Producing and Reproducing Ethnic Residential Segregation. Is "white flight" enough to capture the mobility motives of natives?

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Abstract

Residential segregation is currently perceived as one of the main urban problems in the Western World. In a comparative research project in four Nordic welfare states, we look into this issue focusing on mobility in and out of (immigrant-dense) neighbourhoods and especially the role of natives. Natives are generally more resourceful than minorities and have thus better opportunities to fulfil their housing preferences. This makes natives the potentially most important actor in the production and reproduction of residential segregation patterns. Most existing research studying natives' mobility in relation to ethnic segregation do so based on white flight theory or similar approaches where the ethnic population composition of the neighbourhood is seen as the key issue. We argue such an approach is too simplistic since it ignores other aspects of housing and neighbourhoods that are likely to contribute to the mobility decision. Furthermore, it implicitly assumes that movers from certain types of neighbourhoods behave differently from other movers.

In this paper, we aim to explore the logic behind native Swedes' mobility decisions. Using a unique stratified survey in which we have selected natives moving from immigrant-dense and other types of neighbourhoods, we are able to look at two different groups of movers and compare their preferences and mobility motives. Do those moving from immigrant-dense neighbourhoods have similar mobility motives as those moving from other neighbourhoods? How important is the ethnic population composition of neighbourhoods in relation to other factors, such as dwelling characteristics, local service provision, relative location and visual beauty? Are there differences in housing and neighbourhood aspirations regarding the new destination among those moving from immigrant-dense neighbourhoods compared to those moving from other neighbourhoods? This study represents a first step in a comparative Nordic analysis and focuses on movers within the Stockholm region.

1. Introduction

Ethnic residential segregation is a hot topic in Sweden, in media, among practitioners as well as in the scholarly debate. Immigrant-dense neighbourhoods are often heard of in media (generally in combination with negative news), they are associated with a number of social problems, and they are subject to various policy initiatives. The causes behind ethnic segregation are also discussed, especially among scholars. Whereas the main explanations previously were centred on immigrants' mobility decisions and "wish to live clustered", focus in the Swedish debate has now shifted towards the behaviour and attitudes of native Swedes.

The U.S. has seen much more extensive research around the role of the majority population in the production and reproduction of ethnic (racial) residential segregation. One of the most popular theories in the U.S. debate is "white flight", a theory that roughly suggests that white individuals, or natives in the European context, begin to leave neighbourhoods that have exceeded a critical threshold regarding the share of ethnic minority inhabitants. We know from previous studies that native Swedes tend to be (slightly)overrepresented among out-movers from immigrant-dense neighbourhoods but since most previous studies of the mobility patterns of natives in relation to immigrant-dense neighbourhoods are based on register data, it is unclear to what extent such patterns are related to attitudes towards immigrants or whether the are other alternative explanations.

Some descriptive results from the survey on which this study is based suggest that there indeed is a correlation between natives' mobility behaviour and their attitudes towards immigrant neighbours; as many as 28.5 per cent of the native Swedish movers from Stockholm's most immigrant-dense neighbourhoods claimed that "too many immigrants" was an important reason to relocate to another neighbourhood. It is however too simplistic to assume that the above reported attitudes confirm the white flight theory, if understood as an "escape" from immigrants as such. There may be other associated explanations as well that are as, or even more, important to the movers. These could be explanations that the movers relate to the (high) levels of immigrants in their neighbourhoods, such as relative poverty or high levels of unemployment, poor school quality, falling house prices or neighbourhood stigmatization. There may also be other explanations that have nothing to do with the share of immigrants in the neighbourhoods, such as the lack of preferred type of housing, undesired architecture, or a poor location in relation to e.g. work. Furthermore, it is possible that the reported negative attitudes towards immigrants are not unique for movers from immigrant-dense neighbourhoods. If movers from neighbourhoods with relatively low shares of immigrants report similar attitudes, the white flight argument gets much more complicated.

In this study, we explore the relative importance of attitudes towards immigrants for natives' decision to leave immigrant-dense neighbourhoods in the Stockholm region, in relation to attitudes of native movers who leave neighbourhoods with lower shares of immigrants. Being a study of the reasons behind natives' mobility decisions that is based on survey data, this study provides a useful complement to previous studies of native out-mobility that rather look at general mobility patterns and are based on register data. The study is part of a comparative Nordic project also involving

Norway and Finland[1]. The survey was carried out simultaneously in the Stockholm, Oslo and Helsinki regions but in this study, we focus on the findings from the Swedish survey.

2. Previous research

Urban residential mobility is higly selective (Hedman et al, 2011). Previous research has shown that households tend to sort into neighbourhoods where the population composition is similar to their own characteristics in terms of income, employment and family status, and ethnicity (Clark 1991; Harris, 1999; Quillian, 2002; Hedman et al., 2011). Sorting behaviour can have many different explanations, often categorized into preferences, resources and constraints (e.g. van Kempen and Özüekren, 1998). However, since natives generally have more resources and fewer constraints than the immigrant population, ethnic sorting in Sweden is increasingly explained by the choices and preferences of natives. U.S. based research has indicated that native residents' reluctance to live in ethnically or racially mixed neighbourhoods is one of the key factors contributing to ethnic (and racial) residential segregation in urban areas (e.g. Massey & Denton 1993; Cutler et al, 1999; Krysan & Farley 2002; Pais et al 2009). Similarly, European scholars have also documented how selective migration patterns of natives has led to net loss of natives from the "immigrant-dense" or other distressed neighbourhoods in Europe (e.g. Andersson & Bråmå 2004; Bråmå 2006; Bolt et al, 2008; Vilkama 2011).

There is plenty of evidence showing that the majority population tend to prefer neighbourhoods where they dominate. For example, Clark (1991) reports that while whites preferred the ethnic mix in their neighbourhood to be at least 80% white, blacks seemed to prefer a 50/50 mix. Schelling (1969; 1971) showed in his seminal work how such differences in preferences for ethnic mix could ultimately lead to highly segregated neighbourhoods, through adjusting moves. Whereas Schelling's model explained changes in a linear manner, there are several studies arguing that changes in the ethnic composition of neighbourhoods are non-linear and that the majority population only begins to move out in numbers, or avoid moving in, after a certain threshold in terms of share minority population has been reached (Card et al, 2008; Cutler et al, 1999; Dahlberg et al, 2012) Dahlberg et al (2012) have also found that neighbourhoods beyond the tipping point not only experience a negative population growth of the native population but also tend to experience a negative income growth and a worse development in terms of school grades.

