



UPPSALA  
UNIVERSITET

# **Reproducing and reshaping ethnic residential segregation in Stockholm: the role of selective migration moves**

**Roger Andersson**

Institute for Housing & Urban Research, Uppsala university

Paper accepted for publication in *Geografiska Annaler B* (2013).

CROWDER, K., HALL, M. and TOLNAY, S. E.  
(Am. Soc. Review 76:1, 2011)

*‘While scholarly attention continues to focus on immigrants’ residential attainment processes, we call for additional attention to native-born populations’ mobility reactions to these immigrant settlement patterns.’*

# Contents of the paper/presentation

- Research questions
- Theory
- Analytic strategy and data sources
- Analysing and mapping the dynamics of ethnic residential segregation in Stockholm
- Multivariate analyses:
  - (1) Who enter, stay in and leave n'hoods growing more immigrant dense?
  - (2) Who move 'upwards' and 'downwards' in the ethnic hierarchy of neighbourhoods?
- Conclusions

# Research questions

- *This paper aims at describing and analysing the ethnic compositional dynamics going on in the system of neighbourhoods in the Stockholm region.*
- The key research question is whether native Swedes contribute to sustaining and reinforcing ethnic residential segregation by avoiding and leaving neighbourhoods that experience high immigrant density.
- The hypothesis is that this is indeed the case.

# State of the art (1)

- Selective migration among natives, and its effects upon ethnic segregation, is a relative new field of research in the Nordic context.
- Bråmås (2006) has analysed the role of the Swedish majority population. 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.

## State of the art (2)

- A study of school segregation in Oslo (Sundell 2008) produced similar results, although with a greater emphasis on selective out-migration (i.e. the 'flight' mechanism).
- Vilkama (2011) shows that both flight and avoidance are relevant concepts in the Helsinki context: She also confirms what has also been found for Sweden: out-migration rates from immigrant-dense neighbourhoods are similar for immigrants and natives but immigrants tend to more often circulate within the same segment of neighbourhoods, i.e. immigrant-dense neighbourhoods.

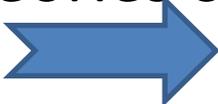
## State of the art (3)

- Other studies have documented selective migration among immigrants. Magnusson and Özuekren (2002) examined intra-urban mobility 1975–90 among Turkish immigrants in three middle-sized Swedish cities. Their results show a highly concentrated pattern of mobility.
- Later research in Sweden (see Andersson & Bråmås 2004), Denmark (Skifter Andersen 2009) and Norway (Blom 2006) presents a more split picture: older, established immigrants tend to leave distressed/multiethnic areas, while recently arrived immigrants gravitate towards these places. Skifter Andersen (2009) also expounds the importance of preferences, such as the desirability for neighbourhood composition.

## State of the art (4)

- Many others have contributed to the research field, focusing on for instance out-mobility from immigrant dense neighbourhoods and on the effects of neighbourhood compositional change (Zubrinsky Charles 2000, Clark 2002, Card, Mas & Rothstein 2008, Ellen 2000, Bolt, van Kempen & van Ham 2008, van Ham & Fejten 2008, Fejten & van Ham 2009, van Ham & Clark 2009, Crowder et al 2011).

# Explaining ethnic residential segregation

- Theories on congregation (volunteer clustering)  
 focus on minorities
- Spatial assimilation theory  focuses on minorities linked to levels of econ. integration
- Majority-related sorting theories
  - *Flight*
  - *Avoidance*
  - *Blocking* (discrimination, institutional racism)
- "Non-ethnic" approaches focus for instance on compositional differences between majority and majority households in relation to housing market segmentation (composition of tenures across n'hoods)

# Analytic strategy and data sources

- This paper deals with the issues of selective migration moves, and the production and reproduction of immigrant-dense neighbourhoods in Stockholm, Sweden.
- It has been worked out as part of a broader NODES sub-project using two different data sources, (1) longitudinal and comprehensive register data, and (2) a survey carried out among 3,000 native-born Swedes in the Stockholm metropolitan region.
- In this paper only the register data will be used, and it will be used in two ways:

- By describing geographical mobility patterns for native Swedes and minority residents in relation to neighbourhoods undergoing rapid change in the ethnic composition, and
- By employing multivariate statistical techniques for estimating which individual characteristics that might contribute to our understanding of selective migration in relation to immigrant concentration areas.

