal normative ideas about progress.
- **Composite indicators** aggregate a series of individual indicators into one or a few numbers to measure multi dimensional concepts (GDP for instance). By providing a “more rounded assessment” composite indicators can present the “big picture” in a manner that caters to a diverse audience. Rankings are types of composite indicators

that are becoming increasingly popular. The strength of rankings and other composite indicators – their ability to simplify – is also their biggest weakness as complex issues can easily become obscured.

The three categories overlap, as descriptive indicators typically constitute the building blocks of performance and composite indicators, and composite indicators are often used for performance measurement. These indicators can serve different purposes and functions such as monitoring, control, awareness-raising, advocacy and knowledge-production. Whichever the primary objective, indicators are expected to simplify and facilitate communication by reducing ambiguity (ibid p. 80).

Type of Indicator	Descriptive	Performance	Composite
Intended indicator functions	<ul style="list-style-type: none"> • Communication • Awareness-raising • Transparency • Target-setting • Standard-setting 	<ul style="list-style-type: none"> • Monitoring and evaluation of performance • Engaging stakeholders • Support to policy evaluation • Early warning • Control and accountability • Guidance to policy analysis and formulation • Better government effectiveness • Target-setting • Standard-setting 	<ul style="list-style-type: none"> • Control and accountability • Political advocacy • Engaging stakeholders
Actual indicator roles	Instrumental	Conceptual	Political

Table 2.1. Summary of the types, intended functions, and actual roles of indicators. From Lehtonen, 2015.

In designing indicators the focus tends to be on the instrumental use, entailing the use of indicators as direct input to specific decisions. But as noted, indicators can perform several roles that are unintended. Indeed, many of the aforementioned functions can be considered as being conceptual rather than instrumental as they contribute to discussions, conceptual frameworks, mental models, with the purpose to ultimately generate ‘enlightenment’ (ibid).

Moreover, some functions are political, especially when indicators are expected to influence agenda-setting and problem definition, highlight neglected issues, or (de)legitimize established policies. In this sense the roles of indicators extend beyond the purely instrumental functions.

With the exception of indicators that are fabricated for manipulation, the conceptual and political roles are often intrinsic rather than intended. What Lehtonen suggests is therefore that focus should not only be on the *product* but the *process*, which can be an important arena for shared learning, consensus building and conceptual influence.

2.5.2 Indicators for segregation

Based on the literature so far, it is clear that policy-makers must make several choices to decide on indicators, from defining segregation (dimensions and domains), technical matters (size of statistical units), and the intended functions (policy relevance). Such choices will obviously also be limited by institutional context and resources (budgets, data availability, analytical skills etc.). From a planning perspective a challenge is that policies and interventions might be targeted at the spatial manifestation and symptoms of segregation, and not segregation per se. These symptoms can be difficult to measure and assess as they can be manifested in the built environment, socio-economic environment, in the unequal distribution in public services, and even as reflections of the public imagination through the reputation and stigma of places (see fig 2.1). Moreover these factors are often interlinked, making it difficult to make predictions or assess cause and effect.

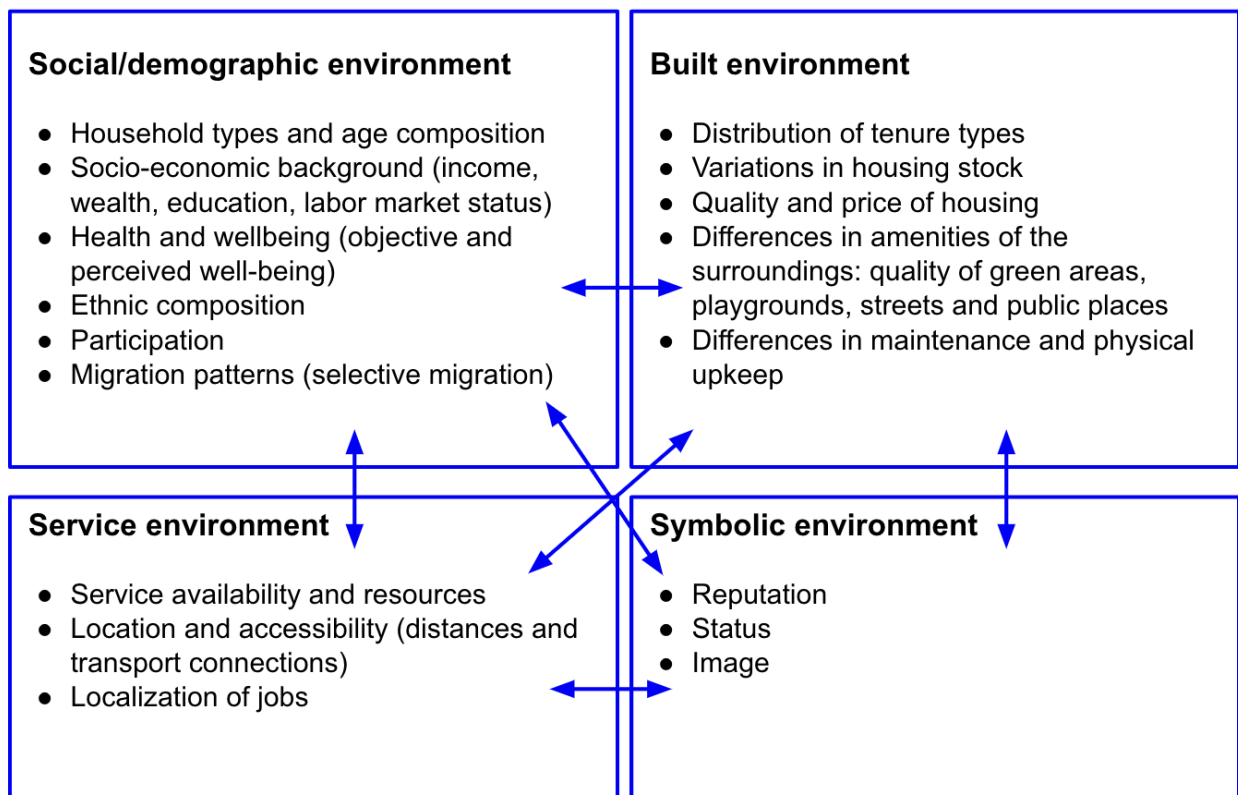


Fig 2.1. Examples of possible indicators for segregation

Lastly, the choice of indicators will respond to the level of governance. This might also pose further conflicts and tensions. For instance, the Danish government has formulated a set of indicators to determine whether or not the conditions in low-income, predominantly immigrant neighborhoods have fallen outside the standards of general society (text box 2.1). Using the indicators as the sole criteria, municipalities are tasked to target areas regardless of local conditions or municipal goals. Widely criticized for its discriminatory approach and draconian policies, the case is perhaps the most notorious example of how indicators are used in anti-segregation policies. A contrasting example can be found in Sweden, where the government has recently developed a “Segregation-barometer” (text box 2.2). As its name suggests it is a monitoring tool. It is intended to provide information across various scales making it relevant to regions, municipalities and central authorities. How authorities or other actors make use of it is left open to its users.

Text box 2.1 Danish use of indicators in anti-segregation policy

“A Denmark without parallel societies – no ghettos in 2030”, or the so-called “ghetto law” in Denmark refers to a set of government initiatives aimed at addressing social and economic challenges in low-income, predominantly immigrant neighborhoods. Introduced in 2010, the policy has been expanded and currently includes a number of measures, such as increased police presence, double penalties for misdemeanors, and mandatory daycare for all children over the age of one, or family allowances are withdrawn. One of the key aims of the policy is to reduce the concentration of certain population groups and promote social mix, by limiting the amount of social housing to 40%. This requires municipalities to sell off a proportion of public housing to private investors. The implementation of policies is decided by a tiered approach using a set of criteria. If a residential areas fulfills two of the four following criteria it is labeled as a “vulnerable area” (previously “ghetto”)

1. The share of inhabitants aged 18–64 neither in employment nor education is higher than 40%
2. The share of inhabitants aged 30–59 with only primary education is greater than 60%.
3. The proportion of residents with criminal convictions is three times higher than the national average
4. Residents having a gross income 55% lower than the regional average

If two criteria are met, and more than 50% of the residents have non-Western backgrounds the area is proclaimed as a “parallel society”. If an area has been named a parallel society for five years in a row it is named a redevelopment area (previously “hard ghetto”). What should

be noted is that an area can go from being listed as a “vulnerable area” to being defined as a parallel society with reference to ethnic composition only. This means that minority groups are far more likely to face the harshest policies and risk displacement. The policy is also criticized for reinforcing stereotypes and stigmatizing immigrant commu. In 2021 the term ghetto was removed, but the policy implications remain largely unchanged.

Text box 2.2 Swedens’ Segregation barometer

The Segregation Barometer is a tool used to measure and analyze levels of segregation in Swedish cities. It provides two different measures: an inequality index and area types.

The inequality index shows the degree of segregation of a municipality or county. This measure cannot answer how the socio-economic differences are expressed in an individual area within a municipality, but gives an overview of differences in settlement patterns at different scales.

The area types provides a tiered classification system that ranks areas into five categories from “*areas with major socio-economic challenges*” to “*areas with very good socio-economic conditions*” Based on a composite index with 19 descriptive indicators, the area categories give an indication of the socio-economic challenges. It does however not show how the socio-economic conditions of individual areas can be related to the conditions in other areas.

The strength of using two measurements is that it provides information on both the relational aspect of how groups compare and on neighbor characteristics. The latter is strictly speaking, not a measure of segregation.

2.6 Summary

Spatial segregation is an intricate and contextual phenomenon that has been studied across domains and along various dimensions. Driven by a broad range of mechanisms, different patterns of segregation frequently interact. For instance, ethnic and socio-economic dimensions overlap in many cities, while school segregation can drive residential segregation, and vice versa. While several of these aspects relate to planning, the complexity of segregation is beyond the means of planning activities alone, as patterns that emerge are driven by actors and forces from within and outside local areas. How far planning can go to mitigate, uphold or

reproduce segregation will invariably depend on planning instruments, the coordination of welfare sectors, the degree to which public authorities can regulate land use and influence housing markets.

The progress in segregation research has led to new tools for measurement. New methods and technological advancements have in turn led to new perspectives of segregation as they have opened new avenues of research. This relationship between tools and concepts is important to acknowledge. To paraphrase Gorard and Taylor, “the results of a study, and therefore, the further problems to be explored, are to some degree dependent on the precise nature of the measures used (2002, p. 2).” This dynamic between definitions, methods and results has its parallel in policy-making, but is further complicated as political goals, institutional constraints, and a range of actors are added to the mix.

Depending on the definitions of segregation, the choice and functions of indicators, it is clear that the understanding of segregation as a policy problem can take many forms. In this way indicators might reinforce how segregation is understood and how it is addressed, as well as shaping normative ideas about places and population groups. For policy-makers, the question is what definitions of segregation and indicators are appropriate. Should the political aims and the policy instruments dictate the choice of indicators? Or can different indicators and definitions influence existing policies by challenging underlying assumptions?

3. Methods

In this chapter, I will describe the research methods used to investigate the research questions presented in Chapter 1. Specifically, this study adopts a comparative case study research approach, which involves analyzing two cases to identify similarities and differences. The study employs semi-structured interviews and document analysis of public policies. This chapter outlines the methods, their advantages and disadvantages, and how they were implemented in the study.

3.1 Case study

Case studies have been criticized for their limited ability to produce generalizable knowledge (Flyvbjerg, 2006). However, they can be valuable for gaining an in-depth understanding of the cases themselves, also when contrasted to other cases. As May (2011) notes, "*The project of comparative analysis is worthwhile because in producing findings on the practices of other countries, we are better able to see the basis of our own practices*" (p. 249). In this way, comparisons have the potential to challenge background assumptions for each case by producing findings from different contexts.

While the Nordic welfare-states are often represented as a unitary solution for organizing society, Andersson points out: "*Whatever 'the Nordic' and 'the Nordic model' is taken to mean, it needs constant and critical interrogation by scholars drawing on comparative reflections*" (2019). For this reason, I have chosen Oslo and Helsinki as cases for my study, as comparative research based on these two cities is relatively sparse in the segregation literature (notable exceptions being Andersson et al., 2016; Andersson et al., 2010; Wessel et al., 2016).

Oslo and Helsinki are interesting cases as there are significant differences in how urban areas develop. This is particularly due to how the planning systems and the housing policies have evolved. Norway has the most liberalized housing market in the Nordic region, whereas housing in Finland is still considered a pillar of welfare, with several policies supporting the production of social housing (Bengtsson et al., 2013). In consequence the social housing sector in Oslo is very small and urban development is largely in the hands of private developers. In Helsinki, the

situation is quite different as the municipality has several policies to ensure affordable housing and by being the biggest landowner, the city has a clear advantage in managing tenure mix and controlling the spatial distribution of housing types. These differences will be discussed in further detail in Chapter 6.

On the other hand the capitals are comparable in terms of their population size and in their role of representing the nation's political, economic, and symbolic center. Both cities are also facing rapid population growth and changes in the demographic composition. By most measures the cities have lower levels of segregation than Copenhagen and Stockholm, but have high levels of segregation compared to their national context (Andersen et al., 2021).

Theme	Helsinki	Oslo
Population	658 457 (2021)	699 827 (2022)
Land area	217 km ²	427 km ²
Housing administered or owned by municipality	63 500	13 029
Gini-index	0.335 (2017)	0.321 (2017)
Ethnic segregation (D-index, 2016)	0.21	0.27