A net loss of the majority population in a neighbourhood, in absolute or relative terms, is generally explained with two different types of mobility behaviour. The majority may increasingly move out of neighbourhoods where the share of minorities is perceived as too high, known as the "white flight" theory. Alternatively, the majority population may avoid moving into neighbourhoods where the share of minorities exceeds a certain threshold ("white avoidance"). Both theories have been out to test and confirmed in the U.S. There is also European evidence that minority presence in neighbourhoods increases native residents' willingness to leave the neighbourhood (van Ham &

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[1] The study is part of the NODES ("Nordic welfare states and the dynamics and effects of ethnic residential segregation") project, that involves research teams in Sweden, Norway, Finland and Denmark. However, the Danish team does not participate in sub-project 3 which the survey is part of, why it was carried out only in the other three countries. The project is being sponsored by NORFACE.

Feijten 2008). In Sweden, Bråmå (2006) was among the first to analyse the mobility patterns of native Swedes in relation to immigrant-dense neighbourhoods. She concludes that selective in-migration (particularly "avoidance"), and not selective out-migration ("flight"), is the main driver behind the production and reproduction of immigrant concentrations in contemporary Sweden (cf. Andersson, 2012). Similar results have been found in Oslo (Sundell 2008) and Helsinki (Vilkama 2010; 2011), although they both argue that also flight is a relevant concept.

The ethnic composition of neighbourhoods affect mobility flows both directly and indirectly (Ellen, 2000). Firstly, the ethnic composition of neighbourhoods may affect migration decisions directly through households' deliberate choices to move out from, or to avoid, ethnically mixed neighbourhoods. This may be an outcome of openly racist attitudes and stereotypes among and between ethnic groups (see e.g. Farley et al, 1994; Bobo & Zubrinsky 1996; Krysan 2002), or a result of previous negative experiences of living in ethnically mixed neighbourhoods. Secondly, the ethnic composition of neighbourhoods may influence neighbourhood choices more indirectly through households' perceptions of neighbourhood quality, and their fears about the negative influencing that minorities would bring into their neighbourhood (see e.g. Ellen 2000; Harris 2001; Krysan 2002). For example, a high share of minorities have been associated with falling property prices (Harris, 2001), which in turn suggest that home owners are less tolerant to increases in the proportion of ethnic minorities than renters (Bråmå, 2006). Alternatively, movers may associate immigrant-dense neighbourhoods with high levels of unemployment, poor quality of the local school, or high crime levels. Many Swedish immigrant-dense neighbourhoods also struggle with a bad reputation, something that may affect moving patterns (see Permentier et al, 2009).

At the same time, we know that moving decisions are complex and that there may be any other factors that affect out-mobility rates of natives and immigrants from immigrant-dense neighbourhoods. The housing composition is one such factor. In Sweden, many immigrant-dense neighbourhoods are dominated by rental dwellings and multi-family housing. Households wishing to move into the home ownership segment thus need to change neighbourhood. Although the conclusions may be debatable, some scholars have found ethnic differences in housing aspirations where natives/whites express a stronger preference for home ownership (Robinson, 1981; Owuso, 1998; Haan, 2005). Furthermore, U.S. based studies have for example found that the out-migration of whites is higher when there is an abundance of new vacant dwellings in the region (e.g. South & Crowder 1998; Crowder 2000).

Previous Swedish studies of white flight and white avoidance have looked at general mobility patterns rather than attitudes and reasons behind mobility decisions of natives. When Bråmå (2006) concludes that white flight is a less relevant concept than white avoidance to describe the moving patterns of native Swedes, she does so based on general levels of mobility of natives and immigrants. She argues that flight is less relevant since immigrants tend to leave immigrant-dense neighbourhoods to roughly the extent as native Swedes, while there are large differences in in-mobility patterns. We do however argue that the "white flight" concept is based on more than mere mobility patterns. Even if natives and immigrants move out to a similar extent, there may be differences in motives. We argue that natives' out-mobility from immigrant-dense neighbourhoods that is due to the (perceived) high share of minorities is to be interpreted as "white flight".

3. Data

The main source of data for this paper is a survey carried out simultaneously during fall 2011 in the three capital regions of Helsinki, Oslo and Stockholm. The surveys targeted native-born residents that were selected on the basis of fulfilling some basic criteria: they should be born in Finland, Norway or Sweden respectively, in ages 25 to 50 in 2008, live in the capital region from 2008 until the sample was drawn (summer 2011), and live in the same neighbourhood in 2008 and 2009. From this population, we draw our samples from four sub-populations. These four strata were defined on the basis on whether the person was a "mover" (moved neighbourhood between 2009 and 2010) or a "stayer" (stayed in the same neighbourhood 2008 to the time of the survey) and whether the neighbourhood in which the person lived 2008-2009 belonged to the upper decile in terms of percentage Non-Nordic born in neighbourhood (we label these *decile 10 neighbourhoods*) or to another decile (1 to 9, labelled *other neighbourhoods* hereafter). The upper decile in Stockholm starts at 24% Non-nordic residents. Mean for all respondents is 13.7%. Mean for Stockholm county neighbourhoods in 2008 was 13.8% (Andersson, 2012). Neighbourhoods with few residents (less than 100 in Stockholm) were excluded from the study. Movers were however allowed to have moved into such small neighbourhoods but no one resided there in 2008-09.