# Data

- The analyses of selective migration are based on a complete set of individual, longitudinal data for people living in Stockholm County in 2005 and/or 2008.
- The database, Geosweden, has been compiled by Statistics Sweden, linking individual data records from a range of separate registers, such as the population register, income registers, educational and employment registers, real estate and property registers, in- and outmigration registers, the Geography database (provides coordinates and administrative identification of all objects in the database (housing units, workplaces) and the registers over in- and outmigration as well as over births and deaths.

- I delimit the multivariate analyses to residents aged 25 to 50 in 2005. The reason is that we want to focus on adults in age groups that are active in the labour market and that might have children in school ages. Younger adults comprise a substantial proportion of students, whose housing situation is volatile, unsecure and often of a temporary character.

# Analysing the dynamics of ethnic residential segregation in Stockholm

- The empirical study is carried out in four steps, using individual register data for Stockholm County December 31, 2005 and 2008.
- Step 1: I select a set of neighbourhoods meeting the requirement that they have undergone change in the proportion Non-Nordic born residents that is clearly above the mean during this three year period.

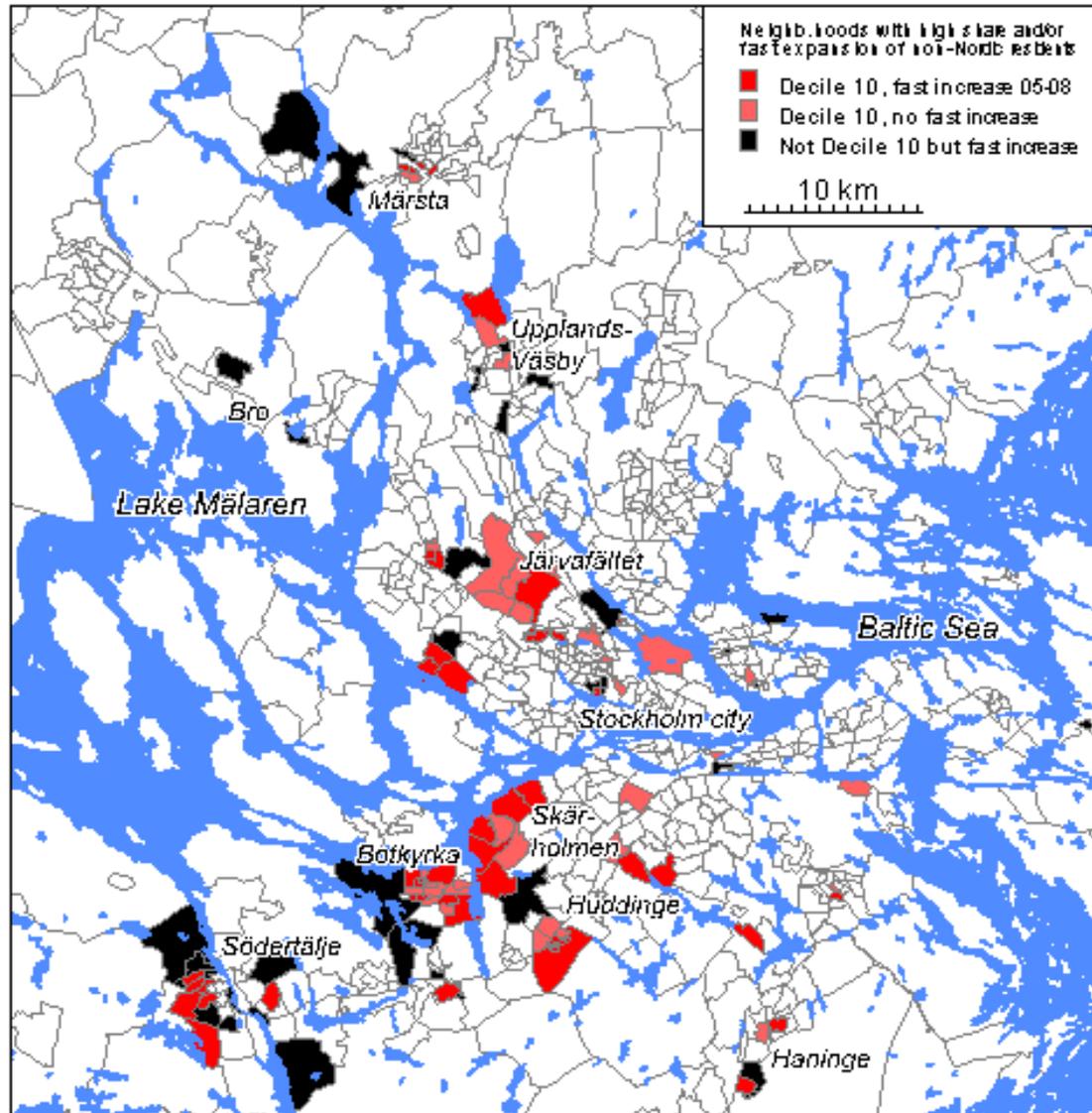
# Compositional change by type of neighbourhood 2005 and 2008.

