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Segregated cities and planning for social sustainability - a Nordic perspective

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NORDREGIO WORKING PAPER 2016:3



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Preface

Within Nordic cities, residential segregation is a hotly debated topic, often discussed in conjunction with concerns relating to socioeconomic inequality, welfare provision, immigration, and integration. Nordic capital cities have experienced similar patterns of segregation and face shared problems. In the light of this, agendas for a socially sustainable urban development are being formulated in multiple arenas. But what are the main features of a socially sustainable city and what do these ambitions imply for planning practice?

This report was commissioned by the Nordic Council of Ministers' Committee of Senior Officials for Regional Policy (EK-R) following a meeting in Copenhagen on 27th April, 2015, with the Nordic Ministers of housing and regional development. The task given to us by the ministers

was to summarize what current research has to say about the state of segregation in Nordic metropolitan cities and to provide insights on the strategies responsible authorities are developing and implementing in order to counteract the negative effects of segregation.

At Nordregio Senior Research Fellow Moa Tunström has been responsible for this research project, assisted by Junior Research Fellow Tim Anderson and Research Fellow Liisa Perjo. Junior Cartographer/GIS Analyst Shinan Wang has developed the thematic maps.

The authors would like to thank Senior Research Fellow Anna Karlsdóttir for her valuable comments on a draft version of this report.



Kjell Nilsson
Director, Nordregio

1. Urban segregation – what is the problem?

At the time of writing this report, the European Union (EU) is in the middle of negotiating the issue of refugee migration to the EU. This has placed the issues of integration and segregation as extremely high priorities on political agendas in European countries and cities. People migrate as refugees from conflict zones, and for work opportunities and better life chances from developing countries to more developed and politically stable countries, or from rural areas to urban areas within their own country. Issues related to migration, segregation, and integration are major responsibilities and challenges for city-regions. The current developments have also made citizens even more aware of the significance of urban diversity. While demographic changes in European cities bring new skills, jobs, opportunities, and lifestyles, they also force planners and public actors to confront the increasing challenges of discrimination, disadvantage, inequality, and segregation.

In its most common usage, segregation refers to the separation of social groups at the residential level of an urban area. The term can also be used to indicate social separation in workplaces, public spaces, service provision, etc. Whether segregation is necessarily harmful or indicative of deeper problems is dependent on the context and how it is measured. Most often, segregation is assumed to be detrimental (or at least understood as a symptom of wider injustice), and the study of segregation often focuses on the challenges experienced by those living in concentrated poverty, violence, and/or urban squalor.

The objective of this report is to provide a basis for a political discussion on planning for urban social sustainability in the Nordic countries. We conduct an extensive research overview of residential segregation, which research indicates is one of the most pressing challenges for Nordic cities, and use it to clarify social sustainability as a planning concept.

The Nordic countries are similar in many respects; they are remote, sparsely populated welfare states that contain small and medium-sized cities. However, although it is possible to talk about the Nordic model with reference to welfare production, there are significant differences with regard to housing policy,

economic structure, and post-war urban development patterns (Andersson et al 2010). Despite this, there are striking similarities with respect to patterns of urban segregation. In their overview of ethnic residential segregation in 2010 in the Nordic countries (excluding Iceland), Andersson et al (2010, 74) note of Sweden: “[e]thnic residential segregation is a salient feature of all larger Swedish cities”. They conclude that Sweden as a country is positive towards immigrants but that there is an ongoing debate about more restrictive policies and report the difficulties for new immigrants in, for example, finding housing and employment. In 2016, this statement must be seen in the light of how both global political developments and the public debate on immigration in Europe and Sweden have developed since 2010 and of the move from a debate on restrictive policies into practice.

With reference to Denmark, the same report highlights, among other factors, the increasing segmentation in the housing market over the past 30 years (Andersson et al 2010, 119), where income levels and tenure forms correlate. In Norway, Andersson et al (2010, 187) conclude that there is an “ethnic divide” in economic and social integration patterns. Finally, Finland is a slightly different case, because it is only in recent years that immigration has increased. However, this increase has coincided with the economic recession, resulting in “[g]rowing social differentiation, the aging of the population and increasing ethnic diversity” (Andersson et al 2010, 258). Therefore, although the Nordic model is questioned in academic discourse, developments in the Nordic countries show similar consequences from segregation that are challenging the welfare state. We can already see here that ethnicity and housing policy seem to be two important focuses in research on urban segregation in the Nordic context.

The background for this research project is a commission from the Nordic Council of Ministers’ Committee of Senior Officials for Regional Policy (EK-R) concerning urban segregation in the Nordic countries; this commission arose from the following question from the Nordic ministers responsible for issues related to housing and regional development: What does current research say about the state of

segregation in Nordic metropolitan cities? In this report, we use this question as a starting point for an overview of research in the field of urban geography, planning, and migration studies, and for discussion of policy responses to social unsustainabilities. A deeper understanding of these issues can open up a constructive discussion on how to build cities for the future and how to create the preconditions and possibilities for people with different resources and backgrounds to interact in urban spaces.

1.1 Aim, questions, and method of the project

In this project, the objective is to discuss planning for urban social sustainability in the Nordic countries; i.e., policy responses to urban segregation. In doing this, we address three main questions.

- What does recent research indicate about urban segregation in the Nordic countries? How is segregation discussed and problematized in the Nordic countries? How is it measured?
- How does policy in the Nordic countries respond to the problem of urban segregation?
- What are the implications for future urban planning practice in responding to segregation?

To investigate these issues, we examine research on urban residential segregation in the Nordic countries from 2010 onwards; we also present a number of examples of policy responses and some basic statistics. The literature for this project was gathered using academic journal article databases (such as SCOPUS), searching specifically for research on Nordic urban

residential segregation. This research overview was also used as a guiding tool when searching for policy responses. Statistics were collected from the statistical services of the respective Nordic capitals.

The most important delimitations are related to the two central concepts in this study; namely, segregation and social sustainability. Because they are both very broad concepts, to cover all of their aspects in relation to all Nordic countries would demand a larger project than the one at hand. We focus on urban residential segregation and on aspects, policies, and measures that are related to neighbourhood-level spatial planning and development, which are often framed as social-sustainability-oriented measures. This is not an easy delimitation, and there are certainly examples that could have been included but that are not. However, the purpose of this study is not to achieve a complete overview and mapping but to give indications and examples to further the policy discussion.

1.2 Outline of the report

Chapter 2 discusses different ways of measuring segregation. Chapter 3 presents the basic segregation statistics that we compiled, and based on these, Chapter 4 discusses tendencies regarding spatial isolation and barriers relating to variables such as income, ethnic background, and employment. In Chapter 5, we focus in depth on the variables that are of importance to urban segregation; that is, housing, accessibility, and immigration. To conclude our research overview, this chapter also presents country-specific findings. With Chapter 6, the focus shifts to the policy response side of the issue, introducing and discussing examples of social-sustainability-oriented policies that can be seen as responses to segregation.

Country	Estimated Number of Articles	Core Theme(s)
Sweden	50+	Ethnic residential segregation, labour market discrimination, housing policy, school segregation, immigration, racism
Denmark	23	Ethnic residential segregation, immigration, housing policy
Norway	15	Ethnic residential segregation, immigration, housing policy
Finland	28	Ethnic residential segregation, immigration, housing policy
Iceland	3	Ethnic residential segregation, community disadvantage
Overview/Comparison	20	Ethnic residential segregation, school segregation, housing policy, immigration

Table 1: This table gives an overview of the volume of published research on the topic of residential segregation in Nordic cities. The majority of these articles were published after 2010.

2. Measuring segregation in the Nordic countries

Although segregation as a process is “as old as the history of urbanisation” (Marcinczak et al 2015, 358), the most foundational and influential sources on urban segregation (whether discussed in ethnic, racial, cultural, or economic terms) have their origins in the post-1950s USA (Massey & Denton 1993, 3). The study of urban segregation in Europe, and especially in the Nordic countries, has only more recently gained traction, although a number of well-known studies have been published on the subject with reference to, for example, London, Paris, and Amsterdam (Kazepov 2004; Musterd & Ostendorf 1998). However, compared with studies in North America, there has generally been a “neglect in Europe to fully grasp the dynamics of segregation in the wake of increasing social polarization in the context of more multicultural urban settings” (Andersson 2013, 182). There are consequently significant gaps in research on segregation and social sustainability in the Nordic countries, and our review will provide notes and suggestions for further study.

Our contribution to this topic was informed by *Immigration, Housing and Segregation in the Nordic Welfare States* (part of the NODES project¹) by Andersson et al (2010), which until now was the most recent attempt to analyse urban residential segregation in the region comprehensively. Our work includes Iceland in its analysis, and we integrate the topic within a social sustainability critique that differs somewhat from previous literature in the field. Given our aim to provide the most up-to-date picture of the situation in Nordic cities, we also emphasize work published in the intervening years since 2010.

In Nordic cities, residential segregation has quickly become the subject of heated debate and is often discussed alongside concerns relating to socio-economic inequality, welfare provision, immigration, and integration. Segregation also presents a profound

challenge to Nordic ideals of egalitarianism and justice, challenging planners with a complex issue that forces us to understand how we navigate the different needs and desires of an increasingly diverse and dynamic population. To ignore segregation is to ignore a critical indicator and a driver of social exclusion.

There are significant limitations in studies on segregation. Because segregation is an inevitably complex, fluid phenomenon, it can be extremely difficult to determine what scales and what variables are important for addressing the topic. For example, mapping ethnic minority concentrations at the regional level may reveal very different findings from mapping minorities at the district or neighbourhood level. Zooming out too far can obscure the most intense patterns of wealth and deprivation, while a narrow focus on one neighbourhood can miss wider urban or regional demographic patterns. Moreover, defining what constitutes a minority group or relative poverty can be a contentious process.

Despite these limitations and concerns, clear patterns and trends can emerge from a well-structured study, and a broad overview of the literature can provide reliable, verifiable evidence of detrimental spatial segregation. Results from a wide range of studies reviewed here all indicate that residential segregation is increasing in Nordic cities. Moreover, this segregation is commonly understood as a hindrance to integration, public service efficacy, economic growth, and social sustainability. Sweden, Denmark, Norway, Finland, and even Iceland have all been afflicted by growing ethnic and socio-economic segregation in their urban centres.

A number of studies on Nordic segregation also address labour market mobility (Aldén & Hammarstedt 2014; Vaattovaara & Kortteinen 2012; Wessel 2013) and immigration (Dhalmann 2013; Jørgensen 2015; Kauppinen 2002; Lödén 2008) as key issues that have consequences for residential divisions. One example is Wessel, who provides a critical analysis of the lopsided labour market in Oslo, concluding that “men rather than women, and Western immigrants rather than non-Western

¹ The Nordic Welfare States and the Dynamics and Effects of Ethnic Residential Segregation (NODES) project, which ran from 2009 to 2014 produced a wide range of articles and reports dealing with segregation in the Nordic states.

immigrants, converge towards employment in high-profit businesses” (Wessel 2013, 1082), trends that align with growing income inequality and segregation in the city.

Furthermore, although the topic is not discussed at length here, the segregation of schools is a growing problem in Nordic countries, particularly in Sweden. School segregation links in strongly with residential segregation, and a general movement towards increased school choice has had the unfortunate side effect of enhancing this. Indeed, in Copenhagen, Rangvid (2007, 1329) estimates that “[ethnic] school segregation ... for some student groups [reaches] levels comparable to the extreme segregation typical for US cities”. In Sweden’s case, Bunar (2010) and Szulkin and Jonsson (2007) note that ethnic segregation in urban schools has been increasing, and they suggest a need for public policy to increase ethnic and social mix in classrooms. In contrast, Poikolainen (2012, 127) finds that school choice and school segregation are less pressing concerns in Finland, where there remains a high level of trust in local comprehensive schools. However, results from more recent research projects point to the increasing school segregation also in Finland (e.g., Bernelius 2013; Seppänen 2015).

Segregation can be measured and conceptualized in

various ways, although overall trends are quite clear even when accounting for these different methods. For example, Östh et al (2015, 34) use a “k-nearest neighbour index” to map concentrations of ethnic minorities in the largest Swedish cities, taking into account the different sizes of neighbourhoods and ethnic groups. Exploring segregation in Copenhagen, Andersen (2010) measures the phenomenon through an analysis of the distribution of dwellings and neighbourhood types across income groups. Marcinczak et al (2015, 372) study segregation more broadly through various socio-economic traits, assessing spatial divisions between populations with different income quintiles, education levels, and employment levels. Andersen’s (2010) strategy is the most common, and this type of housing/income analysis was used throughout the NODES project. In almost all cases, segregation is understood as a function of spatial isolation, which refers to the degree to which demographic groups are separated or concentrated within a particular space (Östh 2015, 34).

In the next chapter, we explore residential spatial isolation in each of the Nordic states, using the literature and reported data to explain the distribution of socio-economic and ethnic groups around different districts of selected Nordic urban areas.

3. Statistics on economic and ethnic segregation

In the tables below, we have listed a selection of the 'richest' and 'poorest' districts in Stockholm, Copenhagen, Oslo, and Helsinki municipalities². The purpose here is not to introduce a discussion about the exact levels of income or unemployment rates but rather to show the spatial divisions between socio-economic groups, as well as the strong correlations between personal income, unemployment rate, and foreign background population³. Reykjavik municipality is included, although data on income and unemployment were not available at the district level. These tables and figures are one way of illustrating segregation in a city.⁴ Answers to questions such as 'where do the highest share of high-income earners live?', 'where do the lowest

share live?', and 'how do these relate to unemployment or national background?' tell us about segregated living patterns in these cities. Moreover, they are an indication that segregation is a multi-dimensional issue; that is, a phenomenon related to economic and political structures, to the structure of the labour market, and to spatiality. The data open up for discussion the importance that your dwelling has. Does it provide you with good social networks, or not? Does it offer you the possibility of interacting with people from different backgrounds and experiences? Is there an ethnic divide in your city? What does it mean to live in an area of high unemployment? Do employed and unemployed people meet in your local area?

² Full tables including each district of each capital municipality can be found in the Appendix.

³ In all cases where 'foreign background' is mentioned, this refers to persons born abroad and persons born in the country with two foreign parents.

⁴ Because of insufficient data available, we have not included a map of Reykjavik.

Stockholm	Average personal income, yearly (EUR) (2012)	Unemployment rate (2013)	Share of population with foreign background (2013)
Rinkeby-Kista	24,600	7.4%	80.4%
Skärholmen	24,700	6.4%	67.8%
Municipal average	37,500	3.4%	30.7%
Norrmalm	46,900	2.1%	20.3%
Östermalm	47,600	2.1%	20.5%

Table 2: District-level data on a selection of districts in Stockholm compared with the municipality average. Based on statistics from the City of Stockholm.