With help from the respective Statistical bureau in each country, we selected 750 persons from each stratum who got the survey, giving a total of 3,000 respondents. When the questionnaires were sent out it transpired that a few individuals in all three cities were not actually meeting the basic criteria of being part of a sub-population; they could have died, left the region or left the country. This "over-coverage" reduces some of the samples somewhat, see table 1. Response rates varied slightly between the four strata but we find them both to be acceptable. We have also a very good picture of the non-responses and consequently use weights provided by the statistical authorities in respective country to account for a potentially biased sample. For this particular study, we only use data for the two mover categories and for stayers in decile 10. Thus, the movers in study have all lived in the same neighbourhood for two years, 2008 and 2009, and have then moved to another neighbourhood but within the capital region. 50% moved from a decile 10 neighbourhood, from here on referred to as *decile 10 movers*, and 50% had moved from other neighbourhoods, labelled *other movers*. Stayers in decile 10 have lived in the same decile 10 neighbourhood from 2008 until the survey was sent out. They are labelled *decile 10 stayers*. This study is based on the Stockholm survey (why table 1 only refers to Stockholm) but we will also make a few short references to results from the other two countries.

Table 1. Sub-populations, sample size and response rates for the Stockholm survey.

	Population	Original sample	Net sample	Response rate (%)
Decile 10 movers	3460	750	745	43.1
Other movers	37794	750	746	47.7
Decile 10 stayers	24826	750	748	39.8
Other stayers	351158	750	746	45.9

We used two different survey sheets, one for movers and one for stayers. Most questions were overlapping but there some questions that also were unique for each group. For example, the

movers were asked about the reasons behind their move. The questions aimed at collecting information about a range of issues concerning housing and neighbourhood conditions and the respondent's attitudes towards, and behaviour in relation to, social and ethnic mix, and ethnic residential segregation in schools and in neighbourhoods. In this particular study, we are especially interested in questions addressing reasons behind moves, but also in more general attitudes towards immigrant neighbours. More explicitly, some of the questions we analyse ask respondents to what extent on a scale 1-5 they agree with a number of statements of which some relate to ethnic mix, and to what extent on a scale 1-5 they found a number of statement to be important for their decision to leave their former neighbourhood. An example of the first type of question is "I prefer an ethnically mixed neighbourhood". An example of the second type of question is "there were too many immigrants in my former neighbourhood". We acknowledge that some of these questions/statements may be perceived as provoking and that respondents may have asked what they thought were politically correct. If this is the case, we would however underestimate to what extent a high share of immigrants mattered for natives' decision to move out. In general, we do however judge that the quality of the responses is high and that the survey is a reliable source for analysing the issues we have identified as important for the survey.

In addition to the data we gathered from the survey, we have also added register data to the respondent files including each respondent's age, gender, income and civil status. We also have the specific neighbourhood codes for 2008 to 2011 which make it possible to generate and add other neighbourhood characteristics if needed from register data

4. Results

From previous studies, we know that native Swedes are (slightly) overrepresented among out-movers from the most immigrant-dense neighbourhoods, especially when looking at movers who remain in the region (Andersson, 2012). In this study, we aim to explore the attitudes of these native out-movers and what they themselves claim to be the main reasons behind the moving decisions. Is the high share of immigrants in their former neighbourhoods a push factor, as suggested by the white flight theory, or are there other reasons why natives decide to leave immigrant-dense areas?

Differences between movers from decile 10 and stayers in decile 10

We begin the analysis with looking into who the native out-movers are, and if and how they are different from stayers. We know from previous research that there are differences in terms of socio-economic status, where the out-movers generally have more resources compared to the stayers (Bråmå, 2006). But are there also differences in attitudes? Our results suggest that there are, but that these are relatively small and quite surprising (see Figure 1). We find that movers were slightly more *positive* towards ethnic mix than stayers. 63% agreed with the statement "I prefer an ethnically mixed neighbourhood", compared to 60% of the stayers. The movers were also more likely to agree with the statement that they did not care about what type of neighbours they have, and were less concerned with a potentially bad neighbourhood's reputation. Stayers were more likely to claim that there were certain groups they preferred to avoid. These results seem to suggest that those who left decile 10 neighbourhoods on average are slightly *less* concerned about a high share of immigrants, neighbours with social problems, and a bad reputation than the stayers. Movers were more likely to

prefer home ownership, to think that public rentals have a bad reputation, and to prefer a homogenous income level in the neighbourhood, suggesting that their moves may leave a segment or low-income neighbours rather than a high share of immigrants.

Figure 1. Share of respondents (stayers in/movers from decile 10 neighbourhoods) who *agree* ("completely agree" or "agree to some extent") with the following statements. Values in per cent. *Table only shows results where there is stastically significant difference between the two strata.*
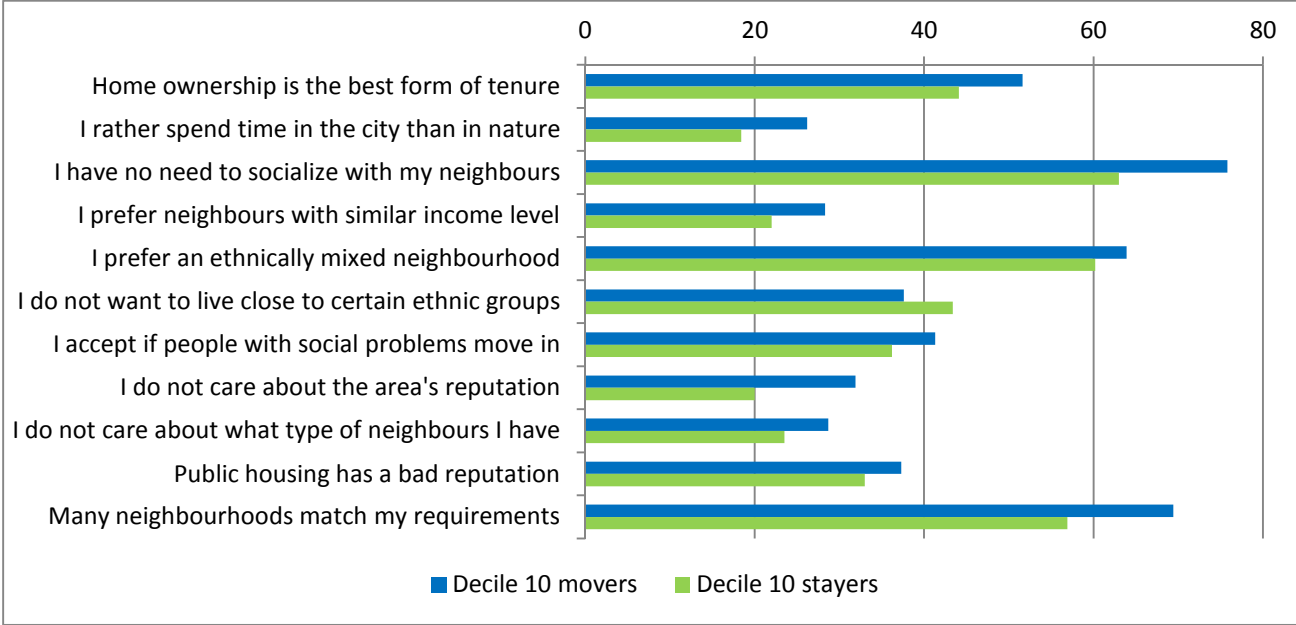
However, when we run a logistic regression to explore to what extent individual answers to the above statements explain who will stay in or leave a decile 10 neighbourhood, only three statements come out statistically significant (Table 2). Movers are more likely to claim that they do not care about their neighbourhood's reputation, that they do not have any need to contact with neighbours, and that there are many areas in which they could see themselves living. Results does consequently *not* provide any support for the idea that those who are most troubled by a high share of immigrants are the ones who also leave immigrant-dense neighbourhoods. In light of previous research on how movers differ from stayers, it seem more likely that all inhabitants in the most immigrant-dense neighbourhoods have similar attitudes towards a range of factors and that those who decide to leave these areas are those who have the (financial) possibilities to do so.