Table 3.1 City comparisons

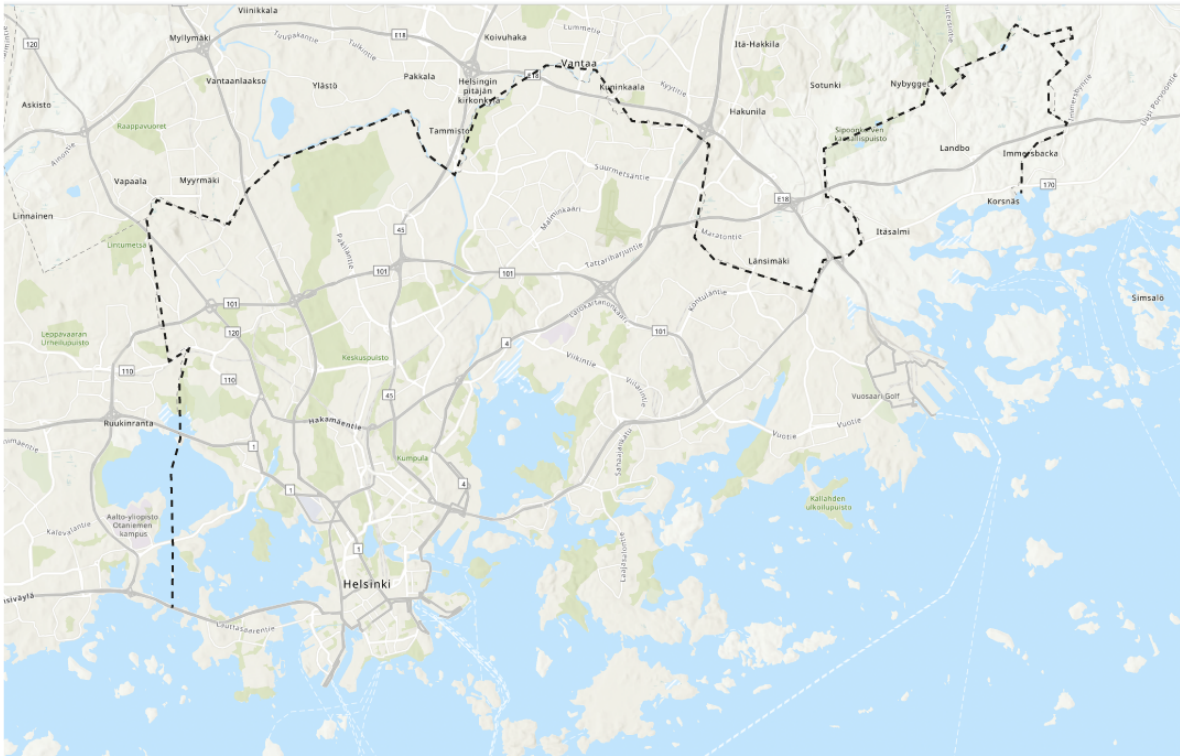


Fig 3.1 Map of Helsinki

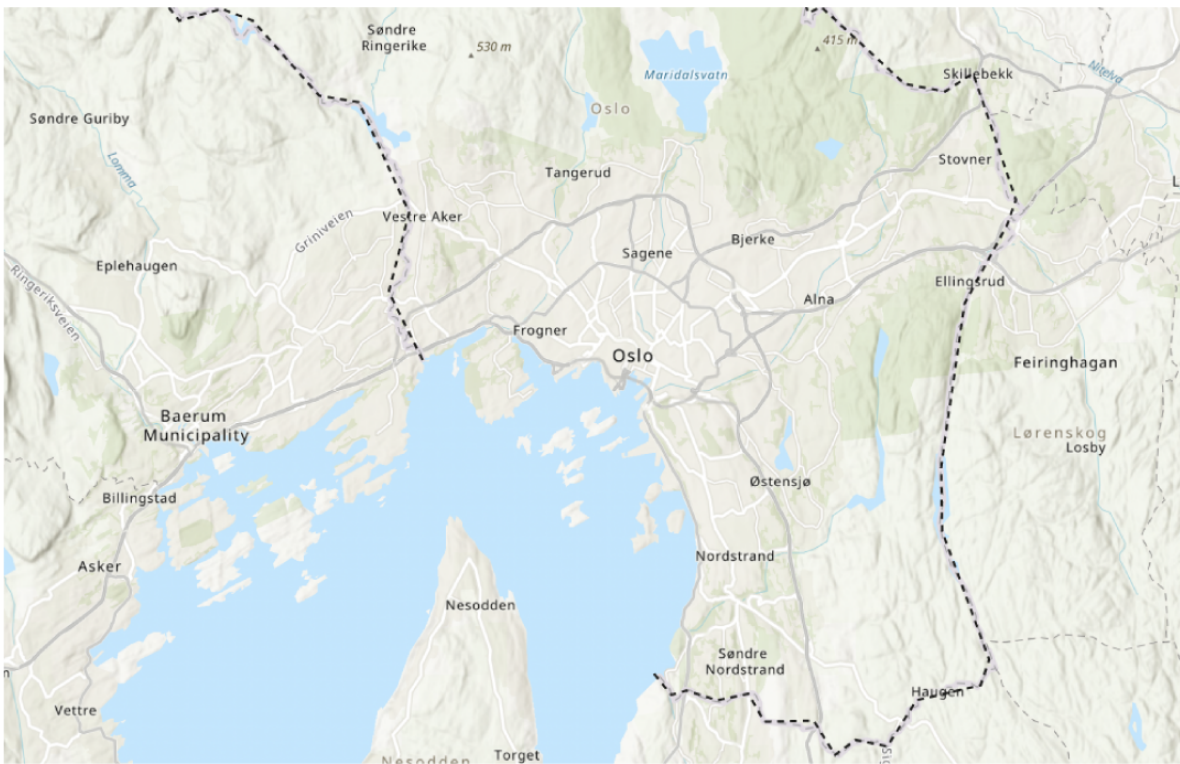


Fig 3.2 Map of Oslo. The northern part of Oslo is a protected forest area, outside of the urban zone, and is therefore cropped out.

3.2 Document analysis

The beginning of the thesis project started during my internship period at Nordregio (see preface). Prior to my internship the research team had compiled and reviewed the national policies that address social inclusion and segregation in cities in all of the Nordic countries. Going through the documents from Norway and Finland it became apparent that none of these plans would have any direct significance for the municipal level. The keywords and local terminology identified by my colleagues was however a good starting point to compile data for this thesis. To begin with I reviewed a large number of plans, reports, gray literature and academic articles to gain a sense of the contexts, before making a selection of plans.

In the selection of documents I had four guiding criteria: (1) the documents should be current, (2) documents should be publicly available, (3) the documents should be tied to municipal planning/an official planning activity (not a separate/one-time project), and (4) the document should be relevant to the research question by addressing segregation explicitly or implicitly. Beyond these criteria I decided it would be relevant to include the highest planning document in each city which is the municipal plan, *Kommuneplan* in Norway and *Yleiskaava* in Finland, as these express the overall spatial goals and ambitions. Once I had narrowed down my selection of documents I highlighted the most relevant parts and sentences using keywords searches. I did not use a formal coding procedure, which poses a risk for selectivity in overly relying on portions of data and underusing or ignoring others (Yin, 2015, p. 200-201). But I believe the procedural checks and the multiple times I have reviewed the documents throughout the research period has ensured fairness in the analysis.

The benefit of using publicly available documents is that they are transparent and explicit about the goals and objectives they seek to achieve, which in turn increases the reliability of the sources. I considered requesting access to withheld documents, such as summaries of meetings and policy drafts, but decided against it because it would have increased the amount of documents to a big volume and would have made comparisons more difficult, as finding the most relevant documents could be inconsistent between the cases.

3.3 Interviews

The interviews were conducted during my internship period at Nordregio. During this time six semi-structured interviews with a total of nine civil servants were conducted. The interviewees agreed to have their answers used in this thesis and in Nordregio's research project.

In Helsinki the interviewees were selected due to their professional knowledge and experiences in working with segregation issues in Helsinki. The interview was conducted by myself and a colleague from Nordregio.

- Interview 1: Group interview with one representative from the Housing Programme at the City of Helsinki and one representative from the Urban Research and Statistics Unit at the City of Helsinki. Both are part of a working group for improving segregation policies.
- Interview 2: Interview with one representative from Urban Research and Statistics Unit at the City of Helsinki

In Oslo the interviewees were selected due to their professional knowledge and experiences in working with area-based interventions in Oslo and in Norway. In the second interview a colleague from Nordregio was a co-interviewer. Interviews 3 and 4 have not been included in the empirical findings, but have provided background knowledge to the thesis.

- Interview 1: Interview with one representative from the City Council's Department of Urban Development in Oslo (Byrådsavdeling for Byutvikling)
- Interview 2: Group interview with one representative from the Ministry of Local Government and Regional Development (Kommunal- og distriktsdepartementet, KDD) and two representatives from the Norwegian State Housing Bank (Husbanken).

Interviews that have provided background knowledge, regarding ABIs in Oslo:

- Interview 3: Planner from Planning and Building Services (PBE)
- Interview 4: District Program Coordinator for *Områdeløft* (ABI)

All of the interviews were conducted in a semi-structured manner and lasted around 90 minutes. The interview guide (see appendix) contained general questions formulated in a manner that would open for discussion. The interviewees were asked questions about segregation policies, the production, handling and use of indicators, and the benefits, risks and potentials of indicators. Some questions were tweaked to correspond to the role and responsibilities of the interviewees. All of the interviews were conducted in the native language, recorded and transcribed, before being translated to English. I have tried to keep the quotes as verbatim as possible, but as with all translation work some meaning will be lost. In cases where interviewees used figures of speech with no direct translation I did not attempt to find substitutes in the English language, but omitted them from the transcripts.

Following the transcriptions, I conducted both a vertical and horizontal analysis of the findings. The vertical analysis was completed by combining all collected data from the same respondent and summarizing it (transcription and personal notes). The horizontal analysis was completed in a later stage by comparing the vertical summaries across all of the respondents.

3.4 Reliability and validity

The validity of my research findings relies largely on the sampling. To this end, the team and I used a purposive strategy to select participants who were knowledgeable about the cases and could provide rich and diverse insights. Moreover, the documents allowed me to triangulate my findings and validate the accuracy of my data.

To ensure confirmability, I reviewed the documents several times. During my internship I also discussed my interpretation with my research colleagues which added nuance to my thinking. As mentioned, by using publicly available documents in my research, the reliability is strengthened, as well as it allows me to gain insight into the broader context surrounding the cases.

I believe the reliability and validity of the collected empirical evidence, in the form of interviews and document studies, are satisfactory for reaching the conclusions I make. Some of the findings are, however, inconclusive. The research project would have benefitted from more interviews and a longer systematic review of documents.

3.5 Limitations

The answers to the research questions are partly inconclusive. I have been cautious about evaluating the unintended roles of indicators in the case studies, as this would have required more empirical evidence, such as more interviews, and preferably in combination with other methods (such as observations of how policy decisions evolve over time in public hearings and internal discussions).

The interviewees were not asked directly about the unintended (conceptual/political) roles of indicators during the interviews. The questions revolved around the production, role and use of indicators, and what the interviewees considered the possible benefits, risks and limitations. This was done so as not to influence the answers, but it is possible that the interviewees might have provided different reflections or experiences about the unintended consequences of indicators, had this been asked as a specific question. Due to time restrictions it was also not possible to make a systematic review of how indicators have been used in public debates, by politicians or by the media.

Interviewees in both countries were not at liberty to share detailed information about specific indicators and plans as some were still being developed or withheld from the public.

3.6 Ethical considerations

In any research project it will be both relevant and necessary to reflect on ethical challenges, particularly in the case where interviews are collected. Although I have not mapped or produced knowledge that can be used against anyone or cause harm to vulnerable groups, it is nevertheless important to be aware that when conducting an interview privacy concerns must be considered. I have anonymised the interviewees, but indirect information, such as which unit they represent, will nevertheless emerge. In accordance with the research guidelines of the university, the master's project was submitted and approved by the Norwegian Centre for Research Data (NSD).

4. Case study Helsinki

4.1 Background and context

Among the Nordic capitals Helsinki has historically stood out for having significantly lower levels of residential segregation than its peers. Up until the early 1990s spatial differentiation in Helsinki was limited, but patterns of segregation have since developed rapidly, with lower levels in health, income, unemployment and education accumulating more clearly in some neighborhoods (AM-ohjelma, 2020, p. 48.; Vaattovaara & al., 2011). School segregation has also increased with socio-economic and ethnic differentiation becoming pronounced in children and youths (Bernelius & Vaattovaara, 2016; Rönneberg & Bernelius, 2021). While there are several factors and events that have stalled the development of segregation, there are particularly three aspects that sets Helsinki apart from its Nordic peers.

First, Finland has upheld its tradition of treating social housing as a pillar of welfare (Bengtsson et al., 2014). While the general trend across Europe and the Nordic countries has been a decline in the production of social and affordable housing, Finland stands as an exception with several government policies supporting the provision of affordable, high-quality housing for low-income and vulnerable populations (Lawson & Ruonavaara, 2019). Moreover, the spatial dispersal of social housing and mixing of tenures is made possible as planning remains strongly in the control of the municipalities. Under the Finnish planning system, municipalities are responsible for preparing master plans, zoning plans, and other land use plans. While private developers and other stakeholders may be included in the process, planning is considered a public process, where municipalities enjoy a large degree of autonomy.

Second, Helsinki has a long tradition of pursuing tenure mixing. First seen as a solution to maintaining social order in the 60s, it has over time turned into a part of general equality policy (Vaattovaara et al., 2018; Kortteinen, 2022). This has resulted in the social housing sector being distributed across several areas of the city (Skifter Andersen et al., 2016). The city also has a considerable advantage in its ability to regulate the private housing market due its large share of land ownership (at ca. 63%). The mixing policy has, however, come under scrutiny as segregation is increasing. Critics argue that tenure mixing is inefficient in addressing the structural drivers of segregation (Kortteinen, 2022; Vaatovaara et al., 2018) and the assumption that social mixing can increase social cohesion has been challenged. Kortteinen (2022) finds

that social differences between population groups have in some places grown so large that the spatial proximity produced through the mixing policy does not produce social interaction but adds to alienation and selective migration that reinforces homogenization. Despite these criticisms, tenure mixing is still a cornerstone of housing policy in Helsinki and the current goal is to allocate about 20% of the annual plot donations to state subsidies housing production (ARA construction), about 30% to so-called intermediate housing and the remaining 50% to market-based production (Helsingin Kaupunki, 2021).

Third, the Finnish population has historically been relatively homogeneous. Between the post-World War II period and the recession in the 1990s the equality gap in the population was converging. Helsinki did not experience the same level of immigration during the post-World War II period as the other Nordic capitals and the influx of immigrants and refugees only took off in the early 2000s. Despite foreign-born residents being overrepresented in social housing, the spatial distribution of social housing and consistent tenure mixing has had some moderating effect on ethnic segregation (Page, 2020). While some areas have noticeable ratios of minority residents and some areas have almost none at all, segregation by income and education still remain higher than ethnic segregation in Helsinki (Bernelius & Vilkama, 2019). This trend might be changing, as the selective migration patterns of the majority group (white flight) is becoming a significant driver of ethnic segregation (Vaattovaara & al. 2018).

To summarize, segregation in Helsinki emerged relatively late, but then rapidly. While the social housing policies and tenure mix in Helsinki has had a mitigating effect, the increasing trend of spatial disparities has put the municipality under pressure to rethink strategies.

The most recent progress to this end will be explored in the next sections of the chapter where I will present the findings from the documents analysis and interviews.

4.2 Document analysis

In Helsinki the overarching goals and development of the city is guided by: (1) **the City Strategy**, (2) **the Master Plan**, and (3) **the Programme on Housing and Related Land Use**. These are approved by the City Council, the highest decision-making body, whose members are elected in municipal elections every four years. In the preparation and realization of plans is also a plethora of other sources, such as supplementary guidelines, additional zoning regulations and thematic plans. To limit the scope, the document analysis focuses on the three aforementioned plans as these are the high-level sources that guide further policies and interventions on lower levels. Moreover, the plans are relevant as each plan addresses segregation. In cases where indicators are not mentioned directly in the documents but included in supporting sources (such as follow-up plans, appendices and city website) these have been referred to.

4.2.1 A Place for Growth – Helsinki City Strategy 2021-2025

The purpose of the city strategy is to provide a vision and guidelines for the future, and is updated for every council term. The guidelines are not strictly limited to urban planning and land use but addresses municipal activities in general. In the current strategy (A Place for Growth – Helsinki City Strategy 2021-2025) the guiding principle is to encourage sustainable growth which is defined as balancing ecological limitations, creating benefits that are socially, financially and culturally sustainable (City of Helsinki, 2021, p. 7).

The prevention of segregation is one of 13 prioritized themes. As stated in the document: *“Helsinki’s goal is to be a city where polarisation between districts does not increase ... We will seriously address the threat of segregation, listening carefully to what the city’s residents have to say on the matter and learning from research”* (p. 35).

Besides being a strategic priority in itself, segregation is also mentioned as a factor in three other prioritized areas of the strategy: childhood and education, art and culture, and urban development. Combining efforts the city will: *“universally practice positive discrimination and combat segregation in all of its activities, stretching from housing policy and zoning to social work and education as well as culture and leisure”* (p. 35). In this way the strategy recognizes that segregation is not limited to the residential domain, but also occurs in other activity spaces.

The realization and progression of the strategy is monitored by using qualitative and quantitative indicators. In monitoring the goals for segregation three indicators are publicly available on the website of the city. The first is a socio-economic composite index that combines data on low income, unemployment and low educational background. The second indicator uses data from a broad citizen survey conducted twice a year, presenting the results of residents' perception of safety and comfort in their neighborhoods. The third indicator describes the development in the share of owner-occupied and right-of-occupancy dwellings, indicating tenure-mix.

It is interesting to note that while the data is gathered for each district, the socio-economic index and results from the qualitative survey only present the results for the city average (fig. 4.1 and fig. 4.2). It can be speculated if the indicators are deliberately presented at the aggregate level to prevent stigmatization of neighborhoods.