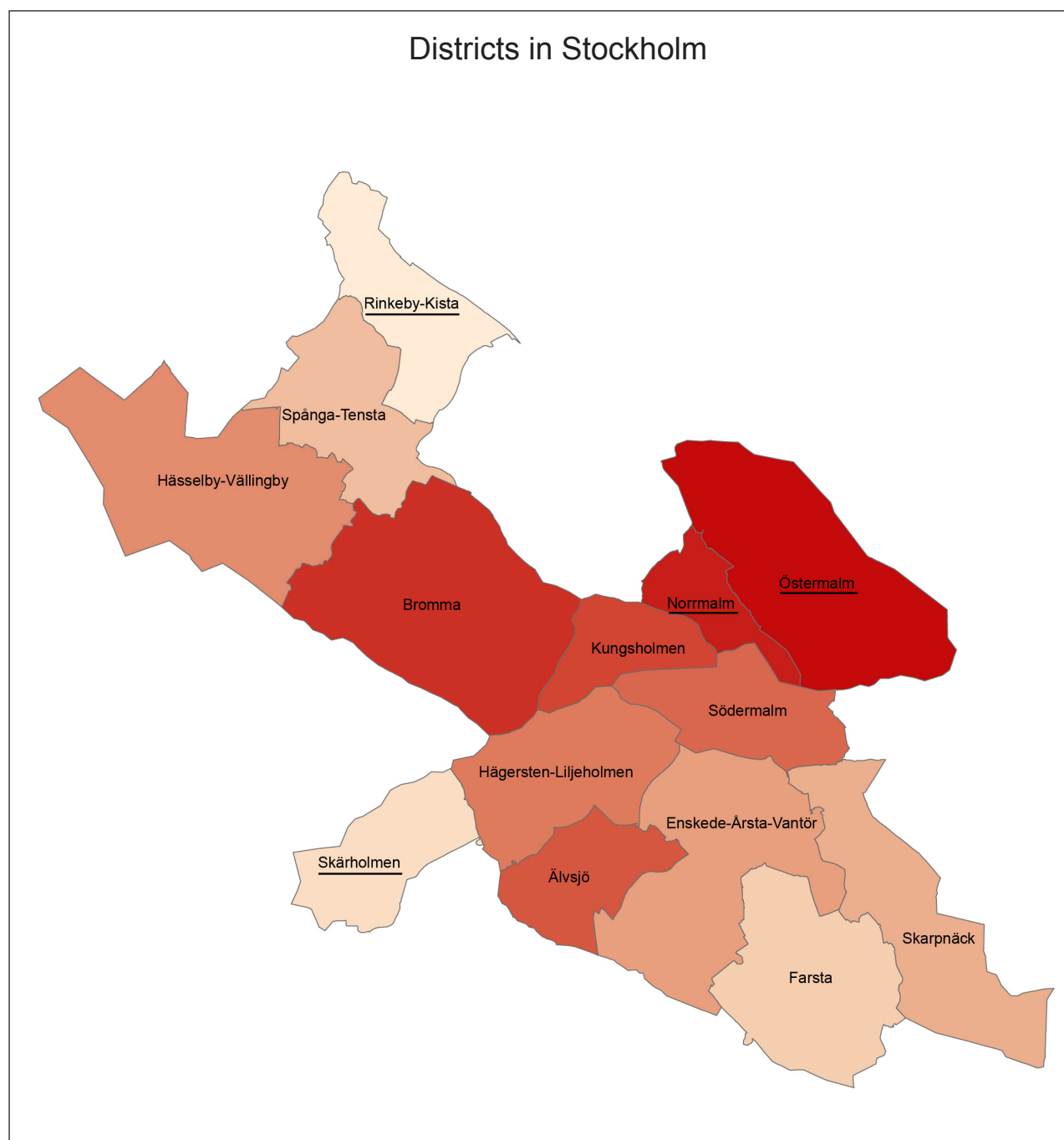


Figure 1: Districts in Stockholm municipality, coloured on a gradient from light red (lowest-income) to dark red (highest-income). Detailed data for the underlined districts can be found in table 2. Map design: Shinan Wang, Nordregio. Data source: Open data Stockholm

Copenhagen	Average personal income, yearly (EUR) (2013)	Unemployment rate (2012)	Share of population with foreign background (2015)
Bispebjerg	31,100	7.5%	32.6%
Nørrebro	31,228	6.9%	26.2%
Municipal average	33,400	5.9%	23.2%
Østerbro	40,900	4.8%	17.4%
Indre By	44,400	4.3%	17.1%

Table 3: District-level data on a selection of districts in Copenhagen compared with the municipality average, based on statistics from Copenhagen municipality.

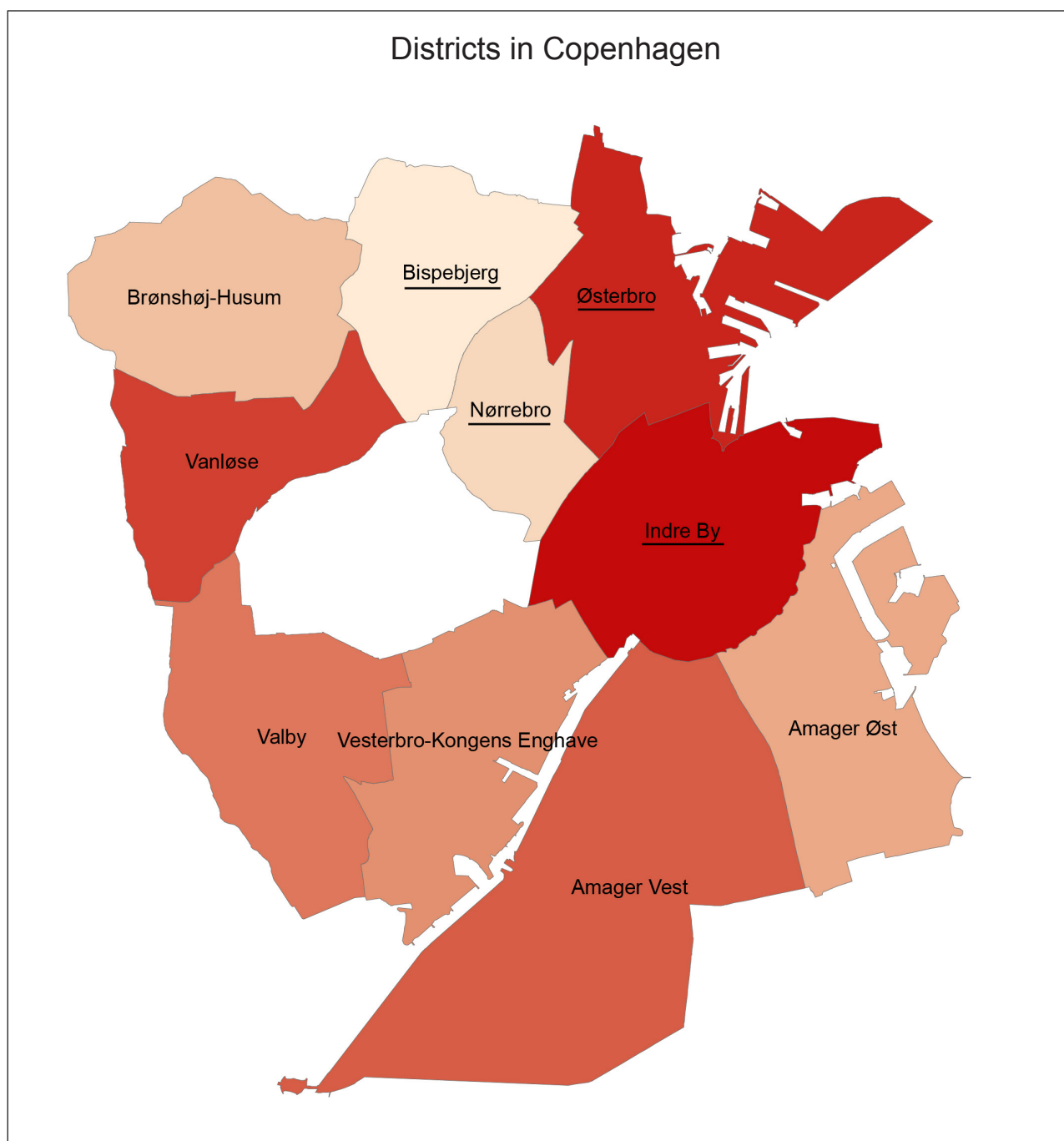


Figure 2: Districts in Copenhagen municipality, coloured on a gradient from light red (lowest-income) to dark red (highest-income). Detailed data for the underlined districts can be found in table 3. Map design: Shinan Wang, Nordregio. Data source: Open data Copenhagen

Oslo	Median personal income, yearly (EUR) (2013)	Registered unemployment rate (2013)	Share of population with foreign background (2013)
Grorud	36,500	4.8%	47.4%
Stovner	37,000	4.7%	52.8%
Municipal average	48,000	2.7%	30.3%
Ullern	68,300	1.6%	17.6%
Vestre Aker	72,800	1.9%	17.0%

Table 4: District-level data on a selection of districts in Oslo compared with the municipality average, based on statistics from Oslo municipality. 'Registered unemployment' includes only working-age persons who are formally registered as 'job-seeking' within the municipality.

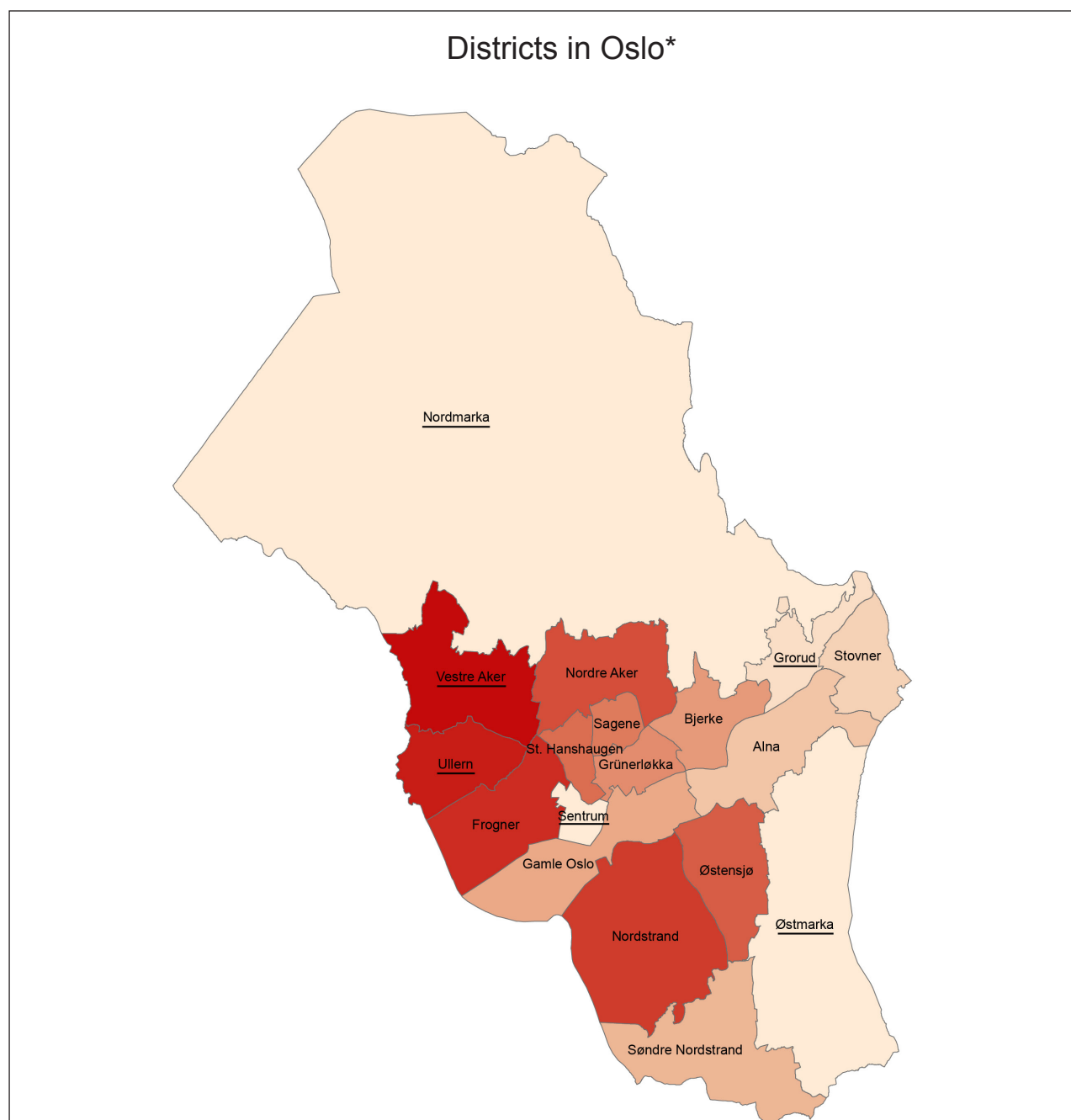


Figure 3: Districts in Oslo municipality, coloured on a gradient from light red (lowest-income) to dark red (highest-income). Detailed data for the underlined districts can be found in table 4. Map design: Shinan Wang, Nordregio. Data source: Open data Oslo

Helsinki	Average personal income, yearly (EUR) (2012)	Unemployment rate (2013)	Share of population with foreign background (2014)
Jakomäki	17,289	18.4%	24.2%
Mellunkylä	19,910	15.1%	21.6%
Municipal average	27,897	10.1%	12.9%
Ullanlinna	43,926	6.6%	9.7%
Kulosaari	44,921	7.0%	8.1%

Table 5: District-level data on a selection of districts in Helsinki compared with the municipality average, based on statistics from Helsinki municipality.