Table 2. Logistic regression analysing differences in attitudes between stayers in decile 10 and movers from decile 10.

Dependent variable = stayer in decile 10 neighbourhood (reference category) or mover from decile 10 neighbourhood.

	Odds Ratio	Sign.
Home ownership is the best form of tenure	1.280	
Access to services is important	0.651	
I rather spend time in the city than in nature	1.336	
I have no need to socialize with my neighbours	1.741	**
I prefer neighbours with similar income level	1.384	
I prefer an ethnically mixed neighbourhood	0.895	
I do not want to live close to certain ethnic groups	0.725	
I accept if people with social problems move in	1.276	
I do not care about the area's reputation	1.810	
I do not care about what type of neighbours I have	1.269	
Public housing has a bad reputation	1.225	**
Many neighbourhoods match my requirements	1.893	**
Intercept	0.721	
Pseudo R-square (Nagelkerke)	0.076	
* = p < 0.05, ** = p < 0.01, *** = p < 0.001		

Differences between movers from decile 10 and movers from other areas

Another angle to the discussion of white flight and its relation to migration motives is to analyse whether the attitudes towards immigrants and reasons for moving out differ between those who9 leave the most immigrant-dense neighbourhoods and those who move our from other type of neighbourhoods. Are they claiming similar reasons behind their moves, or are the movers from decile 10 different with respect to their mobility motives?

We begin this analysis by looking at the same general statements as in Table 2 but this time comparing movers from decile 10 to other movers. Here we only report the results for the alternatives that are related to ethnic mix and neighbourhood reputation (Table 3). We find that there is a small but statistically significant difference between the two strata in attitudes towards ethnic mix, where movers from decile 10 are slightly less positive. A clear majority in both strata do however report a positive attitude towards ethnic mix. There is however no significant difference regarding whether there are certain ethnic groups the movers do not want to live close to. Neighbourhood reputation is still however something the decile 10 movers seem to care little about, which is somewhat surprising given that the neighbourhoods they leave behind are neighbourhoods that are more likely to have a bad reputation.

Table 3. General attitudes towards ethnic mix and area reputation (values in %)

		Agree	No opinion	Disagree	Total
I prefer an ethnically mixed neighbourhood	dec 10 movers	63,94	17,75	18,31	100
	other movers	69,11	16,61	14,28	100
I do not want to live close to certain ethnic groups	dec 10 movers	37,59	17,95	44,46	100
	other movers	37,61	19,35	43,04	100
I do not care about the area's reputation	dec 10 movers	31,86	10,00	58,15	100
	other movers	16,70	7,84	75,47	100

When asked about the specific neighbourhood the movers just left, there are however clear differences in attitudes and reasons for moving between movers from decile 10 and other movers. We first asked the movers whether they liked living in their former neighbourhood. Whereas the other movers were happy with their former neighbourhood on average - almost 60 % of respondents claimed they liked living there - only one fifth of the decile 10 movers liked their former neighbourhood. Almost as many claimed they did NOT like the neighbourhood, while a majority thought it was "OK" (Table 4).

**Table 4. Attitudes towards the former neighbourhood (values in %)**

Q: Did you like living in your former neighbourhood?

	Yes, very much	It was OK	No, not at all	Total
dec 10 movers	19,24	64,12	16,64	100
other movers	59,69	34,05	6,26	100

We also asked our respondents about the main causes behind their decision to move. First we asked whether a number of factors affected their decision to change dwelling. These included family related motives such as leaving parental home, moving in with a partner or getting divorced, reasons related to the dwelling itself, such as cost, size, standard and tenure, reasons related to distance to work/school or friends/family, and finally that the decision to change dwelling was related to a wish to change neighbourhood. Although the five most common answers are the same for decile 10 movers and other movers, there is variation in the internal ordering of these (Figure 2). Among decile 10 movers, a wish to leave the neighbourhood was the most common reason behind the decision to change dwelling. Over 40 % of respondents within this stratum claimed this to be the case, compared to only 15 % among other movers, and there is a clear correlation between being unhappy with the former neighbourhood and leave because of the neighbourhood. Thus, we can conclude that the movers leaving decile 10 neighbourhoods were on average more unhappy with their former areas compared to other movers and that this had a strong influence on their decision to leave, which supports the idea of a flight behaviour.