Share of respondents who consider their own residential area to be comfortable

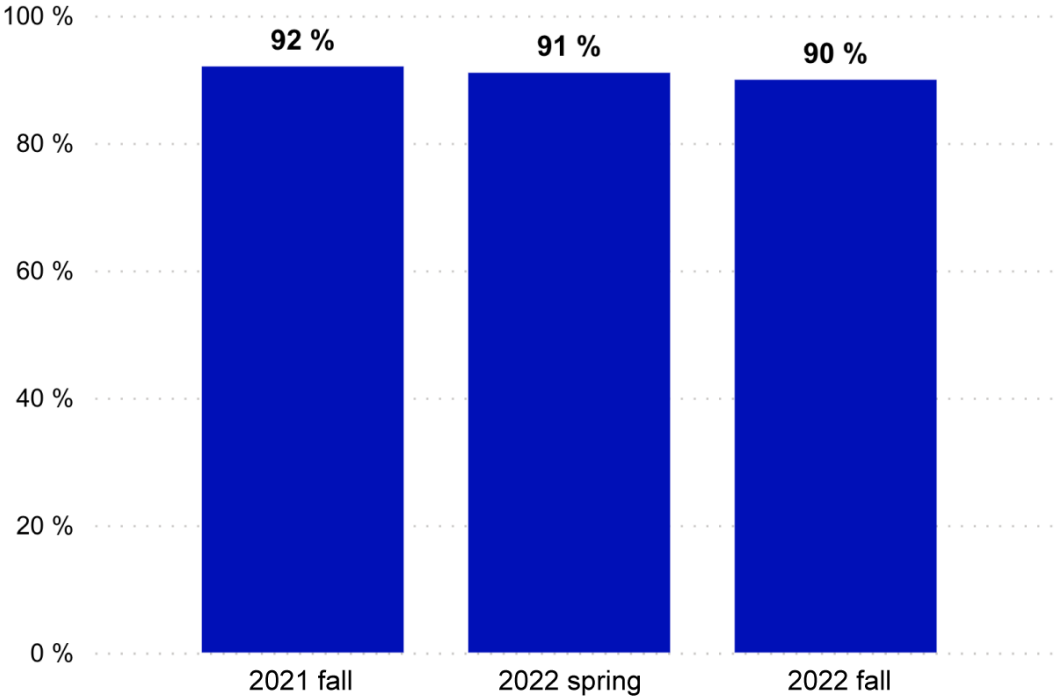


Fig 4.1 Share of respondents who consider their own residential area to be comfortable. Data is gathered for each district, but the figure shows the city average. Source: City of Helsinki website

Asuinalueiden eriytymiskehitys Helsingissä

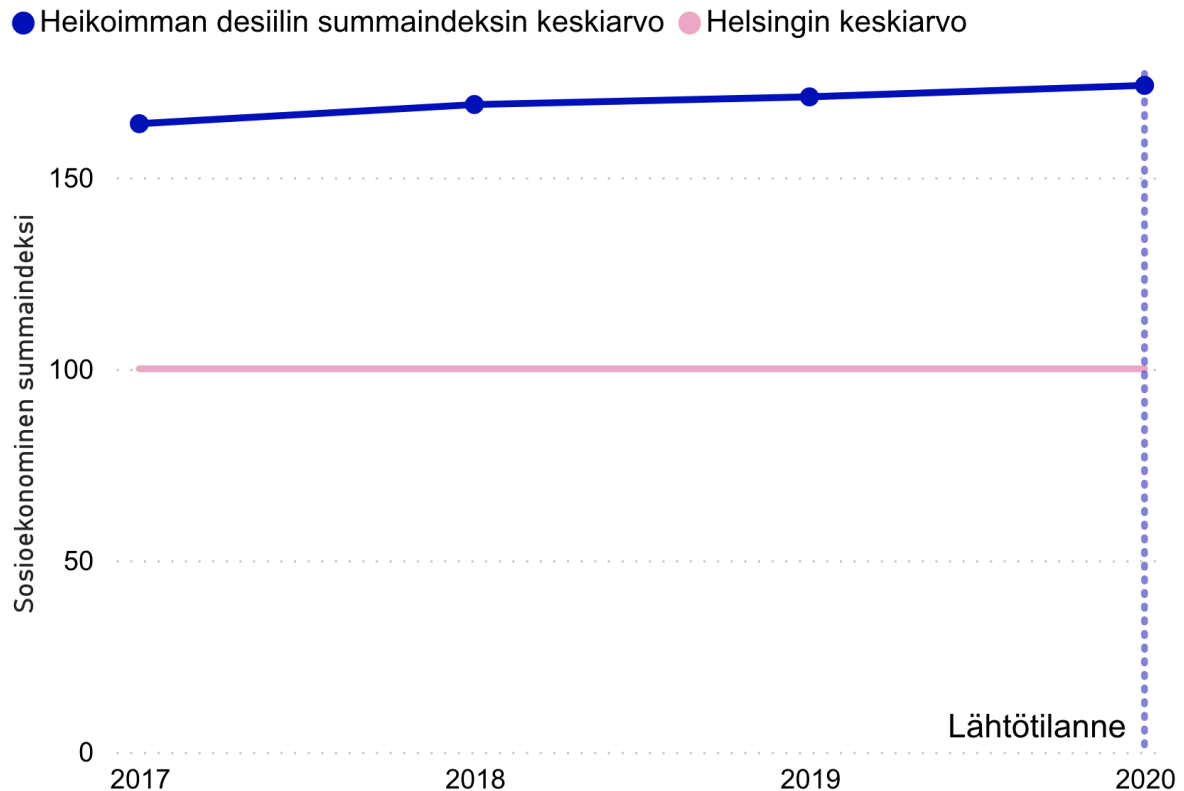


Fig 4.2 The diagram describes the development of the differentiation of residential areas in Helsinki using the socio-economic sum index. The index is calculated from three variables: the share of low-income housing units, the unemployment rate and the share of low-educated people in the workforce. The index is proportional to the city average, where the value 100 represents the average. If the value of the index exceeds one hundred, the area is socioeconomically weaker than the average level of the city.

Source: City of Helsinki website

4.2.2 Helsinki Master Plan

The Master Plan (*Yleiskaava*) is the highest planning document guiding land use and urban development. It is drawn up approximately every ten years, setting directions for urban development for decades to come. The current master plan from 2016 lays a foundation for rapid urban growth towards 2050. It draws on three central concepts: (1) the conversion of motorways within the ring road into mixed-use boulevards, (2) enabling the formation of urban centers further from the inner city through densification, and (3) urbanizing suburban areas along transit lines. The densification around transportation nodes aims to create critical

passenger mass further from the center, while also targeting three suburban areas to prevent segregation (Helsingin Kaupunki, 2016, p. 16, p. 71, p. 126).

Densification is seen as crucial to prevent segregation as it provides an opportunity to diversify existing housing stock and balance existing tenure mix, particularly in neighborhoods where socio-economic challenges have become pronounced: “...*new housing stock will truly complement the current structure and respond to the deficiencies in the area*” (p. 71). The plan identifies three suburban areas where densification will be prioritized, but the principle applies to planning activities in general as supplementary construction anywhere can “*significantly influence how the area develops and whether its population structure, housing stock or service offering becomes more diverse*” (ibid).

The overarching goal of the plan is to create independently functioning small cities within the city, where each part caters to a diverse population. This is also seen as a means to increase social cohesion as “*cities have an atmosphere that emphasizes **solidarity** and increases innovation [emphasis added]*” (p. 126). At the same time new construction must be sensitive to current conditions: “*strengthening the identity of parts of the city and highlighting their characteristics are also important factors in preventing the segregation of areas*” (p. 71). This implies that participation, infills and restoration should be prioritized, although demolition might be granted to achieve higher plot efficiency.

Every four years an **Implementation Program for the Master Plan** is drawn up. The implementation programs provide further detail for the realization of the Master Plan, adjusting to changes in land use regulations, the city strategy and up-to-date knowledge. The current implementation program is supported by an updated knowledge report, which includes an overview of segregation (Helsingin kaupunki, 2021, p. 15-16). In the latest report a composite index is used to group areas into five socio-economic categories (figure 4.2). The socio-economic index combines four descriptive indicators: unemployment, education, low-income and ratio of foreign-language speakers. Here, the addition of “foreign-language speakers” suggests that ethnic segregation is on the agenda, but the relation between socio-economic status and ethnicity is unclear. Including foreign-language speakers in the composite index suggests that non-natives as a group influence the socio-economic conditions in an area, presumably in a negative way. The addition is peculiar given that the other documents reviewed in this analysis present a similar socio-economic index, but where the “foreign-language speakers” indicator is not included.

In line with the Master Plan the prevention of segregation is addressed through densification in three suburban areas, as they rank low on the socio-economic index. With less emphasis, but nevertheless, the document also mentions the role of diversifying better-off areas to achieve a city which is socio-economically balanced, including areas outside the inner city that are dominated by owner-occupied detached housing.

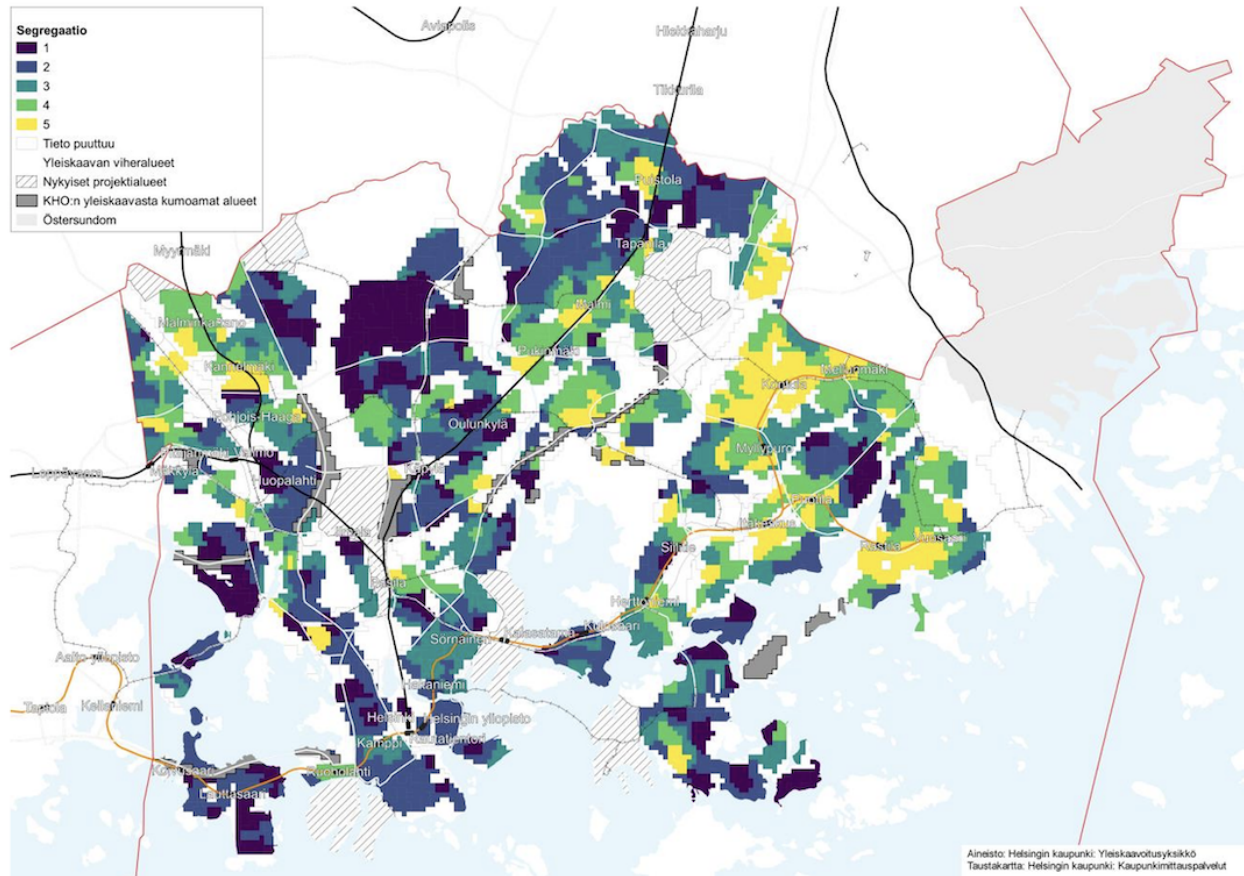


Fig 4.2 Map of segregation. The yellow areas are the lowest-scoring areas on the socio-economic index. Source: City of Helsinki (2021) Yleiskaavan Toteuttamisohjelman 2022 liitedokumentti 1

4.2.3 Programme on Housing and Related Land Use 2020

In addition to the City Strategy and Master Plan, the long-term planning of housing in Helsinki is guided by the Programme on Housing and Related Land Use (AM-program). Among four central objectives in the current programme is the development of “Vibrant areas and prevention of segregation” (Helsingin Kaupunki, 2021, p. 85-90). To reach this objective the AM-program

presents three measures: (1) Suburban Regeneration, (2) Project Areas, and (3) Supplementary Construction.

The Suburban Regeneration Projects are larger area-based investments that target specific suburban districts where socio-economic conditions are lower than average. By involving several public sectors the purpose is to rejuvenate neighborhoods and diversify them in terms of public services, urban functions and population groups. A central objective in these areas is to balance the existing tenure mix by increasing the housing stock by approximately 30%. It is noted that planning measures alone are insufficient to address income differences, unemployment or social problems, but that planning and housing policy can influence the formation of the population structure and other conditions by keeping residential areas attractive (p. 86-87).

The Project Areas refer to new city districts. These are also envisioned as mixed-use neighborhoods, where the goal is to create urban areas that are inclusive and attractive to all kinds of people – of all ages, families of different sizes and of different income levels (p.7). To achieve this the city will continue its practice of tenure mixing, ensuring diversity of urban functions and public transportation.

Supplementary construction refers to densification, as 50% of the annual housing production will be realized as infills within the suburban zone (including the Suburban Regeneration Projects). Infill construction will focus on areas with good transport connection and where accessibility will be promoted (p. 9).

The AM-program is relatively extensive in its use of indicators presenting analyses for each of the objectives in the plan. Segregation is measured using a socio-economic composite index that builds on three descriptive indicators: employment, income and education. In addition to this index there are 11 indicators that describe changes relating to the mechanisms of segregation. These indicators cover topics such as changes in income inequality, household composition, rental prices, perceived safety, housing debts and distribution of foreign-language speakers. By combining the socio-economic index with other descriptive indicators the document communicates a simplified reading of spatial differences but also gives some indication of the underlying mechanisms that can help explain them.

4.3 Interviews

For the Helsinki case two interviews with a total of three interviewees were conducted. The interviewees represent the City of Helsinki, one from the Housing Programme and two from the Urban Research and Statistics Unit. The interviews were conducted in Finnish by myself and a colleague from Nordregio. Identification codes are not added to the citations as the professional roles of the different interviewees are not of significance – they are all civil servants working with segregation policies for the city.

Segregation as a policy issue

At the beginning of the interview the interviewees were asked to consider why segregation was on the political agenda. The interviewees expressed that the current policies in Helsinki can be seen as an extension of a longer tradition of mitigating neighborhood disparities: *“It has been a principle for quite a long time that the city wants to prevent segregation ... This has been the goal of several different council terms.”*

Still, the interviewees agreed that the current City Council has prioritized segregation more than in previous terms: *“Different units and sectors have done smart work from their point of view, but there has not been a very strong overall coordination ... At the beginning of the current council term strategic program groups were founded, one of which is a segregation prevention program group. The goal of this program group is specifically to improve the coordination of what the city does in different areas.”*

One of the interviewees considered that the increased political commitment and sense of urgency was motivated by research findings, as well as the observed challenges in urban areas in Sweden and Denmark. In this way the attention to segregation can be understood as partly contingent on previous efforts, evolving in response to political changes and new scientific knowledge. As one interviewee expressed: *“My view is that we are in a continuum where things are advancing, iterating and continuously developing and there is no end view in sight.”*

The production of indicators

The informants shared that the city has monitored segregation for at least two decades.