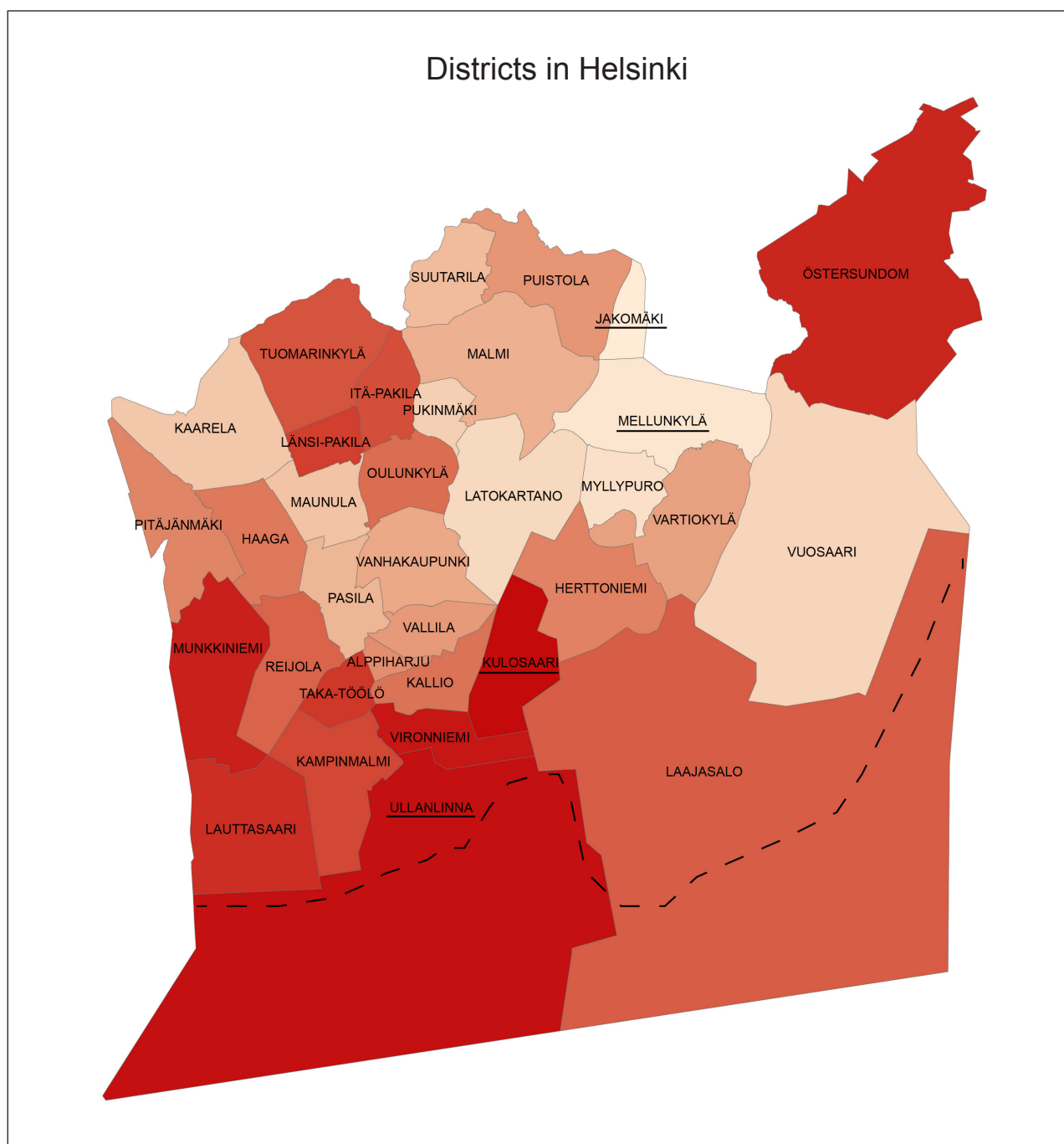


Figure 4: Districts in Helsinki municipality. Detailed data for the underlined districts can be found in table 5. Map design: Shinan Wang, Nordregio. Data source: Map service of city of Helsinki, Statistics Finland

Reykjavik	Share of population with foreign background (2011)
Staðahverfi	2.3%
Grafarholt-vestra	19,910
Municipal average	27,897
Efra-Breiðholt	43,926
Kjalarnes	44,921

Table 6: District-level data on a selection of districts in Reykjavik compared with the municipality average, based on statistics from the Icelandic Directorate of Labour.

4. Spatial isolation

Before looking at the processes that drive and/or reinforce segregation, it is important to understand just how isolated particular groups in Nordic cities are. Studies on segregation most commonly focus on the (generally poorer than average) concentrations of immigrants and ethnic minorities in Stockholm, Oslo, Copenhagen, and Helsinki. Spatial isolation trends are most pronounced in Sweden, where ethnic residential segregation in Stockholm, Göteborg, and Malmö is among the most extreme in Europe (Östh et al 2015, 44). Economic inequality is also rising in tandem with segregation in the Nordic countries (ESPON 2014); there is a broad consensus in the research conducted that these trends are linked to, and reflect inadequacies in, housing and labour market policies, especially in the context of increased immigration and globalization. Table 2 indicates that the poorest district in Stockholm municipality (Rinkeby-Kista) contains the highest proportion of residents with a foreign background and experiences the highest unemployment. In contrast, the municipality's wealthiest districts (Norrmalm and Östermalm) show the opposite trend: a high proportion of native-born Swedes coupled with low unemployment rates. As noted earlier, segregation in Sweden has been the most intensely studied in the Nordic countries.

In Denmark, we can also see a high level of segregation between ethnic and socio-economic groups, particularly in Copenhagen (Andersen 2010). Several scholars have observed that this division is most notable when comparing residents of rental housing (and particularly social housing) with residents of owner-occupied housing (Andersen 2010; Christensen 2015; Jørgensen 2015). In addition to being spatially isolated from white Danes, those from an immigrant background from outside the EU and North America experience a notably higher rate of unemployment and relative poverty (Jørgensen 2015).

In Norway, research indicates that both ethnic and socio-economic residential segregation is an increasingly significant problem (Andersson et al 2010; Sørholt et al 2012; Turner & Wessel 2013; Wessel 2015). In general, research has focused on Oslo, because the city has experienced a significant degree of demographic change and growing inequality

compared with other urban areas of the country. For example, Turner and Wessel (2013, 12) note a "majority/minority [ethnic] gap in settlement behaviour", as many residents of a non-European background (particularly Somalis, Iraqis, and Moroccans) remain concentrated in rental housing and/or in generally poor districts of the city. They conclude that the typical assumptions of spatial assimilation theory (implying that migrants and minorities will catch up with the majority population over time) do not appear to hold true in Oslo's case (Turner & Wessel 2013, 14). Compared with other wealthy European states, social and spatial mobility are shown to be generally low for immigrant populations in Norway (Turner & Wessel 2013, 13).

Sørholt & Wessel (cited in Andersson et al 2010, 180) find that the Oslo region "is characterized by a complex ethnic situation", as minority populations are concentrated in particular suburbs (notably Stovner, Alna, and Søndre Nordstrand), although many areas of the city "exhibit a wide range of cultural and social groups alongside tolerant and pro-diversity attitudes". In his most recent assessment of Oslo, Wessel (2015, 132) now contends that "income inequality and ... ethnic segregation" have both increased significantly since 2005.

In Finland, although residential segregation is a widely researched topic, it has not received the same attention as in Sweden or Denmark. Segregation research mainly focuses on Helsinki, as it is the only major metropolitan area in the country. It is generally agreed among researchers that segregation in Helsinki is not as marked as in many other northern European major cities; however, it is still noted that socio-economic and ethnic segregation have been increasing since the economic crises that hit Finland in the 1990s (Vaattovaara & Kortteinen, 2012; Vilkkama et al, 2014). With respect to ethnicity, segregation in the Helsinki city-region started to intensify during the 2000s, when both the number of immigrants in Finland in general and the ethnic differences between areas grew (Vilkkama 2011). However, the latest research from 2016 notes that the level of segregation has not significantly increased in most Finnish cities (including the Helsinki city-

region) over the past 10 years, despite the doubling of the immigrant population during that time (Hirvonen & Puustinen 2016).

Vilkama et al (2014) examine the changes in average incomes, the level of education of the native population, employment rates, and the proportion of foreign-language-speaking residents in the Helsinki city-region between 2002 and 2012. They report that in general, the average income and education levels of both the native population and the foreign-language-speaking population increased in nearly all neighbourhoods across the city-region. However, their results show differences in the “rate of change” (Vilkama et al 2014, 71). As an example, they describe how average incomes and education levels increased most in neighbourhoods with already average or high income and education levels, which implies an increase in the gap between the well-off and socio-economically deprived neighbourhoods and that the “absolute differences between neighbourhoods are growing” (Vilkama et al 2014). In other words, social mobility appears to be decreasing. Kortteinen and Vaattovaara (2007) note that in addition to socially excluded populations increasingly being concentrated in certain areas, the wealthiest groups are also increasingly concentrated in certain areas of the Helsinki city-region.

The statistical analyses of Vilkama et al (2014, 66) show that geographic patterns in the Helsinki city-region are similar in all the studied variables (education levels, income levels, employment rates, and proportion of the foreign-language-speaking population). This means that socio-economic deprivation is largely concentrated in specific areas and that low incomes, low education levels, high unemployment rates, and high proportions of foreign-language-speaking residents are largely found combined in the same neighbourhoods (Vilkama et al 2014, 66).

The data in Tables 1–5 illustrate the inequality and segregation in the different cities, where differences between districts in terms of income and corresponding foreign background population are significant. Only Helsinki appears to experience a lower degree of district-level ethnic segregation than Stockholm, Copenhagen, and Oslo.

Iceland has only a small share of immigration but already shows patterns of spatial isolation among its immigrant/minority populations. Sindradóttir and Júlíusdóttir (2008, 3) note that “the mapping of residential patterns indicates an emerging tendency towards segregation and [the] concentration of foreign citizens in the urban area [of Reykjavik]”. They argue that this segregation must be understood as an ongoing process that is unlikely to improve without intervention

or redistribution of some kind in Reykjavik’s housing market. Although our data on Reykjavik is limited when compared with the other Nordic cities, Table 6 nevertheless highlights this trend of immigrant spatial concentration.

Despite our focus thus far on residents with a foreign background, some scholars are increasingly pointing to the fact that “the highest social strata appear to be the most segregated” in the Nordic capital cities (Marcinczak 2015, 362). In other words, the most spatially isolated groups in Nordic cities are the wealthier white population. For example, Stockholm’s poorer suburbs are quite ethnically diverse, incorporating both newly arrived and long-standing populations from south-eastern Europe, Africa, the Middle East, East Asia, and South America (Åslund et al 2010, 395). The most distinguishing characteristic of these populations is that they are not white Swedes, and partly because of this, they are cast within a narrative of difference that treats them as a uniquely problematic population.

The work by Marcinczak et al (2015) highlights a significant research gap. While many articles on segregation focus on the plight of immigrants and ethnic minorities, little effort is made to problematize and assess the role of wealthier locals in contributing to segregationist patterns and market trends. This attention given to those who are perceived as the ‘losers’ in the segregation process is (at least initially) intuitive and politically salient because these populations are the most disadvantaged and problematized. However, it is counter-productive to focus entirely on immigrants, ethnic minorities, or other low-income groups. Some exceptions to this trend include Rodenstedt (2014), who critiques “the socio-spatial reproduction of upper-middle class neighbourhoods in Malmö” and Andersson (2013, 163), who has written about the potential role of “white flight” and “white avoidance” in creating spaces of privilege and homogeneity in Stockholm.

There is increasing evidence (see also Andersson 2013; Östh 2015) that the movement patterns of the wealthiest and most advantaged groups play the largest role in shaping the housing market and demographic distribution throughout Nordic cities. Because of this extant research gap relating to the concentrations of affluence and gentrification, most of the present report focuses on the challenges faced by poorer populations and those from a foreign background. However, as suggested, these populations should not be interpreted as the most segregated group.

In a unique study of mothers with small children in Örebro, Sweden, Lilja (2015) found that discourses

of urban polarization and immigration as a problem influenced their choices of where to raise their children. Despite expressing a desire for their children to experience a “culturally and socially diverse neighbourhood, when the mothers disclosed concrete decisions regarding the upbringing of their children, they instead said that they avoided such neighbourhoods” (Lilja 2015, 5). Lilja’s study concurs with the findings of Marcinczak et al, reinforcing a common pattern in many European cities: white, middle-class groups are likely to cluster together and are unlikely to move into immigrant-dense neighbourhoods.

It is worth noting that these strong trends towards residential segregation and spatial isolation are not at all unique to the Nordic countries. Reflecting on an analysis of socio-economic segregation in 12 European cities,⁵ Marcinczak et al (2015) contend that segregation has increased in each case. This indicates that there are

broad patterns and forces that contribute to segregation in Europe. However, the Nordic countries share some particular characteristics, as they are characterized by significant centre-periphery segregation patterns and persistent disadvantage among foreign-background and ethnic minority populations (Marcinczak et al 2015; Nielsen et al 2015).

As can be seen from the statistics and research reviewed in this chapter, it is clear that residential segregation (along both ethnic and socio-economic lines) is a significant challenge in the Nordic capital cities. Although each city has its differences (Helsinki and Reykjavik are outliers in some respects), there are remarkable similarities in segregation patterns between Stockholm, Oslo, and Copenhagen. More alarmingly, these residential segregation patterns have only grown more intense over the past decade.

⁵ Vienna, Amsterdam, Stockholm, Madrid, Oslo, Tallinn, London, Budapest, Vilnius, Athens, Prague, and Riga.

5. Segregation research themes

With these trends of spatial isolation in the Nordic capital cities established, this chapter explores some of the key features and variables of segregation based on an overview of previous work. In the literature on Nordic urban segregation, the topic has of course been analysed and discussed through many different lenses. Here, we organize the most common and relevant topics into three categories. First, the focus is on segregation, housing policy, and tenure forms under the heading *Public housing and market segmentation*; second, we examine research that is more directly spatial concerning *Urban planning and service accessibility*. The third theme focuses on Immigration, discrimination, and stigmatization. Although these are common themes in research on urban residential segregation, given that the topic is multidimensional and complex, there is a certain overlap between them. In addition, there are other aspects of segregation that we do not cover in this report.

5.1 Public housing and market segmentation

As noted in the introduction, there is no common Nordic model with regard to housing. Therefore, before examining in detail research perspectives on housing development and policy in relation to segregation, it is necessary to clarify some key concepts and differences.