Figure 2. The five most common reasons for leaving the former *dwelling*

Q: Why did you leave your former dwelling?
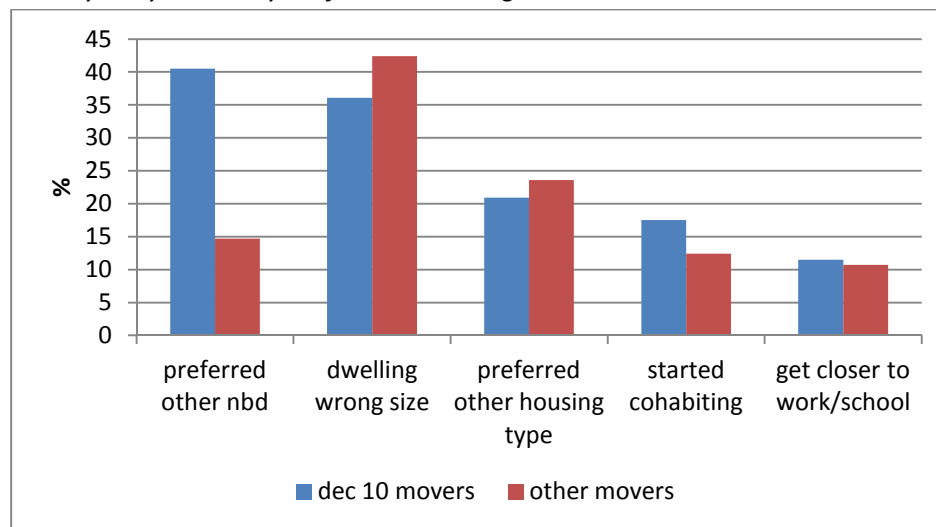
The question then remains whether the wish to leave the former neighbourhood is due to a high share of immigrants, which is the basic argument in the white flight theory, or whether there are other, more prominent reasons. To understand the moving decisions of decile 10 and other movers respectively, respondents were asked to state how important a number of statements regarding their former neighbourhood were for their decision to leave, ranging from "not important at all" (1) to "very important" (5). In the analysis, we have grouped the answers "very important" and "important" together. Results are reported in Figure 3.

When analysing the responses, we find that for some alternatives there are no statistically significant differences between the two groups of movers; lack of green spaces, poor public transport, poor recreation facilities, and the fact that did not know anyone. In addition, relatively similar shares claimed long distance to job or school or poor commercial services to be important reasons behind their decision to change neighbourhood. However, while some of the above reasons were ranked relatively high among other movers, they were all ranked low among decile 10 movers.

More interesting are however the alternatives where we find substantial and statistically significant differences between the two strata, of which most also were ranked among the highest among decile 10 movers. The alternative that the largest share of decile 10 movers found important, and also the alternative where we find the largest differences between decile 10 and other movers, was "there were too many social problems in my former neighbourhood". Over 40 % of the decile 10 movers claimed this reason to be important for their decision to leave their former neighbourhood. Other alternatives that large shares of decile 10 movers, but low shares of other movers, found important, "I did not feel safe in my former neighbourhood", "the neighbourhood was not enough tidy or properly maintained", "the neighbourhood had a bad reputation", and "I did not like the architecture or general look of my former neighbourhood". Results thus reveal that there are certain factors related to social problems, feelings of safety, and the general look of the neighbourhood that movers from decile 10 neighbourhoods were unhappy with and led them to leave but did not affect the decisions of other movers to any large extent. There are also large differences in the attitudes towards immigrant neighbours. It is almost tautological that only a low share of other movers found "there were too many immigrants in my former neighbourhood" or "there were too many immigrant

children in the local school" to be important reasons behind their move since the neighbourhoods they left by definition had a low share of immigrants. However, given the potential sensitivity of the question, a surprisingly large share of decile 10 movers – 28.5% – claim that too many immigrants in their former neighbourhood was an important reason behind their decision to leave. A lower but still substantial share, 19%, claimed that too many immigrant children in the local school were an important factor for them. Although there are other alternatives the were more important to the decile 10 movers, "too many immigrants" was still more important than factors related to green spaces, public transports or commercial services.