Much of the data is collected and monitored by the Urban Research and Statistics Unit of the city, which is well established: *“We have a strong research expertise here within the city, and there are good data sources. So we are always channeling information to support decision-making.”*

This was considered as a strength: *“I’m really biased to talk about this, but I think it’s a big asset for the city that there is such a big research side that produces that information and not only acquires it, but also analyzes it.”*

Moreover, the city draws on knowledge from research institutions: *“the close cooperation between the university and the city is certainly one of its strengths ... the city has funded research for a long time, so a lot of the city research is directly the university’s research. So what is in the background is that the city wants that information.”*

Commenting on the knowledge production the interviewees considered that the instrumental value of indicators has gained attention: *“The city has always used certain monitoring indicators, but their role has become even stronger during the last couple of council terms.”*

Similarly: *“More expertise is wanted from us, that instead of being purely objective researchers, we are asked to not only present the data, but using that data, to consider how a service can be developed ... more and more research information is produced specifically for a strategic information need. So now research is seen more like a tool.”*

While the research department is in charge of monitoring the city strategy and coordinating different efforts, other units of the city also collect data: *“Different service areas do much of their own information management, for example, the education and upbringing services really follow the choice between schools and such. Then through us [research department], the data from the national school health survey is channeled ... it is also one of the key background materials in area-based development, because it provides information at the area level on the well-being of children and young people. But it’s a very diverse field”*

Some, but not all of this data is shared between departments *“we really have a lot to develop in Helsinki, precisely in terms of getting that knowledge to flow better.”*

Use and functions of indicators

In discussing the functions of indicators the interviewees described that knowledge was continuously being channeled to support decision-making. The interviewees noted that the use of indicators is broadly systematized in all of the operations of the city: *“we use it in administrative matters as well, it is based on data. There you look at different things ... but I know that not all cities do things with this precision, so it will definitely have an impact, but of course it is difficult to assess the impact as such.”*

One interviewee noted that the increased use of indicators is reflected in the City Strategy, as one of the priorities is to strengthen Helsinki as a smart city managed by knowledge and data. In this regard the monitoring might in some cases be a bit excessive: *“The challenge with the indicators, especially when talking about segregation, is that changes are incredibly slow ... I think the real usability of indicator information is a challenge. It is being done, but what can really be taken from it when those changes are so insanely slow but then the need in political decision-making is for fast indicators.”*

When asked about policy uptake, the interviewees were hesitant to name specific outcomes, but believed that the indicators have helped build political consensus and commitment to address segregation across party lines: *“that's the thing about showing the hard facts and the research facts, the issue is brought out in an understandable way, so yes, I believe that measures have been taken and more attention has been paid to these issues...there may be some twists about which measures are the best, but we are in a situation where the issue is seen as important politically across the board.”*

Moreover: *“The needs-based school funding and such, I don't think it would have happened without such a good knowledge base, because there are always some doubters, but then when the facts are in place, it's pretty hard to say something completely different”*

When asked about the role of indicators in the Suburban Regeneration Projects (ABIs), indicators have been developed to select areas and to monitor progress.

Regarding the selection process: *“areas have been selected based on socio-economic indicators, those that stand out. Then, of course, we could have other areas [to choose from], but one important starting point is the supplementary construction, that over the next 10 years, housing stock will be increased by 30% in these areas. The potential and the current building stock have also been considered, including the age of the service structure, the buildings*

themselves, and the needs and possibilities of renewal related to that. Then areas should also be along good rail transport connections...of all that's then combined with these socio-economic indicators. That has been the basis of selection."

Regarding the monitoring of progress of the Suburban Regeneration Projects the interviewees were critical towards the selection of some indicators:

"What I think is a bit problematic and a bit surprising is some of the indicators that have been chosen are slow changing ones. Things like morbidity, mortality and employment and the number of foreign-language speakers, education level and these traditional [socio-economic] indicators. And also, the quantity, when the housing stock should be increased, I think they are problematic. Because there is so much hype at the moment with the projects, the city wants to see how the indicators are changing, even though we are at the stage where we have just received a list of the investments that will be made in the next 10 years. Then we've just started some activity, so then we're asked, well how about these indicators, are they green or red? But we know if some indicator has flickered somewhere, we can't say that it was because of the project"

Other indicators were seen in a more positive light: *"Then we have short-term indicators that make more sense, for example things that can be collected with resident surveys...In my opinion, that is really important, when such big changes [large amounts of additional construction] are made, which can also have negative effects."*

Challenges

While the interviewees considered the use of indicators as important for providing a good knowledge base and believed that indicators had brought attention to issues early on, several challenges were discussed: *"A certain kind of risk is that you try to make complicated things too simple, and in the worst case, the causes and consequences can get a little confused ... but I see more of a risk than the information being somehow misused, but rather the implementation ability. How do you really know how to make wise and difficult decisions? When we live in a time of scarcity, we should be able to make decisions that we should invest more in something, but then that [funding] is taken from somewhere else."*

Similarly: *“The idea that data has a solution to everything is perhaps a bit overemphasized ... what we come across in our work all the time is that we need a pretty strong understanding, analysis and interpretation of data, that it doesn’t say anything by itself, but it has to be put into some context and then it has to be understood, but then we need the political path and value judgment for the choice of what to do.”*

Furthermore: *“A big challenge is that we have very little research on impacts/effects, and of course it is very difficult with segregation measures in general, precisely because they are such long-term processes... So these types of policies [tenure mixing] and then everything that is done on the so-called “soft” side, with schools and social services and preventive actions that have been developed, those are probably also reflected in the background, but we do not have research evidence. We cannot, as it were, say that this has led to that.”*

National indicators

In discussing the future direction of indicators, particularly in the development of a national system the question of scale was discussed: *“The big question regarding segregation is what is the relevant unit for examining segregation. But no one has managed to solve it in a meaningful way yet, because it depends quite heavily on the question under consideration. If we are interested in the segregation of schools, then the essential unit is some kind of catchment area of the school or the surrounding areas ... if we think about people's social relationships, it might be much smaller, and there are indeed terribly central questions.”*

Furthermore, transparency of data was discussed: *“whether we should anonymize and try to prevent stigmatization, or if it is more important to make differences visible, so that can be intervened, finding that balance is terribly difficult ... schools in particular are a very good example as it has been understood that rankings have reinforced and increased differentiation.”*

How soon national indicators will be developed and implemented is unknown, but to the knowledge of the interviewees it is on the political agenda and ministries are in discussions of how to proceed. How far into the future this will take is a matter of speculation.

4.4 Summary of findings

From the document analysis and interviews it is evident that segregation is an issue that is taken seriously in Helsinki. The attention to segregation is not new, but building on past

initiatives, the present council that took office in 2021 has added new momentum by acknowledging existing gaps, calling for both preventative and abating measures. A working group for segregation was also formed at the beginning of the council term, to evaluate previous efforts and advise on policy directions.

The interviewees considered that the increasing political prioritization has been motivated by internal knowledge production (research evidence of increasing segregation), as well as attention to the entrenchment and consequences of segregation in other Nordic cities.

The findings also show that Helsinki has prioritized knowledge production for decades. Moving forward, the city intends to make more strategic use of indicators in decision-making. Interviewees considered the rigorous knowledge production of the city as a strength, as issues have been identified early and helped build political consensus that more action beyond tenure-mixing is required. Indeed, school segregation and the effects of segregation outside of the neighborhood are recognized by the City Council.

The instrumental value of indicators decision-making was however considered as being a challenge, as indicators only offer simplifications of complex realities which solutions depend on value judgements.

5. Case study Oslo

5.1 Background and context

The city of Oslo has a long history of being a “divided city” where differences in public health, life expectancy, education and income, roughly follow a geographical East-West division outlined by the central river *Akerseiva* (Ljunggren ed., 2017). The beginnings of the socio-spatial divide can be traced back to the rapid population growth and industrialization in the nineteenth century when settlement patterns of working class residents in the East and the affluent in the West emerged. With the influx of immigration in the 70s the residential patterns of ethnic minorities have also emerged with a majority of immigrants living in the East. The overrepresentation of immigrants in areas with socio-economic challenges has been a particular worry for the state (NOU 2011: 14, NOU 2017: 2, NOU 2020: 16) and the municipality (Oslo kommune, 2018, Oslo kommune 2008).

The goal of balancing living conditions between East and West has been made increasingly explicit in municipal plans over the last couple of decades (Cavicchia & Cucca, 2020). This goal has, however, proved to be difficult for several reasons including institutional constraints, contradictions in municipal plans and area stigmatization by the media (Andersen & Skrede, 2017). The institutional constraints are strongly tied to the drastic deregulation of housing markets in the 1980s, which after the geographical distribution of the population has increasingly been determined by households' purchasing power. In simple terms housing supply has since been controlled by the market and developers and today it is private players who largely determine the volume, location, price and target group of housing production (Sørvoll, 2018).

Private homeownership is the national goal of housing policy, and is the dominating tenure form in Norway and in Oslo, with the share of population being homeowners is at 80% and 70% respectively. The social housing sector is small and is therefore a lesser contributor to socio-economic segregation than in other Nordic cities (Haandrikman et al., 2021). As the majority of social housing is, however, located in the east it is still a reinforcing factor to segregation (Astrup et al. 2015). The state-supported housing loans have also added to the accumulation of vulnerable groups to the cheapest areas of the city, as the vast majority of

recipients settle in the eastern suburbs (Barlindhaug, 2020). While there has been political ambitions to build municipal housing in the West for almost three decades, these remain largely unfulfilled and municipal housing has increasingly shifted from a concentration from the inner East to a more dispersed pattern in the Eastern suburbs (Sørvoll & Johannesen, 2020).

As the housing market has become increasingly unaffordable, a political goal has been to increase the yearly housing production and to develop a “third housing sector”. A pilot project reached fruition in 2023, but the ambitions to develop this to an actual sector faces several barriers (Christiansen & Kjærås, 2021). So far the municipality has set a goal to reach 1000 affordable residential units within 5-7 years. In comparison, Helsinki is expected to add 4000 affordable units per year (including social and intermediate housing).

In lack of other policies the biggest efforts to address neighborhood disparities has been through area-based interventions (ABIs), known as *Områdesatsninger* and smaller investments known as *områdeløft*. While the first ABIs in Oslo emerged in the 1980s, it is particularly *Groruddalssatsingen* that has left its mark on how ABIs are organized in Oslo and Norway today. *Groruddalssatsingen* and its continuation will be further discussed in this chapter. The following sections will present the findings from the document analysis and the interviews.

5.2 Document analysis

The document analysis includes the Municipal Plan, four documents connected to the ABIs and two documents for the Area Policy.

5.2.1 Municipal plan - Our City Our Future

Oslo Municipal Plan

The municipal plan (*kommuneplan*) is the highest planning document at the municipal level and is legally required to be reviewed every four years. The municipal plan has two complementing parts; a part on land use, including legally binding zoning regulations (*arealdei*); and a societal part that identifies broader challenges and goals (*samfunnsdel*). Combined the two parts guide future development by bridging physical planning to other municipal activities. The part on land use is not included in the document analysis as it did not address the research questions in any significant way.

The principle of sustainable development, and its social dimension, is elaborated in the current societal part **Our City, Our Future, 2018** (Vår by, vår framtid, 2018). While there is no explicit use of the term segregation, the plan acknowledges differences in living conditions between groups and between geographical areas, i.e. segregation. It is briefly explained how spatial conditions and socio-economic factors correlate: *“Certain areas in the city have complex challenges linked to living conditions, heavy traffic congestion, lack of maintenance and few social meeting places and communal arenas. People with low incomes get fewer and fewer choices on the housing market, and we get an accumulation of such groups in areas with the lowest prices”* (Oslo Kommune, 2018, p. 22). The plan places emphasis on the welfare of children noting that *“the proportion of children living in low income households varies between 4 and 22 percent between districts”* (p. 22), see fig 5.1.

Further, the plan describes issues linked to integration of people with immigrant backgrounds, who make up 1/3 of Oslo's population. Noting that the majority are well integrated into society, it is worrisome that the most vulnerable areas in the city also have an overrepresentation of immigrants. The welfare of children is again of special concern: *“low kindergarten attendance in districts with a high proportion of immigrant children”* and *“many minority pupils drop out of*

school, and there is a strong connection between the economic and social background of parents and dropout” (p. 22).

To improve and balance social conditions between districts the plan describes several measures. In the most disadvantaged neighborhoods, the city will continue with area-based investments. For new housing construction, social sustainability is described as a premise, where neighborhoods provide: *“a varied housing offer, mixed population composition and good and varied outdoor recreation areas”* (p. 36). In developing the social housing sector: *“There should not be too many homes for the disadvantaged in a single area”* (p. 36). The ambition is that the housing stock should be diversified as this can help balance tenure types and population composition (p. 64, p. 66, p. 70).

While the plan presents some statistical information, only two descriptive indicators can be considered to relate to spatial segregation – the aforementioned proportion of children in low-income households and a reading of housing production according to area and number of bedrooms per unit (see fig 5.2). The document does not provide any performance indicators of how the progression of the plan will be monitored.

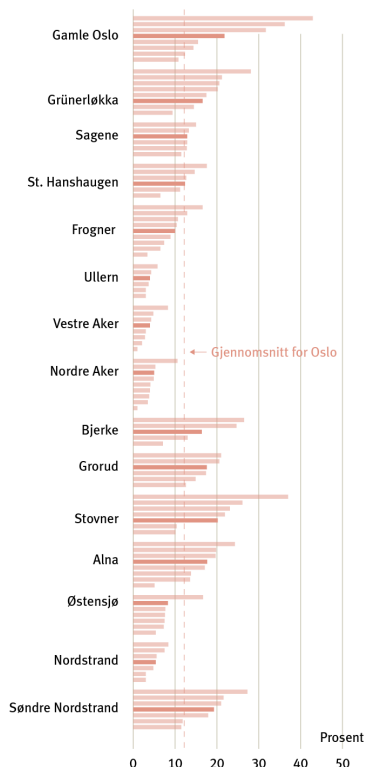


Fig 5.1 Share of children in low income households by district, 2015. Source: Oslo Kommune (2018)

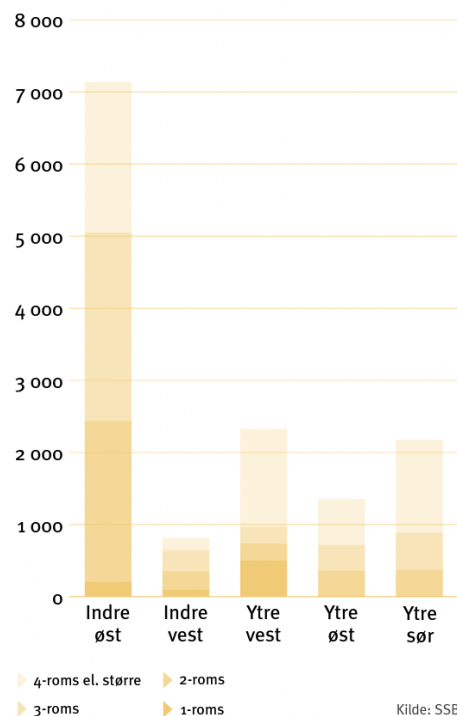


Fig 5.2 Housing construction, room/housing for inner east, inner west, outer west, outer south

5.2.2 Area-based investments

In 2007, the government and the Oslo City Council signed an agreement of intent regarding extra effort to improve living conditions in Groruddalen, a large valley in the north-eastern part of the city (Departementen & Oslo Kommune, 2007). The ten-year program was named *Groruddalssatsingen*, and while it was not the first of its kind, it is by far the largest and most comprehensive area-based investment (ABI) in Norway. The funds were to go to special measures for "sustainable urban development, visible environmental upgrading, better quality of life and overall better living conditions in Groruddalen" (Oslo Kommune & Departementene, 2007, p.1). At the end of the ten-year period the project was extended for another term (until 2026) and two new ABIs were established in Oslo, one in the south-eastern suburbs and another in the inner east of the city.

While the first decade placed a strong emphasis on upgrading physical qualities (such as parks, dimly lit streets and public spaces), other factors that impact living conditions and neighborhoods gained more attention over time. In the current organization of projects the

improvement of both the *place* and the *public services* are addressed through three strategic sub-programs: Employment; Childhood and Education; and Local Environment. The Local Environment program is the program that focuses on the *place* and is realized through “lifts” in local areas (*områdeløft*) on a smaller geographical scale. An ABI can therefore consist of several “lifts”.