Despite having broadly similar welfare states, housing policy throughout the Nordic countries is complex and varied. As Egerö (2014, 1) remarks, despite “common historical origins ... and modern political and economic cooperation”, the Nordic countries have different experiences and objectives concerning housing policy. The housing market refers to the buying, selling, and renting of different dwellings, as well as the cases in which there are combinations of buying and renting. Housing accessibility is of critical importance to urban segregation. How does one enter the housing

Country	Tenure forms	What is social housing?	Who are the main landlords in rental housing?
Denmark	Owner-occupied, public rental, private rental	Low-cost rental public housing accessible for everyone	Non-profit organizations, unions, etc.
Finland	Owner-occupied, public rental, private rental, part-ownership housing (rental that can be transformed to ownership), right of occupancy housing (mix between rental and owner-occupied)	Public rental, needs-tested, and subsidized	Private (laypersons, small scale), municipalities, non-profit organizations, foundations
Iceland	Owner-occupied, small share of public and private rental	Ownership housing with affordable housing loans and small share of public rental housing	Municipalities, associations, private landlords (companies, laymen)
Norway	Owner-occupied, private rental, small share of public rental	Public rental housing (small share)	Private (laypersons) landlords (companies, organizations, individuals)
Sweden	Owner-occupied, co-operative ownership, public and private rental	1) Rental housing and individual, needs-tested rent subsidies 2) Small share of rental housing with the municipality as contract holder, distributed to households on a trial basis. Needs-tested, with strict conditions	Municipalities, private landlords (companies, organizations, associations, laypersons)

Table 7: The key differences between Nordic housing policies that influence segregation patterns and relevant measures for increased integration.

market as a newly arrived resident in a city in the Nordic countries? The answer to this is key to understanding segregation patterns. In discussing public housing and social housing, we utilize the terminology found in Andersen et al's (2013) descriptions of housing policy in the Nordic states. We use public housing as a generic term for rental housing that is publicly owned and social housing as a more specific term that describes subsidized rental housing. However, even within these definitions, there are variations between countries that may lead to conceptual confusion. Table 7 is an attempt to clarify this.

From Table 7, we can see that Finland has more tenure forms than the other countries; these forms mix ownership and rental in different ways. In addition, it is clear that social housing does not exist explicitly in Sweden, while in Denmark and Norway, the terms social housing and public housing refer to the same types of rent-subsidized dwellings. Likewise, public housing holds different positions in the respective countries, being more or less stigmatized. The issue of who acts as landlord can also be important, because it indicates the relevant actors in the housing market who can influence accessibility and create barriers. In Norway, private individuals are significant landlords; in Sweden, the municipal housing companies are key actors. Public housing in Sweden is municipal housing, whereas in Denmark and Finland, unions or non-profit organizations can act as public housing landlords.

An additional housing policy that is of importance for residential segregation concerns settlement policies for refugees and asylum seekers, and whether and how housing is distributed to those receiving residence permits. According to Andersson et al (2010), there are a few decisive differences. In Sweden, refugees and asylum seekers are free to settle where they want, if they can arrange their own housing (the so-called EBO system). Sweden's EBO system is the subject of debate because one consequence of this system is that many immigrants move to the larger cities and live in crowded conditions (Boverket 2015; Myrberg 2012). In 2015, the Swedish Board of Housing, Building and Planning published a report on housing conditions for newly arrived migrants and asylum seekers who arrange their own housing (Boverket 2015). Based on municipal case studies, they conclude that the social consequences are very negative in many cases and that changes are needed, with respect to both the policy on the right to arrange your own housing (EBO) and more broadly concerning the role of the state in securing affordable housing. Clearly, this is an issue that is believed to influence urban social sustainability in the long term.

In Norway, the system is similar to Sweden in the sense that immigrants are free to settle where they want if they can support themselves and find housing (Andersson et al 2010, 168). In Denmark and Finland, asylum seekers who have received residence permits are allocated to certain municipalities to create an equal distribution of immigrants rather than a concentration in certain cities, municipalities, or districts. The Danish local authorities are then obliged to assign a permanent dwelling for the refugee, often social housing (Andersson et al 2010, 108). Compared with Sweden then, Finland and Denmark exercise stricter control of the municipalities, but this also means a more restricted situation for the immigrant. One consequence of the Danish and Finnish systems is that immigrants are concentrated to a high degree in social housing (Andersson et al 2010, 115, 250).

In addition, with reference to differences in rental housing tenure forms, the structure and functionality of the housing market are also of great importance in terms of where immigrants settle. Is the housing market dominated by ownership? Is there private renting or social housing? Settlement policies are also related to the responsibilities of the municipalities and thereby to the role and responsibilities of the public housing system. For example, the possibility of newly arrived migrants establishing themselves in the housing market in Sweden would be minimal if the public housing companies had strict demands on income or permanent employment, according to the Swedish Board of Housing, Building and Planning. In reality, the EBO system in Sweden is dependent on lodging with relatives and on illegal subletting (Boverket 2015, 9).

The conclusion from this brief discussion of housing policies and immigrant settlement policies is that both can affect residential segregation. So far, we have only looked at the policy level. Migrants and refugees are in particular social contexts where many more factors influence whether they should be considered to be integrated or segregated.

Public housing (whether subsidized and needs-tested or not) is a frequent topic of discussion in the academic literature on segregation. This is because, in almost all cases, public rental housing correlates strongly with low-income populations in the major Nordic cities. Norway and Finland have subsidized social housing that is explicitly needs-tested and built for low-income groups. In contrast, Denmark and Sweden have aimed for a more universalist housing model, ostensibly providing equal access to both publicly and privately owned housing, although there are complications in practice.

	Denmark	Finland	Norway	Sweden
Average disposable incomes in tenures (eEuro)				
Owner-occupied	27,149	20,021	30,408	21,100
Cooperatives	21,556	–	28,328	19,900
Private renting	21,130	14,623	20,246	16,300
Social/public housing	19,415	14,028	21,763	14,850
All	24,407	18,233	27,645	19,200
Relative difference from average income, per cent (%)				
Owner-occupied	11	10	10	10
Co-operatives	–12		2	4
Private renting	–13	–20	–27	–15
Social/public housing	–20	–23	–21	–23
Index for income segmentation	14	12	13	11
Index of segmentation = sum(abs(income in tenure- average income)* proportion of dwellings in tenure))/100. Sources: Denmark: Database at Danish Building Research Institute based on data from Statistics Denmark 2008; Finland: Statistics Finland 2008; Norway: Levekårsundersøkelsen 2007; Sweden: GeoSweden 2011.				

Table 8: Housing market stratification in Denmark, Finland, Norway, and Sweden. Average personal income among residents aged 16+ years in different tenures. Source: Reproduced table from Andersen et al (2013, 32).

	Denmark	Finland	Norway	Sweden
Immigrants				
Owner-occupied	30	31	45	30
Cooperatives	6		18	23
Private renting	16	21	24	26
Social/public housing	45	43	13	20
Other	2	5		
Total	100	100	100	100
Total population				
Owner-occupied	62	72	62	55
Cooperatives	6		14	17
Private renting	14	11	19	14
Social/public housing	17	13	5	14
Other	1	4		
Total	100	100	100	100
Year and sources: Denmark: 2008, Database at the Danish Building Research Institute based on data from Statistics Denmark; Finland: 2010, Statistics Finland; Norway: Living conditions among immigrants in Norway 2005/2006 and living conditions among the whole population 2007, survey data Statistics Norway; Sweden: GeoSweden 2008.				

Table 9: Immigrant and national (total) populations (%) by tenure in Denmark, Finland, Norway, and Sweden. Source: Reproduced table from Andersen et al (2013, 36).

In relation to housing policy, a strong theme in the literature on Nordic segregation is market segmentation. Market segmentation occurs when “different tenures to a great extent are made available and attractive for different households, for example divided by income and family situation” (Andersson et al 2010, 92). Instead of focusing purely on the spatial element of segregation, in this section, we look at the ways in which housing choices are constrained (or encouraged) by particular policies, shortages, and trends. Market segmentation is also dependent to some extent on the policies surrounding public housing and home ownership. While low-income groups tend to cluster in public housing, high-income groups tend to cluster in owner-occupied housing. This tenure segmentation “often results in [the] spatial segregation of immigrants” (Andersen et al 2013, 40). There is evidence for this phenomenon in all of the Nordic countries.

In Sweden, housing policy has undergone some changes since the early 1990s, when the economic crisis prompted an end to generous state subsidies for municipal housing development. Hedin et al (2012) trace these developments, noting that Sweden’s housing stock went from being a significant net burden of SEK 30 billion a year in the late 1980s to a net income of roughly SEK 31 billion 10 years later. Together with a gradual movement towards liberalization and decentralization, which was solidified in 2011 when rent prices in the public and private rental markets were unlinked from each other (Christophers 2013, 891), this has resulted in one of the most extreme housing shortages in the EU, particularly in the rental sector (Pittini et al 2015, 86).

In Stockholm, low-income, marginalized areas are dominated by public rental apartments (Christophers 2013, 890). Needs-tested social housing of the kind found in Finland and Norway does not exist in Sweden; instead, there is a system of needs-tested welfare payments that are distributed to the households (bostadsbidrag). In his assessment of these forms, Christophers calls the modern Swedish housing regime a “monstrous hybrid” that fuses egalitarian legacy with potent Anglo-American neoliberalism. He contends that this movement towards neoliberalization reveals the “pivotal role currently being played by the Swedish housing system in the creation, reproduction, and intensification of socio-economic inequality” (Christophers 2013, 885). The mechanisms behind these changes are complex because of the strong role of tenants’ unions and corporatist ideals in Sweden, but they show a very clear trend. The Swedish universalist housing model no longer exists, and Stockholm is instead increasingly dominated by private forms of

housing (particularly owner-occupied but also private rentals).

Reflecting on the study by Christophers, Lind (2015, 15) argues that another key reason for Stockholm’s low-income housing shortage lies in an “alliance of environmental groups, home-owners and also tax payers in general that want to avoid high costs for the municipality”. Lind contends that the lack of new housing development is to the advantage of many homeowners in the Stockholm area, and he notes a general concern among homeowners that an increase in rental housing would lead to a decline in usable green space and lower property values.

The shrinking of the Swedish rental sector, particularly in Stockholm’s inner city, has been an “important [part] of the gentrification process”, cultivating an inner-city population that is overwhelmingly wealthy and white (Andersson & Turner 2014, 26). However, public rentals (and private rentals to a lesser extent) remain dominant in Sweden’s poor, peripheral suburbs (Andersson et al 2010, 26; Lind 2015, 8; Öresjö et al 2005, 4). In Rinkeby, for instance, 99.7% of residents rent from the municipality (Rinkeby-Kista District, 2015). Stockholm’s housing market is segregated and socially stratified, and public rentals correlate strongly with low-income, highly stigmatized areas. However, it should be noted that segregation and stigmatization do not necessarily correlate with poor-quality housing.

In Denmark, Christensen (2015, 268) notes that “housing policy has contributed significantly to [urban] segregation”. Rental housing comprises about 40% of the total housing stock and is split relatively evenly between social housing (which is explicitly subsidized and rent controlled although not reserved only for low-income groups) and private rental housing (Andersen 2010). Great pressure has been placed on the social housing sector, particularly in Copenhagen, and because of the lengthy waiting lists, it is extremely difficult for immigrants and low-income groups to access these homes. Moreover, there has been a steady increase in the difference in average household incomes between the owner-occupied and the rented sectors (Christensen 2015, 267). Christensen (2015, 268) identifies the “extensive tax subsidies” given to residents of owner-occupied housing as a mechanism that exacerbates this increasing inequality in the housing market. These processes have led to a high level of market segmentation in Copenhagen, one that reflects socio-economic and ethnic patterns of spatial isolation (Christensen 2015, 268). In principle, while being subsidized, Denmark’s social housing is open to all residents (Andersen et al 2013, 30). However, incomes are lowest, by a large margin, for those who

live in social housing (Andersen 2010; Andersen et al 2013). In addition, those in social housing often struggle to enter the private market, and this difficulty in the housing market correlates with unemployment, under-employment, and relative economic deprivation (Andersson et al 2010).

In contrast to Sweden and Denmark, most housing in Norway is deregulated, and the country holds only a very small share of public rental housing. This small share functions as social housing; it is subsidized and “often ... reserved for people in need” (Andersson et al 2010, 144). The total rental sector only makes up approximately 23% of the housing stock, and social housing makes up less than 5% of the total (Andersen et al 2013, 29). Rental housing is concentrated in Norway’s largest cities, most notably Oslo. Home ownership has been politically emphasized as “the most desirable kind of housing for all” (Andersen et al 2013, 28). Evidence from Andersen et al (2013) indicates that Norway has the most stratified housing market of any of the Nordic states. A majority of those in the poorest income quartile (58%) are not homeowners, meaning that this group is concentrated in Norway’s relatively small rental sector (Andersen et al 2013, 31). In some ways, this is by design, given that social housing is meant to aid those who have no alternative; however, housing mobility remains extremely low. Andersen et al note that this provides a “fertile environment for discrimination”, as immigrants and ethnic minorities (who make up the large majority of Oslo’s poorest) struggle to access housing and frequently settle for overcrowded or economically exploitative living conditions (Andersen et al 2013, 33).

Homelessness can also interact with segregation, especially when there are shortages of affordable rental apartments. There is increasing recognition that homelessness has structural causes (e.g., relating to the housing market and job opportunities) as well as individual causes (Pleace 2015, 35). In Sweden, for instance, homelessness has been rising since 2005, and it correlates strongly with foreign-born populations (Socialstyrelsen 2012). In both Finland and Denmark, although homelessness-reduction programmes have been successful in recent years, high rents and a shortage of small rental dwellings have meant that youth and immigrant homelessness have remained significant problems (Benjaminsen 2013; Pleace et al 2015, 71). Based on her analysis, Katisko (2015, 72) notes that “young immigrants have become a growing subgroup of the homeless population [in Finland]”, emphasizing that “the traditional way of conceptualizing homelessness does not describe homelessness among youths of immigrant background

adequately”.

In Finland, research on migration between Helsinki city-region neighbourhoods in the 2000s (e.g., Dhalmann et al 2013; Vilkkama et al 2011; Vilkkama & Vaattovaara, 2015) shows that the new geographical structure established in the Helsinki city-region in terms of social and ethnic differences relates to migration within the region. Indications of selective migration have been observed, and the reasons behind the decisions of the native middle-class population to leave or stay in socio-economically deprived neighbourhoods have been studied (Vilkkama, Vaattovaara & Dhalmann 2013; Vilkkama & Vaattovaara 2015). The ethnic residential preferences of immigrant groups have also been investigated (e.g., Dhalmann, 2013). As in the other Nordic capital cities, Helsinki’s foreign-background population is concentrated in low-income areas with a high share of rental housing (Vilkkama, 2011, 194). Vilkkama’s research shows that the concentration of immigrant populations in such areas cannot be explained only by tenure form; it is also very much related to selective migration between neighbourhoods. It is feared that selective migration may have the potential to strengthen and cement the existing segregation patterns further (Vaattovaara & Kortteinen 2012; Vilkkama & Vaattovaara 2015).