Change % Non-Nordic in n'hoods*		N	%	Average pop. in 2005	Average % Non-Nordic in 2005	Average % Non-Nordic in 2008
Increase > 2 st.dev. above the mean	(Type 1)	30	3.4	2614	25.5	34.7
Increase > 1 st.dev. & < 2 st.dev. above the mean	(Type 2)	50	5.7	2602	20.0	24.9
Stable trajectory	(Type 3)	707	80.3	2335	9.7	10.9
Decrease > 1 st.dev. & < 2 st.dev. below the mean	(Type 4)	30	3.4	680	8.5	7.1
Decrease > 2 st.dev. below the mean	(Type 5)	10	1.1	482	19.1	13.2
Total (excl. small n'hoods)		827	100.0	2154	11.6	13.8
*Mean=+1.6, One st.dev.= 2.4.						

- Step 2: I then analyse in- and outmigration from these neighbourhoods (by broad ethnic categories) in order to identify whether this compositional change is attributable to in situ changes (deaths/births) or whether it is caused by selective migration, i.e. ethnic differences among those entering and leaving different types of neighbourhoods.

- Step 3: I conduct logistic regression analyses of neighbourhoods belonging to the segment of n'hoods having fast-growing density of Non-Nordic born residents, trying to estimate which individual characteristics and demographic and work-related attributes that seem to indicate why people move into, stay in, or move out of this housing market segment.
- Step 4: I finally carry out another binary logistic analysis comparing two groups of movers from neighbourhoods having average to high but not the highest immigrant density: those moving 'upwards' (into more immigrant-dense neighbourhoods) and those moving 'downwards' (into lower densities).

Location of immigrant-dense neighbourhoods (non-Nordic-born) in Stockholm County in 2005 and those densifying clearly above average 2005 to 2008.



*In subsequent analyses I focus on the dark red and the black areas, i.e. the fast growing segment, labeled Type 1*