As Groruddalssatsingen is now in its 16th year there is a substantial amount of publicly available documentation. To limit the scope, the selection of documents is based on relevance in terms of hierarchy and time. All of the documents relate to the ongoing program period, 2017-2026, and cover two points in time; the initial program plan made by the state and municipality in 2016, and the latest implementation plans for each of the three subprograms, which are from 2022. The implementation plans are the guiding plans for each year.

Program Plan for Grouddalssatsingen 2017-2026

The program plan specifies the reasoning and overall framework for the initiative by presenting the political goals, strategic approach, organization and funding. The main goal for *Groruddalssatsingen* (and the two other ABIs in Oslo) is:

“to contribute to lasting improvements in services and neighborhood qualities in areas where the needs are greatest, so that more residents in these areas become financially independent and active in their local and larger communities” (Oslo Kommune & Departmentene, 2017).

The main objective of each of the sub-programmes are also presented:

- Local environment: *Local environmental qualities in neighborhoods in Groruddalen are to be strengthened and the efforts are to contribute to inclusive local communities where more people are actively participating.*
- Childhood and Education: *Good upbringing conditions are to be ensured for more children and youths and a larger share are to complete and pass upper secondary education through improvement of services in the upbringing and education field in Groruddalen.*

- Employment: *More people will enter the ordinary work force and more people will have a permanent connection to working life through the development of services within the employment and qualification field in Groruddalen.*

The plan recognizes the issues of measurability of these goals, noting that they can act more like visions (p. 6). More specific goals and their operationalization is delegated forwards in time to ensure that the sub-programmes and local districts have agency: *“As strategies and measures are developed within the three sub-programmes, performance targets and indicators must be developed which make it possible to evaluate the efforts”* (ibid). The plan also mentions that evaluations for the ABI as a whole should also be conducted, but also these are unspecified and delegated forwards in time. The analysis of the current implementation plans hence focuses on how indicators are described five years later.

Implementation plans 2022

Each year implementation plans are made for each of the subprograms, at the time of writing these are from 2022. In all of them it is mentioned that indicators are either partly or fully under development.

The **Implementation plan for the Local Environment** (Handlingsprogram 2022 – Delprogram Nærmiljø) is the most straightforward in addressing indicators: *“The resident surveys are the most important source, together with existing statistics, for the programme's baseline documentation and form the basis for later evaluations.”* (Oslo kommune, 2022a, p.11). However, the plan also notes that because goals have both social and physical qualities, there is ongoing discussion about how results and effects can be measured (ibid).

While not directly related to indicators it is worth noting how two other aspects of knowledge production are addressed in the document. First it is mentioned that a job position has been created to collect knowledge about the structural and systemic conditions that prevent the achievement of the programme's goals. Such barriers could be in legislation, plans, national and municipal policies, and the intention is to convey these barriers to the political level in the state and municipality.

Second it is interesting to note that under the headline “Dilemma” the plan discusses the potential consequences that the local improvements could have on gentrification: *“Investments may involve a tension between the goals for general urban development in districts close to the center and the goals for the local area improvements. It is important for the sub-programme that both the municipality and the state **pay attention** to the consequences at neighborhood level of urban development measures and location choices, and how this affects the geographical distribution of inequality [emphasis added]”* (ibid p. 42).

The Implementation plan for Childhood and Education (Handlingsprogram 2022 – Delprogram Oppvekst og utdanning) describes gains and effects rather than goals, and states that it is in the preparation of indicators that the gains become measurable (Oslo Kommune, 2022b, p. 9). For the year of 2022 indicators are up for review and are therefore not described in the plan. It is mentioned that indicators should better reflect what the program sets to achieve and that the benefit of using indicators should be greater than its costs (ibid).

The Implementation plan for Employment (Handlingsprogram 2022 – Delprogram sysselsetting) describes a need to improve indicators (Oslo kommune, 2022c, p. 21). This plan is the only one to address the technical issues regarding access to data availability and the lack of data sources: *“Composite data sources with special requirements for authorization can therefore still be said to be the most important barrier to operationalizing best practice for measurements”* (ibid).

The program does, however, suggest an additional indicator for success:

“An overarching indicator that points in the direction of the extent to which the sub-programme's efforts are making an impact is to measure external hits ... for example, the number of hits in parliamentary notices and academic articles, or professional communities that have been inspired and possibly continue work that has been based on the sub-programme ... we will therefore develop a system that can show us how the sub-programme initiatives leave a mark.” (ibid.)

It is evident from the implementation plans that there are slightly different concerns in the development of indicators, including policy-relevance, resources and data availability. What is perhaps somewhat surprising is that these three sub programmes have been running for half a decade, yet indicators are still subject of “ongoing discussion”. In the interviews the indicators

for the local environment program were discussed, as well as the use of indicators to guide the ABIs as a whole.

5.2.3 Area-policy

In 2017 the City Government of Oslo officialized a city-wide area policy (*Områdepolitikk*) with the purpose to “contribute to ensuring that all local areas in Oslo are experienced as good and safe places to live and grow up” (Byrådet, 2017). The policy lays out three main strategies, where the first is to establish a system to monitor developments across the city:

“Through active use of statistics, the municipality must ensure that negative developments are caught early. Current statistics may include living conditions, demography, environmental pressures, house prices and other things. The system will give the city council a good decision-making basis for political decisions about where in Oslo area initiatives should be carried out.” (p.1)

Drawing on Groruddalssatsingen, the policy states that the statistical information is to be combined with other kinds of qualitative data in the selection of areas. What other data should inform decisions is not specified, but residential participation and the knowledge of public servants in the community is highlighted as relevant. It is emphasized that all information should be collected on a low geographical level to pick up on neighborhood differences in greater detail than the administrative district level.

A rudimentary monitoring system and routines for selecting areas for investments and smaller area lifts was established in 2020 (Byrådssak, 1014/20). The monitoring system is used to identify areas that score significantly lower on several socio-economic indicators compared to the city average (table 5.1). The data is collected for each of the city's 98 subdistricts. In addition, the basic statistical unit of Statistics Norway (which divides the city into 589 geographical areas) provides information on a lower geographical level on employment ratios, education levels, homeownership, moving frequencies, and non-western immigrants.

Theme	Variable	Available level
Employment	Share of employed, 20 hours/week or more	Subdistrict, basic statistical unit
Unfinished upper	Share of residents ages 21-29 that have commenced upper	Subdistrict

secondary education	secondary school, but not graduated within five years	
Low education	Share of residents with low education	Subdistrict, basic statistical unit
Low income households with children	Share of households with children and low income	Subdistrict
Non-western immigrants	-Share of non western residents -Share of non-western immigrants with short period of residence	Subdistrict, basic statistical unit
Household crowding	Share of household with less than 1 room per person and less than 25m ² per person	Subdistrict
Ownership status	Share of renters	Subdistrict, basic statistical unit
Social security benefits	Share of households where more than half of income is from social security benefits	Subdistrict
Moving frequency	Relocations (including internal relocations)	Subdistrict, basic statistical unit

Table 5.1. Indicators for the monitoring system for the Area Policy

The system does not operate as a criterion list with threshold values but is used for making initial comparisons of areas. This provides an outset for prioritizing areas, but leaves room for other considerations and sound judgment. Currently the monitoring system tracks nine descriptive indicators. It is noted that additional indicators from other statistical registries might be added in the future.

5.3 Interviews

Two interviews have been included in the Oslo case with a total of four interviewees. The first interview was with a representative working at the City Council Department for Urban Development – the responsible unit of ABIs and Oslo’s Area Policies. The second interview was conducted as a group interview with one representative from the Ministry of Local Government and Regional Development (KDD) and two representatives from the Norwegian State Housing Bank (Husbanken). The interviewees from the group interview all have extensive knowledge of ABIs in Oslo and other cities in Norway. Upon reviewing the transcripts, three themes emerged and the findings will be presented accordingly: (1) segregation as a policy issue, (2) the use of indicators, and (3) possibilities, limitations and expectations.

Segregation as a policy issue

The interviewees agreed that segregation had received relatively little attention as a policy issue, both on the municipal level and at the state level. However, they also expressed that segregation has gained more attention through the ABIs. Interviewee from the city:

“Segregation, well, it has not been a political goal, but it has been talked about and it has appeared in the discussions. But it isn’t written down anywhere.”

interviewee from KDD: *“Segregation as such has not been such a big issue. You can say that with segregation, it is primarily in Oslo that it is a challenge, because in smaller cities there is a much better mix of where people live in relation to income ... So, for us, it [segregation] has come on the agenda through the area initiatives”.*

None of the interviewees considered the ABIs as a means to mitigate or prevent segregation, but noted a political shift in how neighborhoods are discussed: *“...this geographically oriented work has gained greater political weight. At the start it was perhaps more about building good neighborhoods, while now there are ambitions to see it more in a larger context of social- and redistribution policies. Even if we say that these projects are not a suitable means of balancing those things.”*

While the question was not raised, all of the interviewees expressed that other policies would be needed to tackle segregation. A quote that one interviewee had prepared ahead of the interview, captures the opinions of the interviewees: *“One counteracts economic inequality and promotes welfare, primarily through economic policy and universal welfare schemes. Measures against geographical segregation, that arise as a result of economic inequality, are countered through comprehensive urban development and housing policy.”*

Another interviewee raised the shortcomings of social housing policies and the unintended consequences of state funded loans: *“In the big cities, you see that those who receive the start-up loans, they have to move to areas that are cheaper in the districts, which in the long term can create areas with poor living conditions.”*

An upcoming white paper on living conditions in cities is expected to be presented to the Parliament during 2023. The interviewees with knowledge of the white paper were not at liberty to provide details, but segregation, housing policies and national indicators on neighborhood conditions are among the topics that are expected to be addressed to the Parliament.

The use of indicators

The use of indicators in the ABIs has been primarily to identify the areas with the biggest challenges, and not as tools to evaluate, follow-up or control initiatives. Over the years there has been some variation in which specific indicators have been used to target districts, but they have generally been a set of descriptive socio-economic indicators, such as the share of low-income households, unemployment, levels of education and recipients of social benefits.

Whether indicators had influenced the direction of initiatives once areas had been identified was considered limited: *“Maybe, a little, because through them you can see where the issues are. And they are also different in different places.”* In any case, projects have largely been influenced by efforts to map neighborhood conditions and through participation.

“One of the first experiences from the first project term was that the districts believed that they had a fairly good overview of their own district, but that was only at the district level. When you go down to a sub-district or lower, you see that there are large geographical variations in small areas.” This experience is also what led to the granular statistical units in the monitoring system of the Area Policy.

The interviewees shared that over the years a lot of effort has been put into developing indicators with several workshops, meetings and seminars. Different possibilities have been discussed and some technical solutions have been tested. The Housing Bank, for instance, developed a web-based map solution with different thematic indicators. The system was however not adopted by municipalities: *“They might have helped the municipalities along the way in finding good measurement indicators, but the actual use was limited. I think the comment was that the unit of measurement should have been more granular. Also some of the criticism was, among other things, that a [composite] indicator that was named ‘crime and unsafe environments’ combined vandalism and murder in the same indicator.”*

The interviewees did however have good faith in the ABIs’ capacity to improve qualities in the local environment and in improving the quality of life and increasing belonging and social ties in the neighborhoods. *“These upgrades and the measures that are implemented, the residents are very satisfied. The children get good roads and young people get better meeting places”.* The interviewees also emphasized that a big benefit of ABIs was that it supported public innovation, by providing sectors and levels the opportunity to experiment with different working methods and new ways to collaborate.

Regarding evaluation, the city interviewee emphasized the importance of surveys, which are carried out among residents and among the locally employed public servants in the districts *“We ask the residents, we ask those who work in the districts and then we have the statistics”*. In these evaluations the statistical measurements have had the least value *“Looking at the whole of Oslo, the picture remains relatively stable. These things are slow to change.”*

Possibilities, limitations, expectations

When asked if indicators could provide instrumental value in decision-making in the ABIs the respondent considered it unlikely due to the nature of the local challenges: *“The area investments are very complex, and there is a great deal of complexity in the way of working. So it is very difficult to just put it into some kind of indicator system... I don't think we will achieve very much more by twisting our heads with different indicator measurements.”*

If indicators could be developed to measure progress was also seen as unlikely: *“It is very difficult to measure a development using indicators against the background of such a complex issue.”* Similarly: *“indicators don't capture the extent of everything, because there are long-term effects, and you can't say what is really a direct reason why the result is good. For example school dropout rates may be a decreasing trend. It's one of our goals, and it is a good indicator to look at, but it's not like you can connect it directly with what's going on in an area investment”*. It was noted that the opposite would also be true – it would be impossible to know what would happen to the indicator levels without the ABIs.

When asked if the lack of observable change in the indicators could be used as political ammunition against the ABIs the interviewees found it unlikely *“No, because we have been able to document, for example, that we work more efficiently in other ways ... We have documentation at the beginning with interviews that are used by the evaluators. It was made after a lot of input from all the districts, where we have tried to operationalize the goals. Of course it says nothing about whether the living conditions of the population changed, but it says something about how these local qualities may change, and if the district works differently, which is what all the districts say they do.”*

Despite this general hesitation towards the utility of indicators, the work towards developing indicators is ongoing; *“We are constantly told that we have to make results visible... and even though we are working on it too, it is clear that it is a bit tricky methodically.”* The interviewees shared that this was not just a political expectation, but something municipal administrations

also wished for, as they want to know if they are achieving their goals. As an interviewee said: *“it is of course important to track development and so on, and to see if what we are doing is working in the long term.”* As noted earlier the interviewees considered the short-term use of indicators particularly problematic.

The development and use of indicators was also a question of resources: *“I have more faith in gaining a greater awareness of how we work and plan things, rather than having to spend a lot of time sitting and measuring in relation to an indicator target...For municipalities it creates noise in an already tight budget and limited capacity”*.

To this issue one interviewees suggested the different governance levels and roles as part of the solution: *“By making clearer distinctions between short-term and long-term indicators, between indicators for the ministry and the municipalities, between qualitative and quantitative, I think it is a little easier to be in this jungle of indicators.”*

5.4 Case Summary

Oslo has a long history of being a divided city. Although there are no explicit anti-segregation policies in Oslo, certain areas have been identified as being more impoverished and ABIs have been put into place to improve their conditions. Although not explicit, this suggests that ABIs are comparable as one type of anti-segregation policy. This assumption forms a basis for the discussion in the next chapter.

From the findings in the document analysis and interviews it is apparent that there is an expectation and emphasis on the use of indicators in regards to the ABIs, which has been ongoing discussion for years. The documents related to the ABIs express that indicators are important for monitoring and evaluating progress, but from the point of view of the interviewees this expectation seems somewhat exaggerated as the benefits of the ABIs are not easily quantifiable. Residential surveys (which have been quantified) and surveys with the employees in public service do however show that the efforts have had a positive impact.

In the following chapter the findings from the cases will be compared and discussed.

6. Discussion

Drawing on the theoretical foundations and the findings from the case studies, this chapter discusses the role of indicators in segregation policies. The chapter is organized into three parts.

The first section answers sub-question 1: **How is segregation defined as a policy problem?**

In this part I compare the findings from the document analysis to evaluate how segregation is defined as a policy issue, either explicitly or implicitly. Drawing on the theory chapter the comparison will clarify which dimension and domains of segregation are recognized, and whether different drivers of segregation are considered in the policies.

The second section answers subquestion 2: **How does the definition of segregation shape indicators?**, and subquestion 3: **How are indicators used in decision-making?**

Drawing on the document analyses and interviews, I consider how indicators have been chosen according to the policy definition of segregation, their instrumental function, and what roles they have played in policy-making, by intent or otherwise.

The third section answers subquestion 4: **How can indicators inform policy aims?**

This part rounds off the discussion by taking a more speculative point of view and suggests further avenues for research.

6.1 Segregation – a city or a neighborhood problem?

In comparing the findings, the biggest difference is that Helsinki has several specific anti-segregation policies whereas Oslo has none, despite the fact that neighborhood disparities in Oslo are widely recognized, and balancing neighborhoods has been a political goal for years. Instead, Oslo has introduced several area-based efforts that are used as a compensatory measure in places where welfare conditions are low. In Helsinki such area-based efforts are also used, but instead of treating segregation as solely a neighborhood challenge, several other measures are also being used, meaning segregation is treated as a city-wide problem. In this sense the cases have some similarities, but also significant differences.