Writing in 2002, Kauppinen hypothesized that “social housing [could] explain [immigrant] settlement patterns” in the city, warning of an apparent dependence on subsidized housing that could grow more severe with time (Kauppinen 2002, 173; 194). To some extent, this hypothesis has turned out to be correct. As shown in Table 9, immigrants are over-represented in social/public housing in Finland to a high degree. Similarly, Vaattovaara and Kortteinen (2012, 64) point out that Helsinki differs from other European cities in that poverty and social exclusion are frequently concentrated in specific buildings or blocks instead of entire neighbourhoods or suburbs. They see this as a consequence of the systematic policy of mixing tenure forms that the City of Helsinki has been implementing since the 1960s. Instead of being a reactive desegregation policy, this mixing policy is considered to be more preventive in nature (Dhalmann & Vilkkama 2009).

This brief review of the literature with examples from Denmark, Norway, Sweden, and Finland provides evidence that inequalities in the Nordic housing markets strongly contribute to residential segregation.

5.2 Urban planning and service accessibility

While housing policy and access were core themes in the previous section, it is also important to recognize the role of urban planning and service accessibility in contributing to segregation and inequality. Urban structure provides more than a neutral container for life and work; it can have profound consequences for how easily individuals can access jobs, shops, activities, and green spaces. This understanding also provides the basis for the spatial mismatch hypothesis, which attempts to explain some forms of unemployment via a mismatch or disconnection between jobs and housing locations (Gobillon & Selod 2014, 1).

In Sweden, the most notable scholar on spatial mismatch, Ann Legeby (2010; 2011; 2013), has written at length about the challenges regarding the built environment and geographical access to jobs and services in poor areas. Legeby's work focuses intensively on visible, physical factors that hinder labour market access. Legeby (2013, 3) utilizes space syntax theory, in combination with a spatial analysis and information from questionnaires and observations, to argue that "spatial configuration has a direct influence on access to workplaces as well as on other aspects that affect residents' opportunities in the labour market". More specifically, her work shows that the poorest areas in Stockholm are located far from high-level employment opportunities, far from the city centre, and often far from spaces for community activities, leading to a "negative effect on the local public life" (Legeby 2011, 277).

Along with spatial mismatch, much of the literature on segregation in spatial planning relates to neighbourhood effects. This term refers to the effects that living in a particular type of neighbourhood can have on residents. If living in a particular neighbourhood can hinder opportunities for employment, education, and social mobility, then segregation and social isolation can reinforce and perpetuate each other. In contrast, upper- and middle-class neighbourhoods of course can perpetuate themselves likewise, growing more homogeneous and wealthier with time. However, despite this, meta-analyses of social mix policies that are intended to encourage more positive neighbourhood effects have deemed them to be widely ineffective (Galster 2007; Bolt 2009). One of the problems is that these policies misinterpret the factors that lead to positive effects and fail to improve the well-being of the disadvantaged in absolute terms (Galster 2007, 2). Most often, neighbourhood effects are discussed in economic terms, as researchers attempt to

determine whether moving to a new neighbourhood in the same city can have a marginal impact on earnings or job opportunities. Galster et al (2008, 858) apply this approach to Sweden, where they "investigate the degree to which neighbourhood income mix relates to subsequent labour incomes of adults and how this relationship varies by gender and employment status". They find that unemployed men and women experience income gains and job opportunities when they move into middle- and high-income neighbourhoods, compared with a control group from their neighbourhoods of origin. These results "provide support to those who argue that housing policies need to alter the neighbourhood economic mix to help those with marginal labour force attachments" (Galster et al 2008, 868).

In a case study of the Oslo suburb of Sandvika, Norway, Røe (2014) attempts to articulate the link between physical urban planning and the more abstract 'place-making' that occurs in metropolitan neighbourhoods. Røe (2014, 512) attests that planners overlooked the significant socio-cultural aspects involved in place-making and development, because municipal plans resulted in a "very strong emphasis on physical design and [a] lack of public participation". This focus on the physical, visible aspects as a means to "achieve social equity and sustainability" brings with it several risks (Røe 2014, 499). Most notably, by approaching complex issues such as segregation as one related to attractive places or architectural structure, there is a risk of encouraging gentrification and intensifying segregationist movement patterns.

Reflecting on an ambitious urban renewal project in a relatively poor neighbourhood in Copenhagen (Inner Vesterbro), Denmark, Larsen and Hansen (2008) question the wisdom commonly employed in sustainable urban development projects. Uniquely, their case study involved a project "[explicitly] concerned with social issues", a redevelopment strategy where local residents assisted in drafting new plans (Larsen & Hansen 2008, 2445). However, the result (perhaps an intended one) was a strong trend towards gentrification in the area. Housing prices increased dramatically in Vesterbro in line with the renewal, and many of the original dwellers (estimated at more than 50%) were forced to move out by the change in housing prices. This case study shows the potentially problematic nature of attempting to alleviate segregation with area-based development strategies.

In parallel with the findings of Røe (2014), Dhalmann and Vilkkama (2008, 436) note that in Finland and in Finnish policy documents, "[the] residential segregation of immigrants is viewed mainly as a spatial problem". In

their estimation, this has “diverted attention away from different structural impediments that may restrain immigrants’ capability to improve their own housing situations” (Dhalmann & Vilkkama 2008, 436). Despite the widespread acknowledgement within Finnish planning that ethnic and socio-economic segregation is problematic, there has thus far been a more limited recognition of the role of discrimination and structural disadvantage. Dhalmann and Vilkkama (2008, 437) conclude that “prevailing policies [in Helsinki] ... need to be constantly checked and complemented with more flexible and innovative measures that acknowledge and respect the diversity of contemporary multicultural societies”.

According to Lapintie (2015, 32), although segregation and multiculturalism have been discussed in Finland, planners consider these topics to belong to the fields of housing and social policies and not to urban and regional planning. Lapintie (2014) has also criticized planning for not taking into consideration the nature of the new multicultural society. He notes that the Finnish Land Use and Building Act mentions “cultural sustainability” but does not define what is meant by it. Although the Act stipulates that land use planning should aim to create an environment that fulfils the needs of different demographic groups such as children, the elderly, and the disabled, it does not mention immigrants or take into consideration cultural or ethnic issues. Lapintie has also studied current plans at different levels and notes that the plans do not take into consideration the issues of ethnicity and the role of the increasing share of the immigrant population.

Assessing neighbourhood effects in the Icelandic context, Valdimarsdóttir and Bernburg (2015) use a population survey to determine the influence of neighbourhood-level social ties on crime and adherence to social norms. Their results indicate that “adolescents living in neighbourhoods characterized by concentrated disadvantage are more delinquent, net of individual-level (household) characteristics” (Valdimarsdóttir & Bernburg 2015, 1). However, using a multilevel statistical analysis of educational neighbourhood effects in Helsinki, Kauppinen (2007) came to a different conclusion, indicating that “there [were] no neighbourhood effects on the probability that young people will complete secondary education in Helsinki” (Kauppinen 2007, 440). Despite this, Kauppinen notes the existence of a softer neighbourhood effect; namely, the type of secondary education completed (i.e., vocational vs academic education). He identifies the concentration of affluence as the most significant neighbourhood factor for this effect (Kauppinen 2007, 440). A significant gap in research on neighbourhood

effects, as with research on segregation more generally, is that such concentrations of affluence are only rarely emphasized or problematized. In sum, whether neighbourhood effects can be detected appears to be dependent on time and place, and they are therefore not something that can be taken as given.

One of the core challenges with studies on the residential impact of urban planning and job/service accessibility is that residential location may result from many factors, some of which are difficult to measure and compare adequately. Not everyone moves with job prospects or locations in mind. In urban planning studies, factors such as personal preferences, family ties, and economic necessity are difficult motivations to control for (Åslund et al 2010, 415). Despite these limitations, the literature on the subject in Europe and North America consistently finds a correlation between job proximity and employment. In a new approach, Åslund et al (2010) used refugees in Sweden as a kind of control group in a study of job proximity and labour market access. They find that although distance to potential jobs matters in Stockholm (Åslund et al 2010, 414), it can hardly explain the differences in employment levels between natives, labour migrants, and refugees. As concentrations of minorities throughout Nordic cities strongly correlate with both unemployment and low job availability, it is unlikely that spatial patterns of unemployment can be entirely explained by individual choices or preferences.

The studies discussed above point to one of the main conflicts faced by urban planners in attempting to counteract segregation. By aiming to promote growth and to make areas attractive for investment, there is a high risk of making segregation and inequality more intense and concentrated in the long term. An inequitable urban structure can reinforce and reproduce segregation and intensify its negative social effects. Because the causes underlying segregation are structural and deeply rooted, area-based approaches (at least on their own) are rarely effective (Bolt 2009, 397; Galster 2007, 32; Røe 2014). Poor service and/or job availability can compound this problem. However, it should also be noted that distance from services or workplaces is not a barrier for everyone; in Stockholm’s wealthy suburbs, such as Danderyd, high rates of car ownership mean that for many local residents, distance is not problematic (and indeed often desirable).

5.3 Immigration, discrimination, and stigmatization

Immigration is frequently noted as a phenomenon that has profound implications for segregation. Immigration from both within Europe and across the world to the Nordic countries has increased over the past 10 years. Its impact is most pronounced in Stockholm and Oslo, where 30.7% of Stockholm municipality's population (Table 2) and 30.3% of Oslo's (Table 4) are now classified as having a foreign background. Even Denmark, with its integration and immigration policies that are "among the most restrictive of their kind within Western Europe" (Jørgensen 2015, 275), has seen a large increase in the proportion of immigrants in Copenhagen since 2005. Although Finland has received a smaller share of immigration, it still constitutes a demographic change for the country. Less research is available on Iceland; however, Júlíusdóttir et al (2013) note that there has been net immigration since 2008.

Andersson et al (2010) devote much of their report to explaining the immigration policies and patterns that distinguish Sweden, Norway, Denmark, and Finland. Similarly, Katisko (2015, 61) argues that "immigration policies should also be urban development policies", noting the close link between immigrant disadvantage and urban policy. This idea may initially seem provocative, but it is based on an understanding that different groups have fundamentally different experiences and advantages in urban space. For example, Legeby (2013) and Schierup et al (2014) point out that segregation and social exclusion were prime factors behind the outbreaks of rioting in Stockholm in 2013.

In addition, immigration, discrimination, and stigmatization are closely intertwined with segregation and inequality. This is partly because many disadvantages are concentrated in immigrant-background populations and also partly because there is (as already noted) a lack of problematizing of the actions of wealthier or more privileged groups. Moreover, the present refugee crisis and the general movement towards stronger right-wing parties in most Nordic countries have created a discourse where immigrants and non-white populations are frequently stigmatized as undesirable or a burden for society (Andersson 2013; Hübinette 2014; Hübinette & Lundström 2014; Jørgensen 2015). Writing about Copenhagen, Denmark, Larsen and Hansen (2008, 2443) note a troubling discourse that pervades discussions of immigrants and minorities in the city. Low-income groups, and especially those of a foreign background, are often informally referred to as

"the trash" of the city, and there is a tacit linking of foreigners with problems. Reflecting on interviews with Somali residents in Helsinki, Finland, Dhalmann and Vilkkama (2008, 434) note a discourse regarding ethnic minorities that has similarities with the observations by Larsen and Hansen. One of the interviewees in Dhalmann and Vilkkama (2008) commented as follows.

Many [Somalis] are planning to move to the [western] side of Helsinki, because name-calling and racism have become so common [in other areas]. Moreover, many want to move to western Helsinki or somewhere there, since this outrage from neighbours, in every metro and bus, is present each day (social worker, Somali woman, Helsinki).

In the Danish context, certain housing areas are referred to as 'ghettos' in public discourse, something that stands out from a Nordic perspective. However, there are some critical voices in Denmark. Jørgensen (2015) contends that the policy interpretation of low-income areas as ghettos is stigmatizing and irresponsible, and reinforces existing patterns of segregation and discrimination. The politics surrounding low-income (and generally minority-populated) neighbourhoods in Denmark has been strongly influenced by ideological (and occasionally nationalist) norms in lieu of academic research or expert advice (Jørgensen 2015, 283). The standard story of ghettoization and its relationship to immigration is not supported by existing research on the topic (Andersen 2010; Jørgensen 2015, 287).

The fieldwork and interview data provided by Jørgensen (2015), Larsen and Hansen (2008), and Dhalmann and Vilkkama (2008) show that many ethnic minorities in the Nordic countries (especially those from Africa and the Middle East) feel ostracized and alienated in major cities. In addition to facing discrimination in the housing and labour markets, some immigrants experience a general hostility from natives that may motivate them to self-segregate (Dhalmann & Vilkkama 2008, 434). In both the Swedish and Norwegian housing markets, there is evidence that ethnic discrimination constrains the choices available to minorities. Using fake application letters to test responses from landlords, Ahmed and Hammarstedt (2008) and Bengtsson et al (2012) find that positive responses are significantly more likely for those with Swedish-sounding names than for those that sound foreign (and particularly Arabic). In their study of immigrant job access, Åslund et al (2010, 413) concur on this point. Andersson et al (2012, 233) report similar

results from Norway, finding that “females, individuals with high job status, and ethnic Norwegians are ... likely to receive positive responses” in Oslo’s housing market. In contrast, they find that “being an Arabic man and working in a warehouse is associated with a 25 percentage point lower probability of receiving a positive response when showing interest in an apartment”. It is also worth noting that the groups facing the most disadvantage in the labour and housing markets of the Nordic countries are immigrants from Africa and the Middle East, even when controlling for educational background and skill level (Farchy & Liebig 2014, 5; Nielsen et al 2015, 434). Highlighting the link between structural racism and segregation in Sweden, Hübinette and Lundström (2014, 423) argue that a powerful discourse in the country prevents “the disentanglement of Swedishness from whiteness”. They argue that some of the labour market difficulties and segregation in Swedish cities can be explained by exclusionary and discriminatory practices in Swedish society. From a broader perspective of discriminatory discourses across the Nordic countries, Kuovo and Lockmer (2013, 3305) contend that many non-white groups are subject to a “perceived ethnic threat” that can serve to alienate them from white Nordic populations.

Finally, there are tendencies of a U.S.-style white flight that contribute to both ethnic and socio-economic segregation. Aldén et al (2014) identify tipping behaviours in demographic movements in Sweden when “native [Swedish] population growth in a neighbourhood discontinuously drops once the share of non-European immigrants exceeds the identified tipping point” (Aldén et al 2014, 1). A similar point was mentioned earlier in relation to choices made by mothers on where to bring up their children (Lilja 2015) and regarding the movement patterns of the wealthiest. In Stockholm County, Aldén et al (2014, 29) contend that “segregation is reinforced by the fact that it also affects the residential mobility behavior of natives”. These results imply that area-based measures targeting ‘problem areas’ and disadvantaged populations may not be enough to counteract the movement biases of native Nordic groups and that the issues of segregation must be discussed on a whole-city level. Taken together, the work by Ahmed and Hammarstedt (2008), Bengtsson et al (2012), Andersson et al (2012), and Aldén et al (2014) points to a Nordic housing market that is unfair (and perhaps even hostile) to many ethnic minorities.