# Logistic regressions

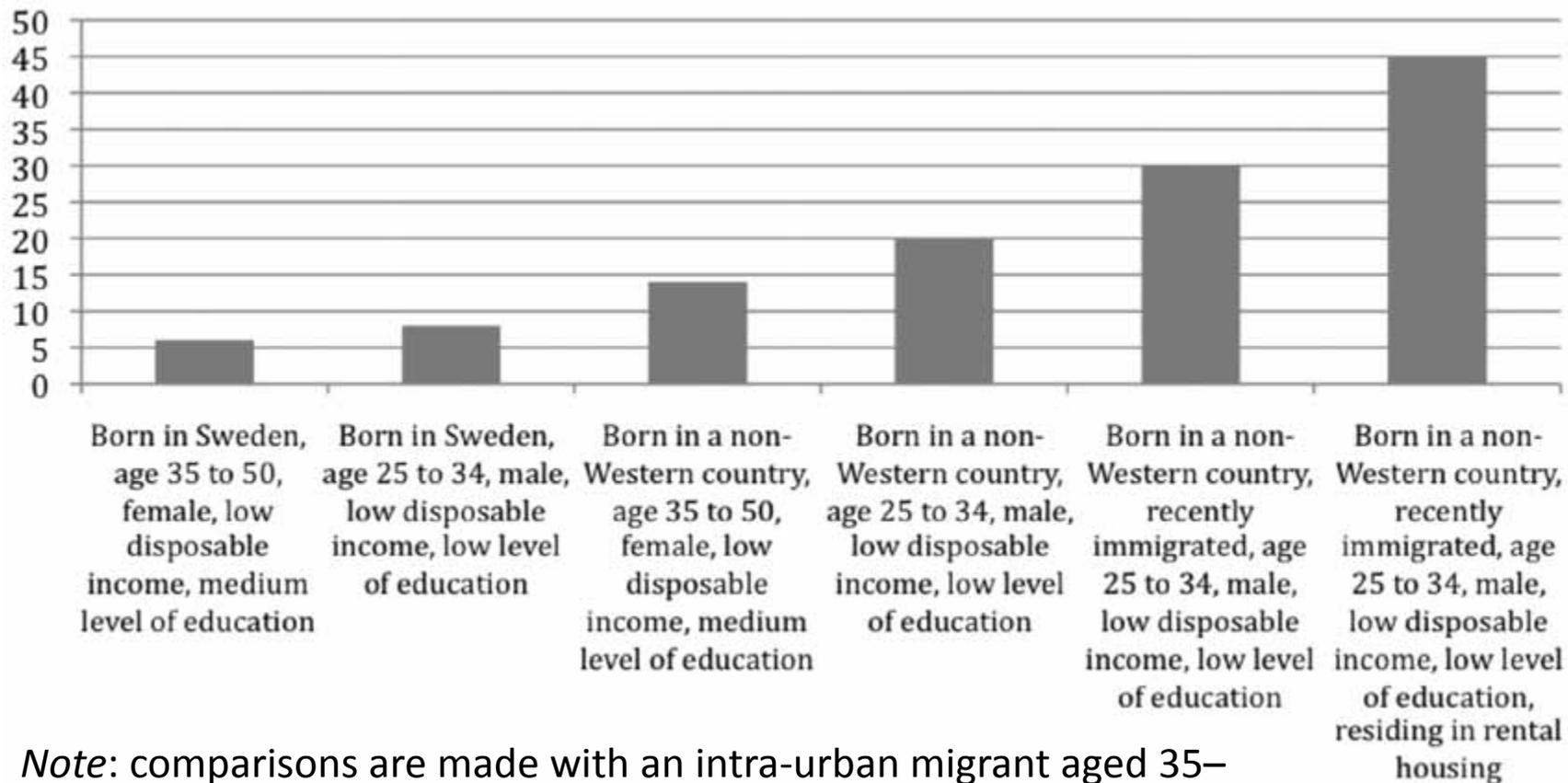
- 1. Comparing movers: Logistic regression of the likelihood of moving into neighbourhoods experiencing fast increase in the share of Non-Nordic-born population, 2005 to 2008, versus moving into other neighbourhoods (only intra-urban mobility).

# Parameter estimates; moving into Type 1 vs moving elsewhere

- Model 1: Only ethnic background
- Model 2: Controls for demographic attributes (age, sex, family type, change in family type, recent immigration, foreign background)
- Model 3: Controlling also for socioeconomic attributes, such as employment, unemployment, work income, disposable household income, change in income, educational level, having received social allowances, studying, tenure
- Model 4: Other neighbourhood characteristics: Number of workers in the retail sector per capita and neighbourhood, per cent employed aged 20 to 64 in neighbourhood, and per cent of all individuals in neighbourhood having children.

Variable	Model 1			Model 2			Model 3			Model 4		
	B	S.E.	Exp(B)									
CoB=Other western country	,864	,063	2.373***	-,215	,084	.807**	-,121	,085	,886	-,115	,085	,892
CoB=Eastern Eur.	1,675	,054	5.337***	,581	,078	1.787***	,477	,079	1.611***	,426	,079	1.532***
CoB=Non-Western country	1,886	,033	6.592***	,841	,064	2.318***	,586	,065	1.796***	,481	,066	1.617***
CoB=Sweden (ref.)			1,000			1,000			1,000			1,000

# Change in probability (%) of having moved into a Type 1 neighbourhood 2005–2008 for combinations of individual attributes.