Figure 3. Percentage of respondents stating the reason to leave the *neighbourhood* was important (answer "important" or "very important") (Values in per cent)
Q: How important were the following reasons for your decision to leave your former neighbourhood?
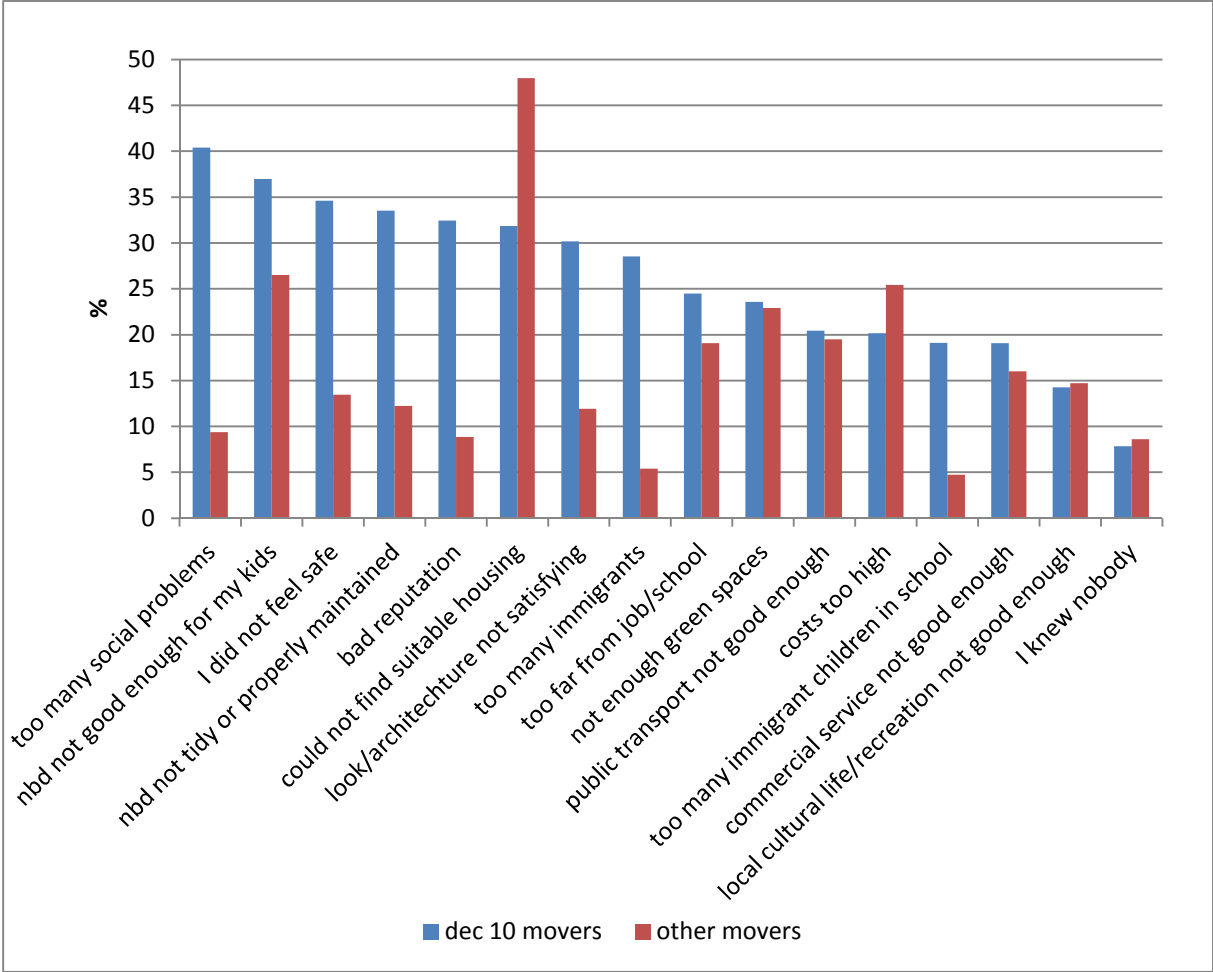
The large share of decile 10 movers claiming that the high share of immigrant neighbours was an important reason to leave provides some tentative support for white flight theory. However, as reported in figure 2, there were other reasons that the movers found to be more important and it is also possible that there are other differences between the two strata of movers that may explain differences in attitudes. In order to control for such differences, we estimate a logistic regression. The dependent variable in the model is type of mover – decile 10 mover vs. other mover (reference category). The aim is thus to explore differences in attitudes between the two strata, with special

focus ion attitudes towards immigrant neighbours. The statement variables are coded as per above, i.e. recoded into dummy variables with the two categories "important" (answer "important" or "very important") and "other answer" ("not very important", "unimportant" or "cannot state"). "Other answer" is used as reference category for the statement variables in the models.

The first model (Model I) in Table 5 only includes attitudes towards immigrants. Results show that decile 10 movers were considerably more likely than other movers to state that "too many immigrants" in their former neighbourhood was an important or very important reason behind their decision to move out. When we control for respondent's statements in relation to the other statements (Model II), we find that the difference between the two strata in relation to the "too many immigrant" statement is substantially reduced, but there is still an odds of 3.7 a person who claim that this was an important reason moved out from a decile 10 neighbourhood. There is however no significant difference between the two types of movers in terms of moving because "there were too many immigrant children in the local school". There are in fact few other variables that are statistically significant in the model. Except the immigrant issue, we only find significant results for "I could not find a suitable dwelling in my former neighbourhood" which was a more likely answer among other mover, and for "there were too many social problems in my former neighbourhood", which was more common among decile 10 movers.

In Model III, Table 5, we add additional control variables on the individual level, such as the respondent's age, sex, household composition, whether he or she work full time, household disposable income and whether Swedish is the main language at home. These variables are meant to make up for differences between the two strata that can explain differences in attitudes, although they may not be so interesting on their own. Only three of them are significant and act as expected; movers from decile 10 neighbourhoods are less likely to work full time, have lower household income, and are less likely to have Swedish as the main language at home. What is interesting is however that although the odds ratio for moving because of "too many immigrants" is reduced when controlling for individual characteristics, movers from decile 10 neighbourhoods are still substantially and significantly more likely to state that this reason was important for their decision to leave their former neighbourhood. Social problems come out even stronger when controlling for individual characteristics.

Table 5. Logistic regression analysing differences between movers from decile 10 and other movers. *Dependent variable = mover from decile 10 neighbourhood or mover from other neighbourhood (reference category).*

	Model I		Model II		Model III	
	Odds Ratio	Sign	Odds Ratio	Sign	Odds Ratio	Sign
Statement variables[1]						
too many immigrants	7.006	***	3.754	**	2.986	**
too many social problems			4.097	**	4.402	**
nbd not good enough for my kids			.880		1.150	
I did not feel safe			.730		.748	
nbd not tidy or properly maintained			1.103		1.028	
bad reputation			1.462		1.669	
could not find suitable housing			.611	*	.655	
look/architechture not satisfying			1.589		1.605	
too far from job/school			1.316		1.173	
not enough green spaces			.834		.797	
public transport not good enough			.706		.805	
costs too high			.941		.827	
too many immigrant children in school			.651		.676	
commercial service not good enough			.788		.691	
local cultural life/recreation not good enough			.960		.907	
I knew nobody			.732		.527	
Individual/household characteristics						
age					1.001	
male (ref = female)					1.045	
couple (ref = single)					1.112	
have children age 0-6 (ref = no children age 0-6)					.690	
have children age 7-17 (ref = no children age 7-17)					1.103	
work full time (ref = not work full time)					.374	***
disposable household income (10 000 SEK)					.984	**
main language at home = Swedish (ref = other language)					.107	*
Intercept	.070	***	.075	***	2.620	
Pseudo R-squared (Nagelkerke)	.089		.164		0.212	

$* = p < 0.05, ** = p < 0.01, *** = p < 0.001$

[1]All statement variables are related to the question: How important were the following reasons for your decision to leave your
All statement variables are recoded into dummies with the alternatives "important" and "other answer" (not important or cann
Other answer is the reference category for all statement variables.