5.4 Summary: Research perspectives on urban segregation in each of the Nordic countries

Some brief conclusions on each country (or rather capital city) are now presented. In all of the Nordic capital cities, residential segregation has worsened over the past decade. It is clear from the research that housing shortages, inequitable service/job distribution, and discrimination/racism directed towards those of a foreign background have all strongly contributed to segregation and inequality in Stockholm, Copenhagen, Oslo, and Helsinki. Although only a relatively small degree of attention has been given to Reykjavik regarding urban inequity, the city is also beginning to show patterns of segregation and spatial isolation among its minority groups. While each country has some unique characteristics, there are still more similarities than differences.

Sweden

- Swedish cities have attracted considerable scholarly attention on the issues of segregation and inequality.
- Stockholm experiences the most extreme patterns of ethnic segregation compared with the other Nordic capitals.
- In Stockholm, the housing shortage, high housing prices and costs, and a shrinking share of rental apartments have contributed strongly to segregation.
- Stockholm has no social or subsidized rental housing, but there are individual, needs-tested rent subsidies.
- Areas with high concentrations of ethnic minorities and low-income groups tend to be located far from services and job opportunities. Crucially, these areas also have low rates of car ownership, meaning that residents cannot overcome this distance as easily as those in wealthier suburbs.
- Discrimination in both the housing and labour markets is a serious challenge for those from a foreign background.

Denmark

- Copenhagen has a high degree of housing market segmentation along with a shortage of public/social housing.
- Urban planning and renewal projects have tended to promote gentrification and income stratification

instead of directly improving outcomes among disadvantaged groups.

- Stigmatization and discrimination of minorities have been identified as major barriers for integration and equality.
- Copenhagen's stigmatized, low-income 'ghettos' have been a particular point of controversy in the literature on Nordic segregation. The ideological character of the Danish debate has also been highlighted.

Norway

- Oslo experiences the highest degree of housing market segmentation among the Nordic countries. The low stock of social housing and the high cost of living have also contributed to overcrowding among low-income groups.
- Many residents from a foreign background (especially Somalis, Iraqis, and Moroccans) are concentrated in relatively poor, stigmatized neighbourhoods.
- There is strong evidence of discrimination and structural racism, which makes finding adequate housing and employment difficult for many ethnic minorities.

Finland

- Although Finland has not experienced the same degree of immigration as the other Nordic states, ethnic segregation exists in the Helsinki metropolitan area. As in the other Nordic capital cities, discrimination and racism towards migrants

are growing concerns.

- White flight and selective migration have created neighbourhoods where relatively poor ethnic minorities are concentrated in social housing.
- Because of Finland's pronounced social mix policies, there is a greater degree of block-level (as opposed to neighbourhood-level) socio-economic segregation in Helsinki's urban space.
- There has been limited response from the urban planning sector (outside of social mix policies) to the issues of inequality and social division.

Iceland

- Although little research has been conducted on urban segregation, there are indications that ethnic residential segregation in Reykjavik has increased since 2000.
- Recent research lends some support to the links between neighbourhood disadvantage, social isolation, and types of criminality in Reykjavik.

6. Policy responses to urban segregation

6.1 Social sustainability as a tool for planners

How can we deal with difference in cities, and what can policy do? Fortunately, there are a multitude of policy approaches that can facilitate social justice and counteract segregation, some of which were mentioned or alluded to in the previous chapter. Potential housing policies, employment policies, integration policies, cultural projects, social projects, and initiatives oriented to the built environment can all be framed under the heading of social sustainability. Different interpretations of social sustainability point to different problems to be solved (such as ethnic segregation, socio-economic differences, unemployment, and the high turn-over in housing areas). Below we present examples that concern 1) area-based initiatives, 2) social mix, 3) social sustainability commissions, 4) think-tanks, and 5) participatory governance. These are five different ways of placing the problem of urban segregation on the policy agenda, ways that in themselves can result in different types of proposed measures. They highlight how segregation is understood and acted upon in Nordic cities, in urban planning discourse, and in practice.

We do not claim that these examples are representative of their respective countries; rather, we wish to exemplify and discuss a few possible approaches to problems of urban segregation in the Nordic context. For that reason, we have chosen to present policy responses that are not always explicitly about residential segregation but are about broader social justice and aspects of everyday life in Nordic cities. Instead of discussing segregation as a problem linked with a single issue (such as physical planning, urban development, or political engagement), we would like to present more comprehensive approaches that frame urban segregation as an issue of social sustainability. We also see this issue as one that a broad range of actors can respond to, not only urban planners or politicians.

Another reason for framing responses to urban

segregation in terms of social sustainability is that this concept is a common policy buzzword, and social aspects of sustainability are very much at the centre of the sustainability discourse in planning (see, for example, Boverket 2010; Manzi et al 2010). Social sustainability is the theme of research calls and seminars, and it is emphasized in both local and national policy, whether explicitly or implicitly. It is therefore relevant to try to understand how the concept is used, and what meanings it is given in different cases. However, this does not mean that the current social sustainability discourse covers completely new perspectives, because social aspects of planning and the importance of social welfare in everyday life have been at the centre of the Nordic welfare state model for decades. Despite this, the concept reinforces how important social justice, citizen participation, and general well-being are for reaching sustainability goals. It draws attention to the social and human aspects of sustainability. The contemporary political context also lends this concept an added dimension, because the needs of minorities, immigrants, and refugees are of particular concern.

However, although social sustainability is a frequently used concept, its definition is often vague. Social sustainability functions as a catch-all term, and it is in many instances open to interpretation (Tunström et al 2015). The black box comprises many different aspects of sustainability; it is difficult to define or measure precisely what social sustainability is about and consequently how to plan for it or achieve it. Indeed, what is a socially sustainable city or neighbourhood? It might be a place where people live long lives, or a place where the residents are organized and engaged in their local area. It might be an urban environment where there is a social mix of the population's socio-economic resources and lifestyles; or the opposite, a neighbourhood where the socio-economic differences are instead small. Depending on how the term is defined, different types of problems and solutions are emphasized, and different types of measures are considered to be reasonable: participatory projects,

a mix of tenure forms, public health initiatives, community events, etc.

It should also be stated, as this report hopefully has made clear, that neither segregation nor social sustainability is solely an urban planning issue. Rather, they are both political and social policy issues, related to economic trends, political movements, public desires, policy trends, education, etc. Social sustainability is not created by building compact cities or mixing urban amenities, but these can be aspects where physical planning can contribute. Consequently, different understandings of the concept imply different understandings of what the problem is, and thereby, what suitable responses are. In the following sections, we briefly discuss a selection of social sustainability and anti-segregation policy/project examples from the Nordic countries. They each frame the problem of urban segregation differently and open up space for discussion about suitable measures to be applied at different times and places. The objective is to show a variety of approaches rather than to be normative and to suggest good or bad approaches, or for that matter, representative measures for a specific country.

6.2 Area-based approaches in Oslo, Copenhagen, and Helsinki

As noted, area-based initiatives have been a common approach to segregation in the Nordic countries. Area-based initiatives locate both the problem of and the solution to segregation in the segregated area. The implemented measures in an area-based initiative can be diverse and oriented to urban planning, the built environment, cultural events, education, etc. However, as discussed in section 5.2, there is scepticism among many planning scholars that these types of approaches can result in lasting change. For example, Andersen (2002, 767), reflecting on a large-scale meta-analysis of area-based revitalization programmes in Denmark, concludes that segregation and social inequity “demand further and longer-term efforts to create ... new and positive development”. Although localized renewal may result in improvement of a particular area, it often has the effect of simply dislocating poor residents to even more marginal areas of a city. This is not to say that areas with an ageing housing stock or poor infrastructure should not be improved, but any strategy must be dealt with carefully to avoid displacement as an outcome. Despite this critique, area-based initiatives remain appealing for many Nordic planners, and this approach is still at the core of many of the most ambitious revitalization and anti-segregation projects

in the region.

One such initiative is Groruddalssatsingen⁶ organized by Oslo’s municipal government and the Norwegian state to improve the environment and living conditions in the Grorud valley, a part of the Oslo region with a population of around 138,000. The main objectives are formulated as sustainable urban development, visible environmental renovation, better life quality, and overall better living conditions in the Grorud valley. The project is based on four programme areas: 1) transportation; 2) green spaces, sports, and cultural heritage; 3) housing and urban regeneration; and 4) childhood, education, living conditions, cultural activities, and inclusion.

The municipality of Oslo has taken on the responsibility of governing the local development, but there are also initiatives that emphasize citizen inclusion, such as community spaces, gardening, social events, and festivals. Overall, the project has a clear social sustainability focus. Its scope is broad, encompassing social, cultural, and environmental measures that emphasize a holistic view of quality of life. The Grorud valley is regarded as a problem area both physically and socially, with numerous issues concerning noise and pollution, poor transport links (both road and rail), a lack of public spaces and spaces for recreation, low education levels, low employment levels, health issues, low immigrant integration, poor commercial activity, and a high turn-over of tenants. However, despite its impressive range of themes and goals, Groruddalssatsingen still functions as a fairly traditional regeneration project, focusing on top-down environmental and physical regeneration in a ‘problematic’ urban district.

As noted earlier, there are differing opinions in research regarding the effectiveness of area-based measures. Although a focus on physical regeneration of a certain area is relevant, this is unlikely to change the socio-economic situation for local inhabitants. Area-based initiatives place the focus on a specific housing area or urban district rather than on its people; these initiatives strongly connect the two together through the idea of neighbourhood effects (see section 5.2). Groruddalssatsingen certainly operates with this logic, but the uniquely large size of the project area makes it difficult to tell just what the neighbourhood is in this case, and what it represents in the wider Oslo region. Moreover, this project must be interpreted within the framework of the Norwegian housing market.

6 For basic information and published documentation about the project, see Oslo municipality’s website: <https://www.oslo.kommune.no/politikk-og-administrasjon/prosjekter/groruddalssatsingen/>.

Because of the high home ownership rate in Norway, segregation, integration, and regeneration are to a great extent market-dependent and self-perpetuating processes. Desirable areas attract residents; undesirable areas do not, and this feedback loop can result in worsening conditions for jobs and services in struggling neighbourhoods. Groruddalssatsingen explicitly discusses segregation as a problem to be solved for this area, and the municipality thus approaches this issue with a variety of practical projects spanning different scales. Despite our concerns about the area-based focus of the programme, Groruddalssatsingen goes further and explicitly reflects on community needs and social justice, topics that are critically important for addressing segregation in Nordic cities.

In Denmark, a recent similar area-based initiative with a clear social sustainability focus is found in Husum, Copenhagen (Områdefornyelse Husum 2015). The measures in the project cover physical, social, and cultural aspects; they have a citizen participation profile and include a wide range of actors that can influence local development. However, as an area-based project, it remains oriented towards locating and solving problems in 'problem areas'. The purpose of the Husum project also illustrates what the key problems are interpreted to be. Husum should aim at becoming a neighbourhood with a strong common identity and many local networks, pleasant green areas, and well-functioning and diverse cultural and sports activities. This implies that Husum's problems involve a lack of identity and networks, poor public spaces, and a lack of amenities in the area. Furthermore, Husum should aim at becoming a place where residents are proud to live and where they can work together across age groups, ethnicities, and social differences (Områdefornyelse Husum 2015). Similar to the Grorud valley, the Husum project is broad and holistic in its themes and measures while maintaining a localized focus: it is about Husum, not Copenhagen as a whole. The same would probably hold true for the often-mentioned example from Stockholm, the project Järvalyftet (the Järva uplift)⁷, which addresses social sustainability and urban development in the north-western part of Stockholm.

An area-based example from the Finnish context that addresses the issue of residential segregation in Helsinki is the Lähiöprojekti (the suburbs project).⁸ It is area based in the sense of focusing on the modernist

suburban areas, but these can of course be located in different parts of the city. The initiatives included in the project focus on education and culture, densification of the built environment, improving images of places, and participatory initiatives with the public and other voluntary actors. However, the Lähiöprojekti is not overtly focused on the built environment; rather, it has to do with social aspects of sustainable urban development and lessening the stigma and changing the problematic image of the modernist suburbs. It is a municipal project, but it includes the participation of both private actors and the third sector.

The area-based approaches discussed above are the most common policy-level responses to Nordic urban segregation and its related socio-economic inequalities. Although evaluations are mixed, many new, large-scale area-based initiatives (such as Groruddalssatsingen) are remarkable in their ambition and scope. By recognizing the importance of social issues, integration, and structural problems, these approaches can still improve lives locally, even if they are unlikely really to counteract residential segregation at the city-regional level or really to reduce socio-economic differences in the city as a whole.

6.3 Social mix policy in the Finnish context

Another common strategy for reducing segregation and increasing social sustainability is through policies aimed at increasing social mix. As noted in section 5.2, social mix refers to the composition of residents in a city or an area. Social mix policy is intended to facilitate this, resulting in diversity and variation with respect to residents' socio-economic resources instead of segregation (Christensen 2015). In the Nordic countries, when social mix is on the agenda, it usually refers to mixing housing types and tenure forms to attract or locate different social groups and lifestyles to the same location (city, district, housing area, block). In addition, the issue of owning or renting your dwelling is considered to be key to the mixing of socio-economic groups, ethnic groups, lifestyles, etc. (Holmqvist & Bergsten 2009), and it is thought to be vital that individuals and groups that differ in these respects are able to meet in an everyday life setting.

In Finland, and particularly in Helsinki, there has been a traditional practice of social mix policy in housing. The yearly goal for housing in Helsinki is that 20% should be state-supported rental housing with a share of category housing for special groups, 40% should be of the mixed and regulated forms of part-ownership

⁷ For information (in Swedish and English) from the City of Stockholm on Järvalyftet, see <http://bygg.stockholm.se/visionjarva>.

⁸ For information in Finnish, English, and Swedish, see <http://lahioprojekti.hel.fi>.

housing (delägarbostäder), right-of-occupancy housing, and regulated ownership housing (so-called Hitas housing), and 40% should be unregulated rental and ownership housing (Helsingfors stad 2012).