Drawing on the theory chapter I will discuss the policy definition of segregation by comparing how the cities address different dimensions, domains and drivers of segregation (cf. Haandrikman et al., 2021), and how these play into tackling segregation as either a city problem or a problem that is concentrated in certain geographical areas. In the following parts I compare findings from the document analysis by addressing (1) the goals expressed in high-level plans, and (2) the ABIs.

6.1.1 Municipal goals and strategies

To compare how segregation is defined as a policy issue, I will first compare the City Strategy (2021) and Master Plan (2016) in Helsinki with the Municipal Plan (2018) and Area Policy (2017) in Oslo. These plans are an important reference point as they provide insight into long-term goals of their cities which are meant to guide decision-making on lower levels.

Identifying segregation

In the Helsinki case, the term segregation is used explicitly and the plans emphasize that a main objective in urban development is to *prevent* residential segregation. In addition to defining these existing disparities as segregation, the latest City Strategy also forms short- and long-term goals ensuring equality in living conditions and social cohesion and stability. There is an emphasis on the urgency to not only prevent but also *combat* segregation, and promote the city as an international role model of urban equality.

In the Oslo case, there are no explicit mentions of segregation. However, issues of spatial disparities are recognized with policies targeted at “areas with an accumulation of welfare challenges,” “vulnerable areas,” and “areas with complex challenges”. These terms are used to describe disadvantaged neighborhoods where physical, cultural, and socio-economic forms of deprivation are higher than elsewhere, concerns that are de facto about segregation. As in Helsinki, Oslo’s Municipal Plan identifies issues of social and geographical exclusion, and stresses the importance of preventing further deterioration by aiming to balance out unequal living conditions and ensuring social cohesion.

While Oslo’s Municipal Plan does not have a holistic goal to become a poster child of urban equality (it is a divided city, after all), the rhetorical language is similar to that of Helsinki’s City Strategy. Moreover, both cities demonstrate their relative success at keeping neighborhoods healthy by making comparisons to Sweden and Denmark. Overall, it can be argued that Helsinki has a more prudent approach towards the issue of segregation because it has been precisely identified as such, making it possible to formulate goals beyond the neighborhood scale.

Diversifying neighborhoods

In Helsinki several measures to balance low- and high-income areas have been introduced. The most important one is the continuation of the tradition of tenure-mixing. Housing construction in new districts, as well as infills in existing neighborhoods can encourage and maintain socio-economic diversity in neighborhoods by ensuring variety in tenure forms and housing sizes. The principle applies to both deprived and better-off areas, as each district should cater to a heterogenous population. However, in dense and/or privately owned areas, this is not feasible in practical terms. This includes big parts of the historical inner city where housing costs are high, meaning some neighborhoods will inevitably continue to be exclusive to the most affluent groups.

Oslo’s Municipal Plan emphasizes the importance of balancing neighborhoods and ensuring that new areas cater to diverse groups. However, the planning reforms in the 1980s has meant Norway’s housing stock today has a very strong private sector. This in turn widens the gap in the city’s affluent and disadvantaged neighborhoods. Furthermore, these reforms also narrowed the municipality of Oslo’s regulatory ability, and as a result has few policy instruments

(Christiansen and Kjærås, 2021; Tunström, 2020), making it difficult to propose or develop more affordable housing across all districts.

In essence, tenure-mixing can be used to an extent to diversify neighborhoods and mitigate segregation in Helsinki, but Oslo has additional issues in the housing sector that need to be addressed, such as the distribution of municipal housing to western parts of the city, preventing state-subsidized housing loans from reinforcing segregation, and tools to regulate the private housing market (NOU2020:16), before policies on balancing neighborhoods can be implemented.

Domains of segregation

In both cities the principle of densification is seen as the most favorable way to promote sustainable development, including economic and social dimensions. In both cases successful densification implies better mobility options, combined with added functions and high-quality public spaces. Urbanization through densification is seen as a means to limit sprawl and need for car based commuting, but it is also considered as a means to promote social interaction and conviviality.

This raises two questions. First, there are the academic discussions, that social proximity does not necessarily lead to increased interaction and trust (Andersson et al., 2016). While good public spaces are certainly a value in itself, there is little evidence that public “meeting places” facilitate inter-group relations or promote desegregation (Andersen et al., 2021). The other question relates to the actual ability of using densification as a strategy to secure social sustainability and to counter segregation. As pointed out by Cavicchia (2021), urban densification policies in Oslo that have been implemented since the 1980s, have instead produced exclusionary housing markets with negative socio-spatial implications.

While residential segregation stands out as the biggest concern in both cases, segregation in other domains are also mentioned, meaning the cities recognize that segregation is reproduced in multiple domains of life (cf. Piekut, 2021; Boterman & Musterd, 2016), albeit to different degrees. In Helsinki segregation in schools and spaces of recreation are clearly acknowledged and will be addressed through practicing positive discrimination across municipal sectors and through investments in cultural activities that can facilitate contact between groups. As

mentioned above, the explicit acknowledgement of segregation as an issue in Helsinki's City Strategy has helped formulate short- and long-term policies to prevent and mitigate its effects.

In Oslo, terms like “areas with an accumulation of welfare challenges” and “vulnerable areas” are used mainly in reference to residential areas where socio-economic conditions are low. It is hard to treat a problem when there is no diagnosis that neither recognizes the spatial relations between residential areas nor that segregation perpetuates in other activity spaces – as in the case of viewing issues such as school segregation as being tied only to specific geographical areas and not as a domain in its own right. This further reinforces the impression that segregation in Oslo is not treated as a problem that concerns the city as a whole.

Drawing on the drivers of segregation described in the theory chapter, it is evident that planning in Oslo has to a limited degree responded to organization of the housing system, housing policies in combination with urban morphology and migration dynamics. Inequality is still largely prescribed to the regular tasks of the welfare state, whose response has proven to be insufficient in addressing spatial inequality. ABIs have been the only option, yet these interventions are supplementary and compensational, rather than actually a means to reduce segregation.

6.1.2 Area-based interventions

In both cities ABIs are used with notable similarities and differences. To mention the similarities first: both cases consider the consolidation of overlapping socio-economic challenges (such as poverty, health issues, drop-out rates and unemployment) particularly concerning. Moreover, these conditions are seen in connection to other forms of disadvantage, for instance, urban functions, pollution, lack of services, and poorer mobility options. To improve the quality of life, and not just the qualities of the place, there is an understanding that efforts require a cross-cutting approach across public sectors and governance hierarchies. In both cities, investments are therefore made to improve both physical conditions and public services in the area, and in both cases local participation is seen as essential.

The ABIs in Oslo are not intended as anti-segregation policies. Instead their function is twofold, to be preventative in stopping “negative spirals that are reinforcing” in the project areas, and compensatory in offsetting negative impacts. The ABIs are also used as a means of promoting

the socio-economic integration of “non-Western immigrants,” as many of these areas have a high concentration of households with immigrant backgrounds and lower income levels. Thus segregation is primarily framed as an issue in the residential domain along socio-economic and ethnic dimensions.

In Helsinki the ethnic dimension of segregation is also recognized, as the City Strategy expresses concerns that several areas with higher populations of “foreign-language speakers”² also face additional socio-economic challenges and other forms of deprivation, but specific strategies to address ethnic segregation remains vague. Kortteinen (2022) argues that the tenure-mix policies are not sufficient to ensure inclusion and integration of immigrants, but that other policies, particularly in the education and employment sector, must be improved to neutralize this aspect of residential segregation and tackle the systemic discrimination and racism faced by immigrants in Finland. This argument reflects back on the multi-dimensional aspect of segregation, where majority and minority groups (by ethnicity and class) are separated across several domains in daily life.

Furthermore, some researchers have pointed out that planning policies in Helsinki have not been able to accommodate the interests of minority communities (Hewidy & Lilius, 2021). Hewidy (2022) finds that suburban areas have attracted new residents through rejuvenation and densification projects (ABIs), but as the city has replaced or renewed existing commercial buildings, several businesses run by immigrants have been lost at their expense. He argues that a significant barrier to inclusion and integration is the homogenizing mechanisms of anti-segregation policies without a clear or considered political interest in multiculturalism. I will not dwell deeper into these questions, but it is clear that mixing policies that are promoted as means to strengthen social cohesion and trust, can easily lead to trade-offs that obscure whose interests are being served.

In Oslo, ABIs and policies frame segregation as a spatially-bound problem that concerns specific neighborhoods that need “fixing”, and is not seen as it is: segregation as a broader issue of increasing inequality that affects the whole city. While valuable for other reasons – for instance from a social justice perspective (Andersen & Brattbakk, 2020) – the significance of ABIs should not be overstated simply because there are currently no other comparable

² Foreign-language speakers are used as the Finnish classification of people of immigrant backgrounds. In Norway, indicators refer to the census groups “non-Western immigrants” and “immigrants”

measures in place. Instead ABIs should be used as one of several tools in alleviating socio-economic tensions. Indeed, the plans and documents associated with the ABIs already recognize their projected impact is insufficient in solving or preventing broader inequities. Oslo needs long-term segregation mitigation processes, and could learn from Helsinki's understanding of segregation as a city-level problem.

6.1.3 Problem definitions of segregation

To summarize, segregation in the residential domain is the main concern in both cities. Oslo's Municipal Plan frames disparities in schools and recreational spaces as a result of disparities in the residential domain, and disadvantaged areas are earmarked with terms like "vulnerable" or "with complex challenges". There are no specific anti-segregation policies at city-level. On the other hand, plans in Helsinki explicitly define segregation as a city-level issue with distinct and reciprocative domains (i.e. residential and school). The comparatively clear delineation of disparities and understanding of interconnectedness therefore allows Helsinki to take a more prudent approach developing both short- and long-term policies such as tenure-mixing, positive discrimination in public services and urban rejuvenation to target these different domains and at different scales.

Socio-economic disparities are particularly emphasized in both cases, and ethnic segregation is also mentioned. Oslo's Municipal Plan presents a clearer overlap of the socio-economic and ethnic dimensions in the residential domain, which is expressed as a policy concern. ABIs are used as a key tool to improve the socio-economic inclusion of ethnic minorities at neighborhood scale, though its limited scope is also acknowledged. In Helsinki, ABIs are one of several tools, though the use of ABIs generally overlap with areas that have higher levels of "foreign-language speakers".

The most crucial difference between Helsinki and Oslo, is that Helsinki's has more tools and a broader range of policies to balance neighborhoods across the whole city. This is partly contingent on a long history of tenure mixing and social housing policies on the national level, but also because the patterns of socio-economic disparities are recognized as segregation and thus are handled as a city-level issue. In Oslo, disparities are identified as an area-specific issue, and as such fails to address structural barriers and the actions of wealthy residents

(particularly in the housing market) which are as consequential to segregation as the actions of marginalized groups.

6.2 Indicators and practices

The findings show that there are clear differences between how indicators have been developed and used. Each case demonstrates that the choice of indicators reflect the problem definition of segregation as either an area-specific issue on a low geographical scale (the Oslo case) or as a city-wide phenomenon (the Helsinki case). Yet, interviewees from both cases share many of the same concerns (table 6.2). The following sections discuss the use of indicators by drawing on findings from the document analysis and the interviews.

6.2.1 Monitoring neighborhoods and mechanisms

In Helsinki a composite index tracks the socio-economic conditions of neighborhoods (combining income, education and unemployment). This index is a simplified and cursory indicator of neighborhood disparities. In addition the city monitors a range of other indicators to analyze aspects and potential drivers of segregation. For instance, the AM-program presents longitudinal indicators that demonstrate that a reduction of welfare in some areas is not the root cause of socio-economic differentiation. Indeed, welfare is generally increasing for the whole population but the rate of improvement is much faster in the most affluent areas. In other words, the problem is the difference between the lowest and highest quantiles, which supports the argument that efforts are needed at both ends of the scale to close the gap. As housing is recognized as a primary driver and mitigator of segregation in Helsinki, there are also various indicators that monitor trends in the housing market, ranging from housing and rental prices, average apartment size per district and household purchasing power. In this way it is clear that the city not only tracks socio-economic disparities but several of its underlying mechanisms.

In Oslo, a monitoring system for tracking living conditions in neighborhoods was developed in 2020, in response to the Area Policy from 2017. The function of the system is to identify the “neediest” and at-risk areas (classified as the 5-10% of areas with the lowest indicator score), primarily through tracking five descriptive socio-economic indicators, the ratio of home ownership, and moving frequencies. These are provided on a granular scale for all districts in Oslo. The purpose of the system is to ensure that the prioritization of areas and subsequent ABI

funding is legitimate and based on factual knowledge. Unlike Helsinki, the utility of these indicators appears to be limited to this monitoring system. Its function is also comparatively single-minded, focusing only on the lowest scoring areas when there is already a wealth of information to be analyzed from looking at the other 90-95%.

6.2.2 ABIs and indicators

Regarding ABIs in Helsinki and Oslo, there are notable similarities and differences in the use of indicators. In both cases, analyses at various scales (district, subdistrict, neighborhood) are made. As participation is also emphasized in both cases, qualitative surveys and other community-based activities are seen as essential tools for setting strategies and evaluating progress. What is interesting to note is that while both cities rely on a combination of socio-economic data and more qualitative considerations to select areas (such as mapping physical deprivation in the local environment), in Helsinki's the general strategies for urban development and growth is also considered in the selection of areas assigned ABIs. Given the dual goals of rejuvenating vulnerable areas and increasing their housing stock by 30%, the selected areas must also be places that can be densified. Moreover, the location along transportation lines is considered. In other words, the ABIs and the broader strategy for urban growth in Helsinki are aligned and reinforcing, whereas in Oslo the ABIs run as separate programs.

As discussed earlier, the limitations of ABIs to solve larger structural disparities implicate that the use of indicators for selection cannot be directly tied or equated to indicators for evaluation, even if the indicators for selection are partly what legitimize the efforts to begin with. In other words, it is unrealistic to expect significant changes in indicators during the limited time-period and funds of an ABI, but this is not grounds to invalidate targeted ABIs. If anything, unchanged patterns of segregation in the long term would be a reasonable argument to suggest that *additional* measures are required to balance living conditions. In a situation where indicators would show improvement, critical attention should be turned to migration patterns, to evaluate whether an observed balance is caused by gentrification processes or displacement. As noted earlier, there is already proof of the unjust consequences of ABIs on immigrant entrepreneurs in Helsinki (cf. Hewidy, 2022).

6.2.2 Lessons from practice

As noted earlier, in Helsinki, there are several monitoring systems and performance indicators tracking how the municipality is progressing towards its goals. Many of these are publicly available, in public documents and on the city website. Through the interviewees it is evident that in addition to these, the city uses other indicators that are systematically collected and monitored for the purpose of informing and evaluating policy decisions. These include long-term and short term indicators, based on both qualitative and quantitative data and on different geographical scales. The interviewees shared that the city is increasing efforts towards making policies data driven and there are ongoing efforts to collect indicators and streamline knowledge from across sectors and departments to use indicators even more strategically.

In the Oslo case the production of indicators seems to have been more iterative and ad-hoc, approached with a learning-by-doing attitude. Whether or not the several discussions around developing indicators for the ABIs (over the last 16 years) have provided an arena for seeking consensus on goals or had other outcomes was not brought up by any of the interviewees. This does not rule out that this might have been the case and it is possible that the ongoing efforts to produce indicators have contributed to how the ABIs function today. How indicators are used in other policies and sectors in Oslo should also not be generalized, but the findings from the document analysis suggests that gains of indicators in policy-making are present, but that these expectations are stronger on the rhetorical level than in practice.

In both cases interviewees were critical to the use of indicators to assess the success of ABIs in the short term. Indeed, the slow-changing nature of segregation was recognized and the need to demonstrate improvement seems to be motivated by political expectations. Interviewees also pointed out the general difficulties in assessing cause-and-effect of initiatives, challenges that apply to segregation research in general. Instead, interviewees stressed the value of qualitative surveys and feedback as important to evaluate progress through the eyes of the citizens.