We have also tested whether there is a correlation between the percentage Non-Nordic residents in the former neighbourhood and having answered that "too many immigrants" was an important reason to leave (results not shown). We find such a correlation when including both strata of respondents, not surprisingly since there were significant differences in answers. No such relationships were however found when running the analysis separately for the two strata.

5. Discussion

According to the white flight theory, the majority population leaves a neighbourhood when it has exceeded a certain threshold regarding its share of minority inhabitants. Explanations for this behaviour is either racism or racial stereotypes, i.e. that the majority don't want to live among

minority neighbours, or that a high level of minority population in the neighbourhood is associated with other neighbourhood characteristics, such as falling house prices. White flight has been empirically proven to occur in the U.S. Previous Swedish research is however slightly inconclusive in regard to whether white flight exists also in Sweden. Scholars have agreed that native Swedes indeed tend to leave immigrant-dense neighbourhoods when their incomes increase, but several studies have found a similar behaviour among immigrants (e.g. Bråmå, 2006; Andersson, 2012). In this study, we approach the white flight phenomena from a slightly different angle compared to most previous Swedish research. Instead of measuring levels of out-mobility of natives and immigrants, we have focused on natives' attitudes towards ethnic mix and immigrant neighbours. More precisely, we look into whether the attitudes of movers from the most immigrant-dense areas differ from those of stayers, and also whether the reasons behind mobility decisions differ between those natives who leave the most immigrant-dense areas and those moving out of other types of neighbourhoods. We argue that almost regardless of levels of mobility, we can talk about white flight if native out-movers leave because the share of immigrants in their neighbourhood is perceived as "too high". If native movers instead "flee" a high level of unemployment, a boring architecture, a lack of green spaces, poor public transport, or simply move to get closer to kin, the white flight theory is misleading even if the number of movers is high.

We have analysed the attitudes of native residents and reasons behind moves using a survey carried out in Stockholm during fall 2011. The survey was stratified so that 50% of respondents were stayers (they had stayed in the same neighbourhood 2008 until the survey was carried out in 2011) and 50% were movers (they had stayed in the same neighbourhood 2008-2009 and relocated in 2010). Furthermore, 50% within each group lived in one of the most immigrant-dense areas, and 50% lived in another type of neighbourhood.

The analysis of attitudes of stayers in and movers from the most immigrant-dense neighbourhoods did not provide any support for the idea that movers fled the high share of immigrants while stayers were more tolerant. Results instead showed very small differences, with a majority of both strata reporting positive attitudes towards ethnically mixed neighbourhoods. If anything, the movers seemed more positive than the stayers towards ethnic mix, and they were also less concerned with social problems in the neighbourhood and the neighbourhood reputation. We interpret these results as if attitudes are fairly similar and that the likelihood of moving out is related to other factors.

Similarly, we find only small differences in general attitudes towards ethnically mixed neighbourhoods when comparing the movers from the immigrant-dense to movers from other types of neighbourhoods. There are however some important differences in relation to the reasons behind the move. Most important, it was considerably more likely for movers from decile 10 neighbourhoods to state that "too many immigrants" in their former neighbourhood was an important or very important reason behind their decision to move. This difference is statistically significant also when we control for a range of other statements related to the move, and for individual characteristics of respondents. It should of course be kept in mind that the movers from other neighbourhoods may have been unlikely to agree with this statement simply because they left neighbourhoods with few immigrants. If there were no immigrants in their former neighbourhood, this can tautologically not be a major concern or reason to leave. However, this does not explain away that as many as 28.5% of movers from decile 10 claimed that "too many immigrants" was an important or very important reason for why they left their former neighbourhood. We interpret this

as tentative support for the white flight theory; native movers who leave immigrant-dense neighbourhoods do so *because* they perceive the share immigrants in their neighbourhoods to be "too high".

It needs to be kept in mind, however, that there were other reasons that were more important to the decile 10 movers; social problems, not good enough for children, unsafe, untidy, and a generally bad reputation. Whether the respondents connect any of these attributes to the high share of immigrants is unclear, but we do acknowledge this possibility. However, the regression analysis made clear that movers from other neighbourhoods moved for basically the same reason; we found no significant difference for any of these attributes with the exception of social problems. Thus, it seems like *all* movers move because they perceive their neighbourhoods to be bad for children, untidy, unsafe or because it has a bad reputation. It would thus be misleading to talk about a "flight" from immigrant-dense neighbourhoods in relation to any of these attributes. Both the descriptive statistics and the regression analysis do however suggest that perceived social problems in the neighbourhood are a major factor behind the mobility decisions of movers from decile 10.

The descriptive results from Oslo and Helsinki suggest that similar patterns are likely to be found in Helsinki, despite their much lower number of immigrants. The Norwegian respondents do however seem to report more extreme attitudes towards immigrant neighbours; descriptive statistics from the Oslo survey reveal that more than 50% of respondents moving from decile 10 neighbourhoods stated that "too many immigrants" was an important reason for them to leave. Whether these differences also remains when controlling for other aspects related to the move remains to be seen.

Conclusions

In this study, we have looked into why native out-movers from the most immigrant-dense neighbourhoods leave these areas, in relation to those who stay in these areas, and in relation to those who leave other types of areas. Our aim has been to explore whether we can find support for the white flight theory in Sweden, here understood as natives leaving because they perceive the share of immigrants in their neighbourhoods to be "too high". The results are however not very clear on this point.

We find no major differences in general attitudes towards ethnic mix between those who stay and in and those who leave immigrant-dense neighbourhoods, and the differences we do find suggest that the movers on average have a more *positive* attitude towards ethnic mix. We find similar results when comparing the general attitudes of movers from the immigrant-dense areas in relation to movers from other areas; although the other movers are slightly more positive, over 60% of the movers from the most immigrant-dense areas had a positive attitude towards ethnic mix.