Furthermore, the Helsinki municipality housing and land use programme for 2012–2015 is quite explicit in its aim to build for different social groups and different tenure forms, and with good quality for all. Social mix should primarily take place at the block level. However, in the housing and land use programme, the municipality also states that a diverse housing market cannot reduce income differences, unemployment, or social problems. A social mix policy can only influence the socio-economic patterns in different parts of the city and potentially thereby also the preconditions for businesses and services (Helsingfors stad 2012).

Social mix in other Nordic cities is usually on a less detailed scale than in the Finnish example and operates in a somewhat less diverse housing market (see, for example, Table 8). The effect is not as visible as it is potentially in Helsinki, where social mix functions at the level of individual buildings. Research has also indicated that socio-economic differences, or a segregated labour market, persist but are less spatially concentrated under a social mix policy (Christensen 2015; Holmqvist & Bergsten 2009). The goal is often to provide similar housing choices for different socio-economic groups instead of closing social gaps related to income, education, employment status, etc. In addition, there is no guarantee of social interaction between the different groups. Although spatial closeness can be a factor in interaction, it is neither a necessity nor a guarantee of any level of social integration.

Social mix policy is an immediate, visible, and proactive way to counteract residential segregation, but it is severely limited in its ability to reduce overall inequalities or to address structural factors. While area-based approaches are more reactive and risk stigmatizing 'problem areas', social mix policies aim to reduce the prevalence of problem areas by spreading disadvantaged populations across a wider, more diverse area. In isolation, social mix policy risks not helping disadvantaged groups much at all (see Bolt 2009; Galster 2007; Galster et al 2008), which may encourage an understanding of segregation as a shallow, physically rooted problem. However, in combination with other approaches, and with adequate low-cost housing available, social mix policy can still have a positive role to play in combating urban segregation and inequality.

6.4 Social sustainability commissions

In 2010, the Swedish Board of Housing, Building and Planning (Boverket) finalized its report on socially sustainable urban development (Boverket 2010), in which they present a wide range of local projects and initiatives with the ambition of increasing social sustainability. Several examples and approaches from different Swedish cities are noted, such as the role of public housing, sustainable growth, social perspectives in comprehensive planning, area-based initiatives, and citizen participation. However, while the scope of these initiatives is wide, the issues are understood from a relatively narrow perspective. The focus of the report is on socio-economically weak housing areas; suggestions on how to counter segregation and to encourage integration focus on physical urban planning measures (Boverket 2010, 9). As is the case of area-based approaches, social unsustainability is understood as a problem for the 'problem areas' rather than for the city as a whole. Planning for social sustainability in urban areas is not considered to be an issue for newly built areas. Boverket (2010) presents a summary of the following five themes, or tools, for socially sustainable urban development:

- the need for a holistic view and of combining physical and social measures;
- the need for variety in functions, housing types, and urban design;
- the need for creating connections between different parts of the city;
- the need for identity both in the sense of to, as a resident, identify with your residential area and the importance of an area's positive external identity; and
- the need for influence and co-operation. The renewal of areas should set out from the residents and be carried out in co-operation with the actors involved.

It is evident that the focus here is on physical measures and (in spite of the rhetorical emphasis on a holistic view) is still rather area based. Social sustainability in urban planning is taken as a less problem-oriented way of talking about residential segregation. In addition, there is a central theme missing, or one that is only addressed indirectly; namely, social and spatial justice.

However, in recent years, there have been indications that public discourse in Sweden is moving from an area-based and physical focus to a more comprehensive understanding of sustainability and

perhaps also to more explicit justice perspectives. Examples of this are the 'social commissions' in the cities of Malmö, Göteborg, and Stockholm, in which social injustices and segregation are approached more broadly. In 2010, the Commission for a Socially Sustainable Malmö was appointed (Malmö stad 2013). It was a politically independent commission assigned for a period of three years to analyse the growing disparities in health among Malmö's inhabitants and to propose strategies for reducing differences. In the view of the commission, stronger social sustainability would manifest as more equal health outcomes among urban residents. Consequently, the focus is on equal access to healthy environments, medical care, and information about healthy lifestyles, in addition to more overarching ambitions regarding political participation, administration, and governance.

The final report of the Malmö commission contains no maps, implying that the spatial aspect of social sustainability was downplayed. Although the approach and the proposals adopted start from the perspective of differences, the commission does not draw conclusions based on geography; rather, the focus is on demographic groups: children, families, pregnant women, the elderly, the unemployed, etc. In that way, the Malmö commission looks for explanations and solutions to social problems in social conditions and lifestyles rather than in urban planning or places of residence. The commission's approach can also broaden the perspective on relevant policy measures to be implemented to reduce health-related disparities. Nevertheless, the project as a whole is directly related to the spatial dimension of urban segregation while also responding to social injustices in terms of health.

It is clear that the ambition of the Commission for a Socially Sustainable Malmö was to change health-related practices and to investigate how disparities arise. The ongoing work produced as a consequence of the commission has a strong focus on municipal leadership, rules and regulations, bureaucracy, policies, etc. The conclusions of the commission are aimed at the municipal administration rather than at citizens. This means that the commission pointed to social unsustainabilities and injustices as government and governance issues. More than with the other projects discussed here, the commission has made social sustainability a political issue and a government responsibility.

In 2015, the City of Stockholm followed in Malmö's footsteps and appointed a social sustainability commission. So far it has produced a first report, a mapping of Stockholm – a City of Difference (Stockholms stad 2015) with five thematic areas: public

health and well-being, living conditions for children and education, employment and support systems, housing and urban environment, and democracy and safety. The commission's task is to analyse these differences, both geographically and socially, and to develop strategies for a socially sustainable Stockholm, as well as systems of evaluation for these strategies. Similar to Malmö, the Stockholm commission starts from a broad and open social sustainability perspective, and explicitly discusses the many possible interpretations of social sustainability, as well as the difficulty of finding adequate measurements of the concept in practice. The Stockholm commission also explicitly positions itself in relation to their public health focus, and its approach is more geographical, highlighting differences between districts within the city. However, it remains to be seen whether the approach adopted by Stockholm or Malmö will prove to be most functional in addressing wider urban segregation and inequality.

6.5 Think-tanks, matrices, and digital forums

The next approach that we want to discuss is similar to a commission but with somewhat different agendas and assignments. In Denmark, there are a number of think-tanks on 'the city' and 'the suburb'. The think-tank Taenketanken Byen 2025 (Ministeriet for by, bolig og landområder 2014) was set up by the Danish government in 2013 and comprised 19 key persons from the Danish architecture and development sectors, who were asked the following question: How do we preserve, develop, and strengthen the Danish tradition of community focus in the development of our cities? They addressed the question in the form of a report on community focus in housing areas, public spaces, improved local participation, and local and regional integration. This initiative was similar to a social commission in the sense that it functioned as a group of individuals investigating practices and proposing changes. However, here the focus was on the city as built environment and the planning process.

Another Danish think-tank, Forstadens taenketank, was a combined initiative of the Danish Nature Agency (Naturstyrelsen) and Realdania, a private philanthropic organization of real estate developers (Forstaedernes taenketank 2012). They focused on suburban areas with economic growth potential, but they also conceptualized development in social terms. This meant that 'problem areas' were excluded from the project, and their main purpose can be understood as inspiring building projects rather than solving social

	Byggnad/Plats	Närmiljö	Stadsdel	Stad	Region
En sammanhållen stad					
Samspel och möten					
Ett fungerande vardagsliv					
Identitet och upplevelse					
Hälsa och gröna stadsmiljöer					
Trygghet och öppenhet					

Figure 5: The social sustainability matrix from the S2020 project in Göteborg. In the leftmost column are the thematic areas (A cohesive city, Social interactions, Everyday life, Identity and experience, Health and green environments, Safety and openness) and in the top row are the geographical scales (Building/Location, Neighbourhood, District, City, Region). The matrix can be used as a tool for discussion and analysis. (Source: Göteborgs stad 2016).

problems.

In Sweden, the local initiative S2020 in Göteborg is concerned with developing both knowledge and practice relating to social aspects of sustainability in urban development. It started out as a separate project, but it is now part of the municipal administration. As part of the project, a so-called knowledge bank was developed, with project examples of social-sustainability-oriented measures on five spatial levels: building/block, immediate surroundings, district, city, and region. Social sustainability was specified in the following six thematic areas: 1) A cohesive city, 2) Social interactions, 3) Everyday life, 4) Identity and experience, 5) Health and green environments, and 6) Safety and openness (Göteborgs stad 2016). The main purpose of this matrix is knowledge, understanding, and inspiration.

The final initiative that we include here is the digital forum for broad social sustainability issues, which is a joint initiative between the Public Health Agency of Sweden and the Swedish Association of Local Authorities and Regions (SALAR) (Folkhälsomyndigheten & Sveriges Kommuner och Landsting 2016). Similar to the other initiatives described, the primary goal of the forum is to spread and create knowledge about cities and aspects of urban life.

All of the above-mentioned examples are indications of political interest and stress the importance of relating urban social sustainability to planning

and development. The commissions and think-tanks also highlight the need for more knowledge, better knowledge exchange, and more robust public discourse. Local, regional, and national actors need to develop both conceptually and with respect to the implementation of tools and measures. Learning from examples is one way of doing this.

6.6 Mobile and electronic governance

Reykjavik provides several unique examples of what we term mobile governance and e-democracy. Since 2010, the mayor's office in Reykjavik has been mobile, meaning that it has been located in different parts of the city, including in socially marginalized neighbourhoods. Although this policy does not target socio-economic outcomes in deprived areas, it is meant to function as an anti-segregation statement by putting power symbolically in the hands of the potentially powerless and placing their needs and wishes high on the agenda for the mayor. This has occurred alongside a decentralization strategy, as neighbourhood councils have been established to distribute information and to encourage more effective local democracy.

In 2011, the projects *Betri Reykjavik* (Better Reykjavik) and *Betri hverfi* (Better neighbourhood) were launched, aiming to increase further local citizens' influence and participation in local planning

and decision-making.⁹

These are digital platforms that allow citizens to propose planning project ideas and to vote on others' suggestions. Both initiatives were seen as extremely popular: 43% of registered voters in the city visited at least one of the associated websites, and more than 100 project ideas were proposed by citizens. Several of Iceland's political parties were also connected with these projects, utilizing locally proposed ideas in their election platforms. This trend has continued with the current Betri borg (Better city) project, which incorporates an online interactive map where citizens can submit ideas and follow up on the implementation of the proposals.¹⁰

⁹ See <https://betrireykjavik.is/> and http://nyskopunarvefur.is/betri_reykjavik for more information on these initiatives.

¹⁰ The interactive map can be found at <http://borgarvefsja.reykjavik.is/framkvaemdasja/>.

7. Concluding discussion

7.1 Researching segregation in the Nordic context

Segregated cities and socially unsustainable living environments have long-term consequences beyond poor housing quality or accessibility problems. An urban life characterized by segregation is detrimental to the development of democracy, spatial justice, and individuals' life chances for employment and education. Segregation functions as a manifestation of, and reinforces, inequalities and injustices in the built environment, the labour market, and the housing market. Understanding how cities are segregated and the factors that are involved in this process is key to understanding how to achieve more socially sustainable cities. Moreover, although many planners and scholars have acknowledged and analysed these issues, there remains a degree of confusion about how to address them.

Even defining the terms segregation and social sustainability can be a complex task. In most research and policy approaches, the so-called segregated areas are usually those with many residents from an immigrant background (although they might be extremely mixed ethnically) or areas with a large share of low-income residents (although these residents might be mixed, integrated, and able in many other respects). In short, talking about segregated areas obscures the fact that it is actually the city as a whole that is segregated. It is the city as a whole that will suffer the long-term consequences of segregation and social 'unsustainabilities', not only particular areas or neighbourhoods.

Research on urban and residential segregation is often carried out through case studies of districts, areas, or projects, or through quantitative analysis of large statistical datasets. As evidence for segregation, these approaches each have their advantages and problems. Case studies can only be generalized to a certain point, and statistical analyses can appear static, revealing little about the reasons for socio-economic inequality. In addition, regardless of methodological approach, the way that segregation is defined in the research matters:

Is the focus on income differences, accessibility, spatial segregation, or images of places, stigmas, and rumours? Segregation can be measured in different ways using different types of more or less advanced indicators, giving different results; more importantly, these results can be interpreted in a variety of ways.

To encourage more discussion and practical anti-segregation politics in the Nordic countries, this report has sought first to present the current research on residential segregation in Nordic cities and then to discuss contemporary social sustainability-based approaches to counteract segregation. From this overview, it is clear that urban residential segregation is a pressing problem in each Nordic country, even though it has been studied to a lesser extent in Finland and Iceland. Sweden is the country where urban residential segregation has received the most scholarly attention. Although this report can only provide a limited overview, it opens up for further research case studies of certain policies or measures, and more detailed data collection and comparison. The current state is a starting point for further discussions, investigations, and evaluations in the specific national, regional, or local contexts in the Nordic countries.

There are many similarities in the ways that researchers discuss and understand urban and residential segregation in the Nordic metropolitan cities, even though there are differences in scale, demographic make-up, and morphology. Stockholm, Copenhagen, and Oslo show the most extreme patterns of ethnic and socio-economic segregation, while Helsinki and Reykjavik show less extreme patterns. There are also interesting differences regarding housing policy, public discourse, and post-war historical development that might make it difficult to draw too many firm conclusions about a common Nordic policy for integration and social sustainability.

In this overview, the focus has been on segregation as measured by differences in employment, income, and national background. It is obvious that the Nordic capitals are segregated when looking at the distribution of these groups on the district level, because parts of the city are dominated by specific income levels,

employment levels, and shares of people with a foreign background. It should be noted that these statistics only provide a recent snapshot of the situation; on their own, they say little about trends over time. However, evidence from the literature indicates that segregation and low socio-economic mobility are becoming increasingly severe problems in the Nordic states. Poor socio-economic mobility is a central aspect of segregation; low mobility in the labour market and the housing market is an indication of lock-in effects. In addition, as the statistics show, the fact that ethnic and socio-economic segregation are interrelated is an indication that foreign background matters in all Nordic capitals. When visualized in maps, the statistics highlight the centre-periphery pattern that appears in all Nordic capitals except Copenhagen. However, what the statistics do not show is that segregated living patterns or even negative stigmatizations of certain places in cities do not always mean poor housing or poor living conditions.