A clear concern in the Oslo case was that developing and using indicators could drain valuable resources and stall decision-making. In Helsinki this was not raised as a concern, probably because the costs and resources to gather and process data is prioritized and well established. Indeed, a big difference between the cases is that the city of Helsinki has its own research division that not only collects but also analyzes data on a continuous basis. Although Oslo has a “statistical bank” and reliable demographic information is collected, it seems that this data goes

largely unused by the city in policy-decisions. As noted by Andersen and Brattbakk (2020), the analytical knowledge production, evaluations and research used as political legitimation of ABIs have largely been provided by external institutions or consultancies. Of course there are benefits to building a knowledge base by outsourcing alternative perspectives, but the benefits of establishing a consistent, iterative method and full oversight in the long-term are more likely to be lost at its expense.

Whether the indicators have fulfilled their intended function or have had unintended consequences is difficult to assess based on the findings. In Helsinki the production of indicators to inform policy-making is systematic and continuous, but the interviewees from Helsinki still found it hard to determine the extent to which indicators have had direct influence on a specific policy issue. Indeed, many of the initiatives in reducing segregation, such as tenure-mix, have a long history and policies have a tendency to iterate and build on each other. There is however reason to believe that the urgency and political commitment to addressing segregation has been influenced by factual knowledge and the use of indicators in communicating challenges in a clear way. For instance, one interviewee found it likely that the positive discrimination policy that the city has begun implementing would not have happened had such indicators not been in place. This does however not mean that political solutions are necessarily always agreed upon.

With these differences in mind, the interviewees still expressed some similar opinions about the benefits, limitations and risks of indicators. As stressed by all of the interviewees the indicators that track socio-economic conditions provide simplified outlooks on realities that cannot be easily changed. Caution should be exercised in reinterpreting findings, as causality is difficult to determine, especially for something as complex as segregation. In Helsinki, the move towards using indicators more strategically also poses a risk for conflating the goals with the indicators. The interviewees in Helsinki also noted that indicators and monitoring systems should be used with caution so as not to produce stigma or reinforce stereotypes about neighborhoods and schools.

The interviewees shared similar sentiments that indicators are still important to track development and for providing a starting point for analysis, but that they should not be overestimated in evaluating results, particularly in the short term. Lastly, interviewees also agreed that qualitative surveys are valuable in assessing progress in urban development, for the city as a whole but especially in ABIs that can have a big influence on communities and the

daily lives of residents in the targeted areas. On the next pages is a table that summarizes the findings from the interviews and document analysis.

Theme	Topic	Helsinki	Oslo	Main finding
Technical/institutional challenges	Correct scale	x	x	In both cases, the right scale and geographical units were seen as important.
	Streamlining data	x		In Helsinki, the city is working on streamlining data from different units and sectors so information can be shared and utilized more efficiently.
	Access to data (privacy)	x	-	In Helsinki, access to sensitive data was mentioned by interviewees. It was mentioned in one of the program plans in Oslo, but not by any interviewees.
	Resources		x	In Oslo, the lack of resources was mentioned as a factor in the development and use of indicators.
Risks/limitations	Utility	x	x	In both cases, interviewees questioned the utility of some socio-economic indicators that describe slowly changing phenomena.
	Oversimplification	x	x	In both cases, interviewees expressed worries that indicators can lead to simplified understanding of issues.
	Added complexity		x	In Oslo, indicators were considered as an additional layer of input that might stall internal processes.
	Stigma	x		In Helsinki, an interviewee expressed concerns over the stigma that can arise from indicators and rankings.
Benefits	Political commitment	x		In Helsinki, interviewees believed that indicators have added to political consensus over the urgency of segregation.
	Political awareness	x		In Helsinki, interviewees believed that the use of indicators have communicated issues that have raised political awareness.
	Residential satisfaction	x	x	In both cases, residential feedback (qualitative surveys etc.) was deemed as an important tool for assessing the progress of interventions.

Table 6.1 summary of findings from interviews.

CASE	SEGREGATION		POLICY		INDICATORS	
	Domain	Dimensions	Spatial target	Aims	Type	Function
Helsinki	Residential School Leisure	Socio-economic Ethnic	City-wide including low and high income neighborhoods	Balance tenure mix Reduce polarization in housing market Counteract neighborhood effects	Descriptive Performance Composite Qualitative and Quantitative	Monitoring Inform policies Guide strategies Policy evaluations Communication
Oslo	Residential School	Socio-economic Ethnic	Area-based Located in: Inner-East North-Eastern suburbs South-Eastern suburbs	Counteract/compensate neighborhood effects Socio-economic integration of minorities	Descriptive Qualitative and Quantitative	Identification and selection of “neediest areas” and areas at risk Monitoring

Table 6.2 summary of findings. Words in **bold** indicate that a dimension/domain is more emphasized.

6.3 Can changing the indicators change the story?

Until now I have discussed how segregation is defined as a policy issue and the role of indicators in supporting those policies. In both Oslo and Helsinki, the indicators seem to be well aligned with their respective policies and the relationship between indicator functions and the policy goals is consistent.

The overall question in the thesis examines the role of indicators in segregation policies, with attention to Oslo and Helsinki. The broader implications of this thesis is addressed by sub-question four: *how can indicators inform or challenge current policy aims?* This question is particularly relevant for Oslo, because there is currently no policy explicitly addressing segregation, despite the fact that neighborhood disparities are widely known and balancing neighborhoods has been a municipal goal for years. In light of examining the case of Helsinki, and the benefits of identifying segregation and its mechanisms as interconnected at different scales, I will present precedents and possibilities of how Oslo might address and anticipate increasing inequality through alternative indicators.

First, there is precedence from when in 2020, the Norwegian Commission for City and Living Conditions applied the Danish ghetto criteria to neighborhoods in Norway, and found that no neighborhoods in Norway met the conditions to be considered a “ghetto” (NOU 2020: 16, p. 54). While this provides some consolation about the relative wellbeing of neighborhoods, an alternatively framed indicator could be used to show that Oslo *is* strongly segregated. Looking on the other end of socio-economic disparities, the affluent residents of “golden ghettos” are the most segregated group in Oslo (cf. Ljunggren, 2017). From a macro-scale, the segregation of the affluent in Oslo is also higher than in Copenhagen and Stockholm (Haandrikman et al., 2021). This hyperfocus on vulnerable areas and lack of reckoning with the spatial relations between all groups could be a key point from which to address segregation in Oslo. Arguably, the increasing wealth inequality in the population (NOU 2020: 16) and migration behavior of the better-off as drivers of both residential and school segregation needs to be recognized.

Whether indicators could actually change the course of policies, is of course a separate question and admittedly a naive one. Undeniably, the insufficiency in existing planning

instruments to regulate the housing market are considerable barriers that necessitate action beyond conceptual shifts in defining and framing spatial relations. So long as there are no policies or strategies that consider neighborhood disparities or housing distribution across the city, there will be no strong argument for the municipality to monitor these differences and mechanisms.

Helsinki offers one avenue to move forwards with, using several anti-segregation tools with their own indicators to address the interlinked issues, but it must also be said that Helsinki's planning structure has regulatory capacities in a way Oslo's system does not. One suggestion from the ground up is that Oslo should better utilize its existing data, moving beyond a comparatively passive monitoring system and producing a broader study of the city which looks at the whole spectrum of socio-economic disparities, pinpointing and communicating existing weaknesses in the system for potential reform.

Last, I would like to draw on the indicator literature that suggests that composite indicators, in particular, can be powerful tools for communication (Lehtonen, 2015). Elaborating on the previous point of using existing data, an example of this already exists in Norway, namely the "nurse-index" (*sykepleier-indeksen*). Using the average income of a single nurse as a baseline, this indicator signals the affordability of the housing market by demonstrating the proportion of homes available on this income. If a nurse can feasibly afford a high proportion of the homes in a city, housing prices in the city are low. If a nurse cannot afford to buy anything in the city the housing market is inaccessible. The nurse-index has gained prominence in media outlets in recent years, especially as the score for Oslo has dropped for consecutive years hitting a record low at 1% in 2022 (Tollersrud, 2023). In this way the issue of housing affordability has been simplified to become more accessible to a wider audience, making it easier to maintain public discussion, whether it be holding politicians accountable or demanding change. This type of "outsider" indicator might be a more viable route to change the current narrative from segregation being a neighborhood problem to one about broader inequalities that makes Oslo a divided city.

The results of this thesis have contributed to the empirical indicator research, confirming previous findings that the policy uptake of indicators is not limited to the "quality" of indicators, but contingent on contextual aspects. In Helsinki, where segregation is the lowest among the

Nordic capitals, and anti-segregation policies have a long tradition, indicators and rigorous research has contributed to political commitment across party lines.

In Oslo, where the division of the city has a long history, anti-segregation policies have been scarce and the use of indicators more limited. A tension in Oslo is a mismatch between the utility of indicators for policy input (selection of areas for ABIs) and indicators for evaluation and monitoring. This is partly the case in Helsinki, but to a less limited extent, possibly because the organizational infrastructure for indicator development is more systemized. What will be interesting to follow is how the increasing popularity of indicators will affect policies in years to come, not only in the capital cities but smaller municipalities as both countries are developing national indicators to track neighborhood disparities.

Further, the thesis is a new addition to the relatively sparse research comparing segregation in Oslo and Helsinki, and is the first to address indicators. As the present time is marked by rising segregation on one hand and increased attention to indicators in governance on the other, I believe more in-depth studies on the dynamics between these topics are worthwhile. The relationship between indicators and policy making is nothing new, but research on this topic has largely focused on broader and more comprehensive sustainability indicators. As the thesis has identified how existing choice and use of indicators reflect the weaknesses in Oslo's planning system, the findings presented here can contribute as a springboard for further studies, where the role of indicators can be used to frame how segregation is diagnosed and treated. An interesting approach to this end could be further studies where different policy indicators are "exchanged" between contexts, not to assess segregation, but as a tool to compare how public authorities in different countries and cities define segregation and evaluate its urgency.

7. Conclusion

The main question in this study was: What is the role of indicators in segregation policies? The question has been approached by using two case studies – Oslo and Helsinki – where the relationship between definitions of segregation and indicators have been analyzed through documents and interviews with policy makers.

The study finds a clear connection between the conceptualization of segregation in urban policies and choice of indicators. In both of the cases the indicators serve functions that align with the policy definition of segregation. Although specific examples of how indicators have influenced decision making has been observed, the role of indicators in wider terms is inconclusive and requires further research.

In Helsinki segregation is seen as a city issue with effects across social domains and scales. The city has had a long tradition of mixing tenures, but segregation has been increasing in the last couple of decades nonetheless, which points to the necessity for more action. The city has also had a long history of monitoring segregation and other indicators to inform policy making. A combination of descriptive, performance and compound indicators are produced and are used to perform different functions such as monitoring, communicating, informing policy decisions and evaluating progress. It seems that through active research and the use of indicators segregation has been recognized as an urgent issue across political parties, which has in turn galvanized action and political commitment to prevent and mitigate segregation. The direct policy uptake is however difficult to assess and solutions are still politically charged.

In Oslo segregation is not explicitly addressed, and is understood as the accumulation of disadvantaged groups in certain residential areas. Policies focus on compensatory and preventative measures in these areas, and a monitoring system with socio-economic indicators has been developed to select areas for future funding. In this way the monitoring system implicitly treats them as isolated and not interconnected cases by focusing on alleviating disparities in worse-off areas. In lieu of actual anti-segregation policies the migration behavior of majority and affluent groups and the relational aspect of segregation remains underplayed and poorly communicated.

In both cities policies stress the need for indicators. The study finds that in Oslo this is presented strongly on a rhetorical level, but that indicators are still being discussed and practitioners express doubt about their practical utility in evaluating policies. In contrast, the City of Helsinki has prioritized urban research and indicator development as a part of city operations, and is increasingly moving towards making strategic use of indicators in decision-making. The underlying rationale is that the city will become better at targeting policies and increase efficiency. How this will influence policies in years to come is uncertain and would make for an interesting study further on.

Based on the findings the research suggests that to be able to understand and cater to the needs of the public, both qualitative and quantitative methods at several spatial scales should be applied. The study finds that the attention to indicators have in some cases been exaggerated. A combination of indicators should aim to support the understanding of mechanisms and drivers of segregation, and no set of indicators should be used uncritically. To conclude, indicators can play different roles in segregation policies, and are in these two cases closely aligned with the segregation policies (or the lack of them), which are in turn shaped by the institutional conditions and contexts of each case.

References

- Andersen, B. (2019). Marginality and banality in the segregated city: Reflections on the 'riots' in Oslo. *Ethnicities*, 19(6), 1121–1137.
<https://doi.org/10.1177/1468796819866334>
- Andersen, B., & Brattbakk, I. (2020). Områdesatsinger i Norge. Et skjørt kunnskapsgrunnlag for strategier og tiltak. *Tidsskrift for Boligforskning*, 3(2), 130–147. <https://doi.org/10.18261/issn.2535-5988-2020-02-03>
- Andersen, B., Gerell, M., & Hanssen, G. S. (2021). NOU 2020:16: Levekår i byer. Gode lokalsamfunn for alle. *Nordic Journal of Urban Studies*, 1(1), 78–90.
<https://doi.org/10.18261/issn.2703-8866-2021-01-06>
- Andersson, E. K., & Malmberg, B. (2016). Segregation and the effects of adolescent residential context on poverty risks and early income career: A study of the Swedish 1980 cohort. *Urban Studies*, 55(2), 365–383.
<https://doi.org/10.1177/0042098016643915>
- Andersson, E. K., Lyngstad, T. H., & Sleutjes, B. (2018). Comparing Patterns of Segregation in North-Western Europe: A Multiscalar Approach. *European Journal of Population*, 34(2), 151–168.
<https://doi.org/10.1007/s10680-018-9477-1>
- Andersson, E., Östh, J., & Malmberg, B. (2010). Ethnic Segregation and Performance Inequality in the Swedish School System: A Regional Perspective. *Environment and Planning A: Economy and Space*, 42(11), 2674–2686.
<https://doi.org/10.1068/a43120>
- Andersson, R. (2019). Comparative perspectives on segregation. Reflection on Segregation and Integration: A Swedish Perspective. In I. G. Ellen & J. P. Steil (Eds.), *The Dream Revisited. Contemporary Debates about Housing, Segregation, and Opportunity* (pp. 44–47). Columbia University Press
- Andersson, R., Brattbakk, I., & Vaattovaara, M. (2016). Natives' opinions on ethnic residential segregation and neighbourhood diversity in Helsinki, Oslo and Stockholm. *Housing Studies*, 32(4), 491–516.
<https://doi.org/10.1080/02673037.2016.1219332>
- Andersson, R., Dhalmann, H., Holmqvist, E., Kauppinen, T., Magnusson Turner, L., Skifter Andersen, H., Søholt, S., Vaattovaara, M., Vilkkama, K., Wessel, T., Yousfi, S., (2010). *Immigration, housing and segregation in the Nordic welfare states*. Department of Geosciences and Geography Faculty of Science, University of Helsinki.