However, when we look at reported reasons behind the movers, the picture changes. 28.5% of the movers from the most immigrant-dense neighbourhoods claimed that "too many immigrants" in their neighbourhood was an important or very important reason behind their decision to relocate. This is not only surprisingly high, it is also significantly higher compared to the other movers also when controlling for other reasons and various individual characteristics. Consequently, our results provide some tentative support for the white flight theory; too many immigrant neighbours are indeed an important reason for why natives who live in the most immigrant-dense neighbourhoods choose to leave these areas. There are however other reasons that are more important explanatory

factors behind the mobility decision. Social problems in the neighbourhood do not only come out as the explanations that the most movers found important, it is also a reason that is typical for movers from the most immigrant-dense areas. It might thus be fairer to talk about a "social flight", rather than a "white flight".

References

Andersson, R. (2012) *Reproducing and reshaping ethnic residential segregation in Stockholm: the role of selective migration moves.* Paper presented at the 3rd Norface Migration Conference, Mannheim, Germany, March 29-31, 2012.

Andersson, R. and Bråmå, Å. (2004) Selective Migration in Swedish Distressed Neighbourhoods: Can Area-based Urban Policies Counteract Segregation Processes? *Housing Studies* 19, s. 517-539.

Bobo, L. and Zubrinsky, C.L. (1996) Attitudes on Residential Integration: Perceived Status Differences, Mere In-Group Preference, or Racial Prejudice? *Social Forces*, 74(3): 883-909.

Bolt G., Van Kempen R., Van Ham M (2008). Minority ethnic groups in the Dutch housing market: spatial segregation, relocation dynamics and housing policy. *Urban Studies* 45(7), 1359-1384.

Bråmå, Å. (2006) 'White flight'? The production and reproduction of immigrant concentration areas in Swedish cities, 1990 – 2000. *Urban Studies* 43(7) pp. 1127-1146.

Card, D., Mas, A. and Rothstein, J. (2008) Tipping and the Dynamics of Segregation. *Quarterly Journal of Economics* 123(1) pp. 177-218.

Clark, W.A.V. (1991) Residential Preferences and Neighborhood Racial Segregation: A Test of the Schelling Segregation Model. *Demography* 28 pp. 1-19.

Clark, W.A.V. (1992) Residential Preferences and Residential Choices in a Multiethnic Context. *Demography* 28(1), 451-466.

Crowder, K. (2000) The racial context of white mobility: an individual-level assessment of the white flight hypothesis. *Social Science Research* 29(2) pp. 223-257.

Cutler, D. M., Glaeser, E.L. and Vigdor, J.L. (1999) The Rise and Decline of the American Ghetto, *Journal of Political Economy*, 107 pp. 455–506.

Dahlberg, M., Fredriksson, P. & Monseny, J.J. (2012) *On the dynamics of segregation*, ongoing research presented at Institute for Housing Research, May 29 2012.

Ellen, I. (2000) *Sharing America's Neighborhoods*. Cambridge: Harvard University Press.

Farley, R. Steeh, C., Krysan, M., Jackson, T. och Reeves, K. (1994) Stereotypes and Segregation: Neighborhoods in the Detroit Area, *American Journal of Sociology*, vol. 100, s. 750-780.

Haan M. (2005) The decline of the immigrant home-ownership advantage: Life-cycle, declining fortunes and changing housing careers in Montreal, Toronto and Vancouver, 1981-2001, *Urban Studies* 42(12): 2191-2212.

Harris, D.R. (1999) 'Property Values Drop When Black Move In Be-cause…': Racial and Socioeconomic Determinants of Neighborhood Desirability. *American Sociological Review* 64(3) pp. 461-479.

Hedman, L., van Ham M. & Manley D. (2011). Neighbourhood choice and neighbourhood reproduction. *Environment and Planning A* 43: 6, 1381–1399.

Krysan, M. (2002) Whites Who Say They'd Flee: Who Are They and Why Would They Leave? *Demography* 39(4): 675-696.

Krysan, M. and Farley, R. (2002) The Residential Preferences of Blacks: Do They Explain Persistent Segregation? *Social Forces* 80(3): 937-980.

Massey, D.S & Denton, N (1993) *American Apartheid: Segregation and the making of the underclass*. Cambridge: Harvard University Press

Owusu, T. (1998) To buy or not to buy: determinants of home ownership among Ghanaian immigrants in Toronto, *Canadian Geographer*, 42: 40–52.

Pais, J. F., South, S. J. och Crowder, K. (2009) White Flight Revisited: A Multiethnic Perspective on Neighborhood Out-Migration, *Population Research and Policy Review*, vol. 28, nr. 3, s. 321-46.

Permentier, M., van Ham, M. and Bolt, G. (2009) Neighbourhood reputation and the intention to leave the neighbourhood. *Environment and Planning A* 41(9) pp. 2162–2180.

Quillian, L (2002) Why is Black-White residential segregation so persistent? Evidence on three theories from migration data, *Social Science Research* 31(2):197-229.

Robinson, V. (1981) The development of South Asian settlement in Britain and the myth of return, in: C. Peach, V. Robinson & S. Smith (Eds) *Ethnic Segregation in Cities*. London: Croom Helm.

Schelling, T. (1969) Models of Segregation. *The American Economic Review* 59(2) pp. 488-493.

Schelling, T. (1971) Dynamic Models of Segregation. *Journal of Mathematical Society* 1 pp. 143-186.

Sundell, T. (2008), *"Hvit flukt" blant norske barnefamilier I Oslo. En kvantitativ studie.* Masteroppgave. University of Oslo, Institutt for sosiologi og samfunnsgeografi.

van Ham, M. and Feijten, P. (2008) Who wants to leave the neighbourhood? The effect of being different from the neighbourhood population on wishes to move. *Environment and Planning A* 40(5) pp. 1151-1170.

van Kempen, R. and Özüekren, S. (1998) Ethnic Segregation in Cities: New Forms and Explanations in a Dynamic World. *Urban Studies*, 35(10) pp. 1631-1656.

Vilkama, K. (2011), *Yhteinen kaupunki, eriytyvät kaupunginosat? Kantaväestön ja maahanmuuttajataustaisten asukkaiden alueellinen eriytyminen ja muuttoliike pääkaupunkiseudulla.* [Shared city, divided neighbourhoods? Residential segregation and selective migration of the native and immigrant populations in the Helsinki Metropolitan Area]. Tutkimuksia 2011: 2. Helsingin kaupungin tietokeskus, Helsinki.