In the literature review, we organized the presentation of research into three broad themes: housing, urban planning, and discrimination. A number of key conclusions can be drawn from these three themes in relation to all of the Nordic capital cities. It is clear that the division that follows tenure forms is a central factor. Whether a city has social housing or not is of significance, as well as the general status of rental housing. In general, there is a shortage of affordable housing in the Nordic capitals, and this situation may deteriorate further if housing policy does not adjust to the present population growth. The accessibility (or rather inaccessibility) of services, public transport, and employment matters in how segregation is made visible. If certain groups are directed to certain areas of an urban region, and these areas are characterized by a lack of accessibility or only a single tenure form, segregation may be emphasized in the sense of hindering mobility. Finally, research indicates that an individual's status in society is significant. If you are a recent immigrant to a Nordic country lacking social networks, have only recently joined the housing queue, and are without the economic capital to buy your own home, there is a high risk that you will suffer from the effects of segregation. Added to this, there are clear tendencies of discrimination in Nordic housing markets.

7.2 The potential of social sustainability

We contend that social sustainability can be reclaimed as a broad, powerful concept that can properly encompass the range of strategies and changes needed to counteract urban segregation. Although social sustainability risks becoming a nebulous buzzword or a rhetorical device that downplays gentrification, it still has the potential to be a concept of central importance in urban and regional development. As we see it, social sustainability can promote debate of aspects of spatial development such as segregation, housing tenure forms, spatial justice, and citizen participation.

The research overview and the social sustainability approaches presented indicate that the problem of segregation in cities is understood and dealt with in a variety of ways, each of them defining the problem to be solved differently.

- Area-based initiatives focus on image and the narrative of place; these initiatives see the solution to segregation within local service provision, the quality of the built environment, and everyday life. Within these initiatives, the city is not a coherent, interconnected form; it is broken into discrete units with some areas that are successful or sustainable and others that are problematic or unsustainable. Segregated and/or relatively poor areas are thus neighbourhoods lagging behind that must be brought up to date with the rest of the city.
- Commissions and think-tanks are less associated with ground-level projects but instead work to spread knowledge, to engage key persons, to facilitate public participation, and to influence new proposals. Government-affiliated commissions frequently frame anti-segregation measures in broad reform agendas, taking a positive, more marketable angle on the issue to inspire co-operation.
- Social mix policies see the separation of socio-economic groups as the most direct challenge to social sustainability. From this perspective, it is beneficial for the city as a whole if different social groups have the possibility to interact in everyday life. Thus, these policies aim to create neighbourhoods that are diverse economically and socially, usually by mixing housing tenure forms in residential areas.
- Mobile governance and digital platforms see citizen participation and local democracy as the best mechanisms for involving residents in planning. Setting up initiatives to empower

citizens in particular communities is seen as facilitating social sustainability and counteracting segregation tendencies.

7.3 What can urban planning do?

What tools can planners use to counteract inequality and urban segregation in a responsible way? Unfortunately, there are no simple or intrinsically effective policies that planners can utilize to promote social sustainability and to mitigate urban segregation. Cities and their respective societies are dynamic and complex, requiring attentive governance and flexible decision-making. Moreover, there is a need not just to deconcentrate poverty with social mix policies or gentrification but also to prevent poverty from occurring in the first place. Clearly, these are aspects of segregation that must be considered as being outside the scope of only local urban planning. For example, although labour market access and racial/ethnic discrimination are significant problems in the Nordic countries, it is difficult for local planning to influence structural change in this regard. Although we may see the effects of discrimination manifest as localized planning problems, this does not mean that planning alone can counteract ethnic and racial prejudice or reduce income differences. Even so, planners and other public actors can facilitate a more open and direct discussion on these issues, working to counter harmful stereotypes about immigrants and minorities.

The most critical mechanism comes in the form of housing policy. An immediate, broadly recognized concern in all of the Nordic capital cities is the shortage of affordable rental housing. This shortage creates difficulties for immigrants and low-income groups in accessing housing, which in turn facilitates concentrations of overcrowding and relative poverty that are extremely difficult to counteract at the neighbourhood level. A stronger focus on planning for these groups instead of planning around them could have a positive impact on segregation and homelessness. In general, a more deregulated housing market also opens up more room for discrimination, as can be seen in Copenhagen, Oslo, and Stockholm in particular. At present, however, housing policy trends in the Nordic states firmly promote homeownership and market liberalization, meaning that a move towards affordable (possibly subsidized) rental apartment construction could prove to be politically contentious.

In our discussion on policy responses, as well as in the research overview, area-based initiatives were somewhat problematized. It should be reiterated that our discussion does not rule out area-based measures

for counteracting segregation but rather stresses the importance of seeing the ‘problem areas’ as units connected with (and dependent on) the rest of a city. Although area-based approaches can have positive local effects on the local living environment, they are only marginally effective in actually counteracting segregation. Even if problematic effects of (for example) gentrification are avoided, it is rare for area-based approaches to affect residential movement and employment patterns at a citywide scale. Segregation is thus a problem for the city as a whole and should be addressed on both an area and a city level. In addition, segregation is a consequence of not only the ‘problem areas’ but also of the decisions, transactions, and prejudices of all Nordic residents, not only immigrants or deprived groups but also long-term residents and individuals in wealthy areas.

Research has also shown that many common social sustainability policies and planning approaches risk exacerbating segregation instead of mitigating it. This is partly due to the conceptual confusion surrounding what social sustainability actually implies or entails, and the term has come to be used both as a tool to solve social problems in existing urban areas and as a justification for developing attractive (and often exclusive) new urban areas. These area-based approaches, combined with housing liberalization and pressing housing shortages (most notably in Stockholm), run the risk of promoting gentrification and increasing market segmentation.

Manzi (2010, 43) notes that gentrification involves “a combination of middle-class colonization and working-class displacement”. In other words, by upgrading areas and making them more desirable and expensive, the risk is that low-income groups may be displaced. Moreover, the more wealthy and stable a population is, the more “socially sustainable” it is likely to be, and this approach then defines problem or target areas that need to be rectified. Gentrification of an area might then be the logical measure. Alwall et al (2012) point out another risk; namely, that social sustainability in action can veer towards events and performances of differences rather than towards measures that confront more consequential social justice issues and inequalities. They term this the “performance of conviviality” (Alwall et al 2012, 19), as token celebrations of difference tend to hide the structural processes that contribute to segregation.

To conclude, we want to emphasize the following points.

- Nordic capital cities have remarkably similar patterns of segregation and face shared problems

related to integration and labour market/housing segmentation. Sharing lessons and successful policies between Sweden, Denmark, Iceland, Norway, and Finland could be beneficial for all involved.

- A lack of affordable housing is one of the main obstacles to residential integration in Nordic cities, as well as the lack of different options regarding tenure forms. Finland stands out in this regard, with its explicit social mix policy and the more diverse housing policy.
- Although planning cannot directly reduce socio-economic differences, planning measures can contribute to ensuring some kind of 'spatial justice' in cities in the form of equal access to basic services
- It is critical to ensure that planning for social sustainability does not become planning for gentrification.
- To make deprived areas of the Nordic capitals more prosperous and sustainable, it is most effective
- to act at the city (or city-regional) level, considering the labour market, housing stock, and demographics as they relate to the region as a whole. It is not sufficient to treat municipalities or neighbourhoods as isolated blocks for planning; it is important to see that the city as a whole is segregated.
- It is important to see that the actions of wealthy residents (particularly in the housing market) are as consequential for segregation, as are the actions of poor and/or minority residents.

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9. Appendix

Stockholm

District	Average personal income, yearly (SEK) (2012)*	Unemployment rate (2013)	Share of population with foreign background (2013)**
Rinkeby-Kista	228,200	7.4%	80.4%
Spånga-Tensta	293,400	6.3%	57.8%
Hässelby-Vällingby	307,600	4.5%	38.3%
Bromma	414,500	2.6%	19.2%
Kungsholmen	407,300	2.0%	19.2%
Norrmalm	435,700	2.1%	20.3%
Östermalm	442,100	2.1%	20.5%
Södermalm	364,600	2.5%	18.0%
Enskede-Årsta-Vantör	301,200	3.7%	34.4%
Skarpnäck	299,800	3.5%	27.4%
Farsta	288,100	3.9%	31.6%
Älvsjö	377,500	2.8%	21.7%
Hägersten-Liljeholmen	329,200	2.6%	22.2%
Skärholmen	229,300	6.4%	67.8%
Stockholm Municipality total	348,200	3.4%	30.7%

* Data are for those aged 20–64 years. Income is calculated before tax.

** Includes those born abroad and those born to two foreign parents.

Copenhagen

District	Average personal income, yearly (DKK) (2013)*	Unemployment rate (2012)	Share of population with foreign background (2015)
Bydel - 1. Indre by	331,000	4.3%	17.1%
Bydel - 2. Østerbro	305,000	4.8%	17.4%
Bydel - 3. Nørrebro	233,000	6.9%	26.2%
Bydel - 4. Vesterbro/ Kongens Enghave	272,000	6.5%	22.1%
Bydel - 5. Valby	273,000	5.9%	22.1%
Bydel - 6. Vanløse	293,000	4.7%	15.7%
Bydel - 7. Brønshøj-Husum	261,000	6.8%	34.7%
Bydel - 8. Bispebjerg	231,000	7.5%	32.6%
Bydel - 9. Amager Øst	266,000	5.8%	20.0%
Bydel - 10. Amager Vest	284,000	5.4%	23.5%
Outside of division		22.2%	47.1%

* Income is calculated before tax.

Oslo

District	Median personal income, yearly (NOK) (2013)*	Registered unemployment rate (2013)	Share of population with foreign background (2013)
Bydel Gamle Oslo	375,000	4.5%	38.8%
Bydel Grünerløkka	383,000	3.6%	34.6%
Bydel Sagene	404,000	2.7%	25.1%
Bydel St. Hanshaugen	418,000	2.5%	26.7%
Bydel Frogner	547,000	2.7%	27.6%
Bydel Ullern	637,000	1.6%	17.6%
Bydel Vestre Aker	679,000	1.9%	17.0%
Bydel Nordre Aker	515,000	1.8%	17.2%
Bydel Bjerke	378,000	4.2%	42.1%
Bydel Grorud	341,000	4.8%	47.4%
Bydel Stovner	345,000	4.7%	52.8%
Bydel Alna	352,000	4.2%	51.1%
Bydel Østensjø	419,000	2.7%	23.8%
Bydel Nordstrand	519,000	2.0%	16.2%
Bydel Søndre Nordstrand	354,000	4.8%	52.2%
Sentrum	260,000**	4.5%	57.4%
Marka		1.8%	10.8%
No registered address		N/A	65.7%

*Income is calculated after tax.

**Sentrum, Marka, and no registered address data are grouped together.

Helsinki

District	Mean personal income, yearly (EUR) (2012)	Unemployment rate (2013)	Share of population with foreign background (2014)
101 Vironniemen peruspiiri	39,446	5.8%	8.0%
102 Ullanlinnan peruspiiri	43,926	6.6%	9.7%
103 Kampinmalmin peruspiiri	35,467	7.2%	10.8%
104 Taka-Töölön peruspiiri	36,222	6.3%	8.2%
105 Lauttasaaren peruspiiri	36,467	6.4%	8.0%
201 Reijolan peruspiiri	28,082	8.1%	9.5%
202 Munkkiniemen peruspiiri	37,690	6.5%	8.1%
203 Haagan peruspiiri	26,444	8.6%	11.3%
204 Pitäjänmäen peruspiiri	25,930	9.5%	12.5%
205 Kaarelan peruspiiri	23,129	10.5%	16.3%
301 Kallion peruspiiri	27,296	9.8%	9.4%
302 Alppiharjun peruspiiri	25,578	11.1%	9.8%
303 Vallilan peruspiiri	25,362	10.1%	8.7%
304 Pasilan peruspiiri	24,266	11.5%	14.3%
305 Vanhankaupungin peruspiiri	24,856	8.8%	8.4%
401 Maunulan peruspiiri	23,650	12.5%	11.2%
402 Länsi-Pakilan peruspiiri	36,220	5.9%	4.0%
403 Tuomarinkylän peruspiiri	32,822	5.6%	3.8%
404 Oulunkylän peruspiiri	27,845	8.7%	8.9%
405 Itä-Pakilan peruspiiri	35,297	6.6%	4.4%
501 Latokartanon peruspiiri	22,273	10.6%	15.6%
502 Pukinmäen peruspiiri	23,115	11.8%	16.0%
503 Malmin peruspiiri	24,695	10.7%	11.2%
504 Suutarilan peruspiiri	23,915	8.3%	9.0%
505 Puistolan peruspiiri	25,394	9.3%	10.5%
506 Jakomäen peruspiiri	17,289	18.4%	24.2%
601 Kulosaaren peruspiiri	44,921	7.0%	8.1%
602 Herttoniemen peruspiiri	26,016	12.6%	13.0%
603 Laajasalon peruspiiri	29,689	9.1%	9.1%
701 Vartiokylän peruspiiri	25,131	12.6%	15.4%
702 Myllypuron peruspiiri	21,880	12.9%	18.1%
703 Mellunkylän peruspiiri	19,910	15.1%	21.6%
704 Vuosaaren peruspiiri	22,724	13.3%	17.8%
801 Östersundomin peruspiiri	36,979	5.6%	5.3%

Reykjavík

District	Number of Immigrants (foreign-born) (2011)	Population (2011)	Proportion of Immigrants (foreign-born) (2011)
Total	14761	121822	12.1%
Gamli Vesturbærinn	1012	6215	16.3%
Austurbær	1564	8174	19.1%
Laugaráshverfi	726	5258	13.8%
Heimar - Vogar	354	3914	9.0%
Norðurmýri	1135	6718	16.9%
Hlíðar	556	4663	11.9%
Laugarnes	303	4703	6.4%
Vesturbær-syðri	1131	10697	10.6%
Háaleiti	497	3004	16.5%
Bústaðahverfi	629	7251	8.7%
Fossvogur	194	4138	4.7%
Breiðholt - Bakkar	746	3898	19.1%
Seljahverfi	1096	8245	13.3%
Ártúnsholt	107	1531	7.0%
Árbær	562	4197	13.4%
Selás	179	2589	6.9%
Norðlingaholt	110	2633	4.2%
Efra - Breiðholt	2324	8891	26.1%
Hamrahverfi	132	2268	5.8%
Foldahverfi	202	3187	6.3%
Húsahverfi	123	1986	6.2%
Rimahverfi	281	4154	6.8%
Engjahverfi	152	1977	7.7%
Víkurhverfi	73	1445	5.1%
Borgarhverfi	69	1571	4.4%
Staðahverfi	28	1228	2.3%
Grafarholt-vestra	73	2523	2.9%
Grafarholt-eystra	217	2924	7.4%
Úlfarsárdalur	36	744	4.8%
Grundarhverfi	41	532	7.7%
Kjalarnes	123	341	36.1%
Unplaced in Reykjavík	55	412	13.3%

ISBN 978-91-87295-39-3
ISSN 1403-2511

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