- Arbaci, S. (2007). Ethnic Segregation, Housing Systems and Welfare Regimes in Europe. *European Journal of Housing Policy*, 7(4), 401–433. <https://doi.org/10.1080/14616710701650443>
- Barlindhaug. (2020). Veier inn og ut av dårlige boforhold. By- og regionforskningsinstituttet NIBR OsloMet.
- Bartl, W., Papilloud, C., Terracher-Lipinski, A., (2019). Governing by Numbers - Key Indicators and the Politics of Expectations: An Introduction <https://doi.org/10.12759/hsr.44.2019.2.7-43>
- Bengtsson, B., Annaniassen, E., Jensen, L., Ruonavaara, H., & Sveinsson, J. R. (2013). *Varför så olika? : Nordisk bostadspolitik i jämförande historiskt ljus. Égalité.*
- Bernelius, V., & Vaattovaara, M. (2016). Choice and segregation in the ‘most egalitarian’ schools: Cumulative decline in urban schools and neighbourhoods of Helsinki, Finland. *Urban Studies*, 53(15), 3155–3171. <https://doi.org/10.1177/0042098015621441>
- Bernelius, V., & Vilkkama, K. (2019). Pupils on the move: School catchment area segregation and residential mobility of urban families. *Urban Studies*, 56(15), 3095–3116. <https://doi.org/10.1177/0042098019848999>
- Boterman, W. R., & Musterd, S. (2016). Cocooning urban life: Exposure to diversity in neighbourhoods, workplaces and transport. *Cities*, 59, 139–147. <https://doi.org/10.1016/j.cities.2015.10.018>
- Boterman, W., Musterd, S., Pacchi, C., & Ranci, C. (2019). School segregation in contemporary cities: Socio-spatial dynamics, institutional context and urban outcomes. *Urban Studies*, 56(15), 3055–3073. <https://doi.org/10.1177/0042098019868377>
- Brattbakk, I. (2014). Block, neighbourhood or district? the importance of geographical scale for area effects on educational attainment. *Geografiska Annaler: Series B, Human Geography*, 96(2), 109–125. <https://doi.org/10.1111/geob.12040>
- Brattbakk, I., & Wessel, T. (2012). Long-term Neighbourhood Effects on Education, Income and Employment among Adolescents in Oslo. *Urban Studies*, 50(2), 391–406. <https://doi.org/10.1177/0042098012448548>
- Cavicchia, R., 2023. Housing accessibility in densifying cities: Entangled housing and land use policy limitations and insights from Oslo. *Land Use Policy* 127, 106580. <https://doi.org/10.1016/j.landusepol.2023.106580>
- Cavicchia, R., & Cucca, R. (2020). Densification and School Segregation: The Case of Oslo. *Urban Planning*, 5(3), 217–229. <https://doi.org/10.17645/up.v5i3.3215>

- City of Helsinki. (2021). A place for growth. Helsinki City Strategy 2021-2025. Retrieved from <https://www.hel.fi/static/kanslia/Julkaisut/2021/helsinki-city-strategy-2021-2025.pdf>
- City of Helsinki. Monitoring City Strategy implementation. (2022, June 15). Retrieved from <https://www.hel.fi/en/decision-making/strategia-ja-talous/kaupunkistrategian-ja-talouden-seuranta/kaupunkistrategian-seuranta>
- Christiansen, I. M., & Kjærås, K. (2021). Kampen om en tredje boligsektor i Oslo: De kommersielle og ikke-kommersielle alternativene. *Tidsskrift for Boligforskning*, 4(1), 28–45. <https://doi.org/10.18261/issn.2535-5988-2021-01-03>
- Fakta i frågan: Ökar boendesegregationen? (2022, August 21). *Dagens Nyheter*. Retrieved from <https://www.dn.se>
- Farner Rogne, Skeie Hermansen, Hundebo, Wessel, Hovde Lyngstad, & Birkelund. (2022, May 2). Finnes det «svenske tilstander» i Norge? *Aftenposten.no*. Retrieved from <https://www.aftenposten.no>
- Gorard, S., & Taylor, C. (2002). What is Segregation? *Sociology*, 36(4), 875–895. <https://doi.org/10.1177/003803850203600405>
- Gorard, S., & Taylor, C. (2002). What is Segregation? *Sociology*, 36(4), 875–895. <https://doi.org/10.1177/003803850203600405>
- Haandrikman, K., Costa, R., Malmberg, B., Rogne, A. F., & Sleutjes, B. (2021). Socio-economic segregation in European cities. A comparative study of Brussels, Copenhagen, Amsterdam, Oslo and Stockholm. *Urban Geography*, 44(1), 1–36. <https://doi.org/10.1080/02723638.2021.1959778>
- Haarstad, H. H., Hanssen, G. S., Andersen, B., Harboe, L., Ljunggren, J., Røe, P. G., Wullf-Wathne, M. (2021). Nordic responses to urban challenges of the 21st century. *Nordic Journal of Urban Studies*, 1(1), 4–18. <https://doi.org/10.18261/issn.2703-8866-2021-01-01>
- Helsingin Kaupunki. (2021). Asumisen ja siihen liittyvän maankäytön toteutusohjelma 2020 AM-ohjelma. Helsingin kaupungin keskushallinnon julkaisuja 2021:1. Retrieved from https://www.hel.fi/static/kanslia/Julkaisut/Kotikaupunkina-Helsinki/2020/Asumisen_ja_maankayton_ohjelma_2020.pdf
- Helsingin kaupunki / kaupunkisuunnitteluvirasto. (2016). Helsingin Yleiskaava 2016. Retrieved from https://www.hel.fi/hel2/ksv/liitteet/2018_kaava/YK_2016_Selostus_20160614_LISALEHDELLA.pdf
- Helsingin kaupunki / kaupunkiympäristön toimiala. (2021). Yleiskaavan toteuttamisohjelma 2022. Retrieved from

https://www.hel.fi/static/liitteet/kaupunkiymparisto/julkaisut/aineistot/aineistoj_a-17-21.pdf

- Hewidy, H., & Lilius, J. (2021). The death and life of Malmi neighbourhood shopping street: is ethnic retail a catalyst for public life recovery in Helsinki? *European Planning Studies*, 30(2), 336–358. <https://doi.org/10.1080/09654313.2021.1956433>
- Horn, R. V. (1993). *Statistical Indicators: For the Economic and Social Sciences*. <https://doi.org/10.1604/9780521423991>
- Housing: Segregation continues to undermine human rights. (2022, March 17). *United Nations*. Retrieved from <https://www.ohchr.org>
- Kauppinen, T. M. (2007). Neighborhood effects in a European city: Secondary education of young people in Helsinki. *Social Science Research*, 36(1), 421–444. <https://doi.org/10.1016/j.ssresearch.2006.04.003>
- Kauppinen, T. M., & van Ham, M. (2018). Unravelling the demographic dynamics of ethnic residential segregation. *Population, Space and Place*, 25(2), e2193. <https://doi.org/10.1002/psp.2193>
- Kortteinen, M. (2022). Alueellinen sekoittaminen ja sosiaalinen kestävyys. University of Turku. Retrieved from https://www.utupub.fi/bitstream/handle/10024/153801/sosiaalitieteiden_laitosken_julkaisu_4.pdf?sequence=1&isAllowed=y
- Kirsi. (2020, December 11). Onko Helsingissäkin pian rikollisjengien hallitsemia lähiöitä Tukholman tapaan? 10 kysymystä poliisille ja tutkijalle. *yle.fi*. Retrieved from <https://yle.fi>
- Lehtonen, M., Sébastien, L., & Bauler, T. (2016). The multiple roles of sustainability indicators in informational governance: between intended use and unanticipated influence. *Current Opinion in Environmental Sustainability*, 18, 1–9. <https://doi.org/10.1016/j.cosust.2015.05.009>
- Lehtonen. (2015). Chapter 4: Indicators: tools for informing, monitoring or controlling? In Jordan & Turnpenny (Eds.), *The Tools of Policy Formulation* (1st ed., pp. 76–99). Edward Elgar. <https://doi.org/10.4337/9781783477043>
- Ljunggren (Ed.). (2017). *Oslo – ulikhetens by*. Cappelen Damm.
- Lyytimäki, J. (2019). Thermostat or thermometer? A Finnish perspective on the overloaded role of sustainability indicators in societal transition. *Sustainable Development*, 27(5), 817–825. <https://doi.org/10.1002/sd.1941>
- Massey, D. S., & Denton, N. A. (1988). The Dimensions of Residential Segregation. *Social Forces*, 67(2), 281. <https://doi.org/10.2307/2579183>

- May, T. (2011). *Social Research: Issues, Methods and Research*. Open University Press.
- Merlo, J., Ohlsson, H., Chaix, B., Lichtenstein, P., Kawachi, I., & Subramanian, S. (2013). Revisiting causal neighborhood effects on individual ischemic heart disease risk: A quasi-experimental multilevel analysis among Swedish siblings. *Social Science & Medicine*, 76, 39–46. <https://doi.org/10.1016/j.socscimed.2012.08.034>
- Morse, S. (2013). *Indices and Indicators in Development: An Unhealthy Obsession with Numbers*. Routledge
- Musterd, S. (Ed.). (2020). *Handbook of Urban Segregation*. Edward Elgar Publishing
- Musterd, S., Marcińczak, S., van Ham, M., & Tammaru, T. (2016). Socioeconomic segregation in European capital cities. Increasing separation between poor and rich. *Urban Geography*, 38(7), 1062–1083. <https://doi.org/10.1080/02723638.2016.1228371>
- NOU 2011: 14 (2011). *Bedre integrering — Mål, strategier, tiltak*. Barne-, likestillings- og inkluderingsdepartementet
- NOU 2017: 2 (2017). *Integrasjon og tillit — Langsiktige konsekvenser av høy innvandring*. Justis- og beredskapsdepartementet
- NOU 2020: 16 (2020). *Levekår i byer - Gode lokalsamfunn for alle*. Kunnskapsdepartementet og Kommunal- og moderniseringsdepartementet
- Oslo kommune. (2008). *Kommuneplan 2008 – Oslo mot 2025*
- Oslo kommune. (2018). *Kommuneplanens samfunnsdel 2018. Vår by vår fremtid – en grønnere, varmere og mer skapende by med plass til alle*
- Oslo kommune. (2022a). *Handlingsprogram 2022: delprogram nærmiljø*
- Oslo kommune. (2022b). *Handlingsprogram 2022: delprogram oppvekst og utdanning*
- Oslo kommune. (2022c). *Handlingsprogram 2022: delprogram sysselsetting*
- Oslo kommune, Departementene (2017). *Programbeskrivelse for Groruddalssatsingen 2017 – 2026*
- Piekut, A. (2021). Re-Theorising Spatial Segregation: A European Perspective. *The Urban Book Series*, 13–38. https://doi.org/10.1007/978-3-030-74544-8_2
- Rasse, A. (2019). Spatial Segregation. *The Wiley Blackwell Encyclopedia of Urban and Regional Studies*, 1–9. <https://doi.org/10.1002/9781118568446.eurs0312>

- S. Fowler, C. (2015). Segregation as a multiscalar phenomenon and its implications for neighborhood-scale research: the case of South Seattle 1990–2010. *Urban Geography*, 37(1), 1–25. <https://doi.org/10.1080/02723638.2015.1043775>
- Sassen, S. (2001). *The Global City: New York, London, Tokyo*. <https://doi.org/10.1604/9780691070636>
- Tammaru, T., Ham, M. V., Marcińczak, S., & Musterd, S. (Eds.). (2015). *Socio-Economic Segregation in European Capital Cities: East Meets West*. Routledge.
- Toft, M. (2017). Enduring contexts: Segregation by affluence throughout the life course. *The Sociological Review*, 66(3), 645–664. <https://doi.org/10.1177/0038026117741051>
- Toft, M., & Ljunggren, J. (2016). Geographies of class advantage: The influence of adolescent neighbourhoods in Oslo. *Urban Studies*, 53(14), 2939–2955. <https://doi.org/10.1177/0042098015601770>
- Tollersrud, P. (2023, January 11). Sykepleierindeksen 2022 - Eiendom Norge. Retrieved from <https://eiendommorge.no/aktuelt/blogg/sykepleierindeksen-2022>
- Tunström, M., Anderson, T., & Perjo, L. (2016). Segregated cities and planning for social sustainability-a Nordic perspective.
- Tunström, M., Liliegreen, C., Granath Hansson, A., Kurvinen, A., Nordahl, B. I., & Sveinsson, J. R. (2020). *Building affordable homes: Challenges and solutions in the Nordic Region*. <https://doi.org/10.6027/r2020.2.1403-2503>
- Turnhout, E., Hisschemöller, M., & Eijsackers, H. (2007). Ecological indicators: Between the two fires of science and policy. *Ecological Indicators*, 7(2), 215–228. <https://doi.org/10.1016/j.ecolind.2005.12.003>
- Visser, K., Bolt, G., Finkenauer, C., Jonker, M., Weinberg, D., & Stevens, G. W. (2021). Neighbourhood deprivation effects on young people's mental health and well-being: A systematic review of the literature. *Social Science & Medicine*, 270, 113542. <https://doi.org/10.1016/j.socscimed.2020.113542>
- Vaattovaara, M., Joutsiniemi, A., Kortteinen, M., Stjernberg, M., & Kempainen, T. (2018). Experience of a Preventive Experiment: Spatial Social Mixing in Post-World War II Housing Estates in Helsinki, Finland. *Housing Estates in Europe*, 215–240. https://doi.org/10.1007/978-3-319-92813-5_10
- von Simson, K., & Umblijs, J. (2020). Housing conditions and children's school results: evidence from Norwegian register data. *International Journal of Housing Policy*, 21(3), 346–371. <https://doi.org/10.1080/19491247.2020.1814190>

- Wessel, T., Andersson, R., Kauppinen, T., & Andersen, H. S. (2016). Spatial Integration of Immigrants in Nordic Cities: The Relevance of Spatial Assimilation Theory in a Welfare State Context. *Urban Affairs Review*, 53(5), 812–842. <https://doi.org/10.1177/1078087416638448>
- White, J. S., Hamad, R., Li, X., Basu, S., Ohlsson, H., Sundquist, J., & Sundquist, K. (2016). Long-term effects of neighbourhood deprivation on diabetes risk: quasi-experimental evidence from a refugee dispersal policy in Sweden. *The Lancet Diabetes & Endocrinology*, 4(6), 517–524. [https://doi.org/10.1016/s2213-8587\(16\)30009-2](https://doi.org/10.1016/s2213-8587(16)30009-2)
- Wong, C. (2006). *Indicators for Urban and Regional Planning: The Interplay of Policy and Methods*. <https://doi.org/10.1604/9780415274517>
- Yin, R. K. (2015). *Qualitative Research from Start to Finish* (1st ed.). Guilford Press.

Appendix. Interview guide

*The guide was translated to the native language (Norwegian/Finnish). Some questions were adjusted to the roles of the interviewees.

Themes	Questions / prompts
Background and motivation	<ul style="list-style-type: none"> • Why has segregation/the need to strengthen social inclusion been taken up on the policy agenda in your country/city? • What are the main reasons behind implementing the use of indicators? • Is the use of indicators connected to any specific current policies/strategies? Has the use of indicators been inspired by how indicators are used elsewhere (either in your country or in another country)?
Concepts, dimensions, indicators	<ul style="list-style-type: none"> • What are the key dimensions of segregation/social inclusion that you want to measure? • What are the indicators for measuring these? • How have these dimensions and indicators been decided? Has the selection of indicators been coordinated with other organizations or policy frameworks outside your own organization? • At what spatial scale/unit?
Current role	<ul style="list-style-type: none"> • What is the current role of indicators for supporting policy and planning towards more inclusive cities in your country/city? • To which extent are they currently used? • How are they used? Are they e.g., used for monitoring how the city and different areas are developing, for determining the course of policy intervention, allocating funds, or following up on measures carried out? • Since when have indicators been used for this purpose?
Goals	<ul style="list-style-type: none"> • What are the goals that your country/region/city is trying to reach by using these indicators? • If indicators have been used over a longer time, have these goals changed, and, if so, how?
Central actors and users	<ul style="list-style-type: none"> • Who has the main responsibility for coordinating the work with indicators? • Are there any other actors or stakeholders involved in the planning or coordination work (either within or outside your own organization. If so, whom)? • By whom are the indicators used within your organization? • Are there any external users? • Are the indicators made public?
Opportunities and challenges	<ul style="list-style-type: none"> • What are the main opportunities or advantages of using these indicators? • Are there any potential risks or problems with these types of indicators? If so, how are these addressed?
Successes and learnings (If indicators already are used)	<ul style="list-style-type: none"> • Achievements so far: what have you already achieved in your country/region/city through your actions? Has this been evaluated or assessed? • What could others learn from your experiences?
Future	<ul style="list-style-type: none"> • How do you see the role of indicators in your country/region/city in the future? • What plans are there concerning the use of these indicators in the short-term? • Or in the long-term?
Final words	<ul style="list-style-type: none"> • Do you have any other perspectives or advice that you would like to share?



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