*Note:* comparisons are made with an intra-urban migrant aged 35–50, female, born in Sweden, with high disposable income and high level of education, not living in rental housing.

# Logistic regressions

- 2. Comparing movers and stayers: Logistic regression of the likelihood of moving out of versus staying in neighbourhoods experiencing fast increase in the share of Non-Nordic-born population, 2005 to 2008.

# Parameter estimates; moving out vs staying

- Model 1: Only ethnic background
- Model 2: Controls for demographic attributes (age, sex, family type, change in family type, recent immigration, foreign background)
- Model 3: Controlling also for socioeconomic attributes, such as employment, unemployment, work income, disposable household income, change in income, educational level, having received social allowances, studying, tenure
- Model 4: Number of workers in the retail sector per capita and neighbourhood, per cent employed aged 20 to 64 in neighbourhood, and per cent of all individuals in neighbourhood having children.

Variable	Model 1			Model 2			Model 3			Model 4		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
CoB=Other western country	-,267	,052	.766***	,254	,074	1.289***	,250	,076	1.284***	,267	,076	1.313***
CoB=Eastern Eur.	-,311	,052	.733***	,030	,074	1,030	,025	,076	1,026	,058	,076	1,060
CoB=Non-Western country	-,519	,029	.595***	-,093	,058	,911	,009	,060	,991	-,022	,060	,978
CoB=Sweden (ref.)			1,000			1,000			1,000			1,000

# Logistic regressions

- 3. Logistic regression of intra-regional migrants moving from Non-Nordic Deciles 7 to 9 into higher Non-Nordic densities compared to those moving into lower densities, 2005 to 2008.

# Comparing 'upward' and 'downward' movers focusing on deciles 7 to 9 in terms of Non-Nordic density

- The number of people moving 'upwards' (into higher density) is less than the number moving 'downwards' (into lower density). Of the 216,000 individuals aged 25 to 50 who lived in Deciles 7 to 9 in 2005, and remained in the region 2008, 19,400 moved to higher density in 2008 while 49,400 moved downwards.

# Parameter estimates; moving 'upwards' vs 'downwards'

- Model 1: Only ethnic background
- Model 2: Controls for demographic and locational attributes (age, sex, family type, change in family type, *decile origin (7, 8, 9)*, recent immigration, foreign background)
- Model 3: Controlling also for socioeconomic attributes, such as employment, unemployment, work income, disposable household income, change in income, educational level, having received social allowances, studying, tenure
- Model 4: Number of workers in the retail sector per capita and neighbourhood, per cent employed aged 20 to 64 in neighbourhood, and per cent of all individuals in neighbourhood having children.

Variable	Model 1			Model 2			Model 3			Model 4		
	B	S.E.	Exp(B)									
CoB=Other western country	,441	,037	1.554***	-,059	,054	,942	,029	,056	1,029	,019	,057	1,019
CoB=Eastern Eur.	1,007	,042	2.739***	,670	,059	1.954***	,584	,062	1.794***	,591	,062	1.807***
CoB=Non-Western country	1,261	,025	3.530***	1,062	,046	2.894***	,864	,048	2.373***	,882	,049	2.416***
CoB=Sweden (ref.)			1,000			1,000			1,000			1,000

- Compared to those moving ‘downwards’ (towards less immigrant dense neighbourhoods), those moving ‘upwards’ tend to be
- males rather than females,
- of Eastern European or non-Western origin rather than Swedish,
- single without children rather than any other family type.
- They also tend to have lower income and low rather than high education, and they are more often unemployed, on social allowances and studying.

# So are the hypotheses regarding flight/avoidance confirmed?

- The analyses show that the ethnic origin of individuals matters when it comes to migration patterns.
- They also show that the ethnic composition of neighbourhoods matters for natives and non-Nordic immigrants' mobility patterns.
- Also after controlling for demographic and socioeconomic attributes, data indicate 'avoidance' rather than 'flight' of native and Western immigrants of neighbourhoods being immigrant-dense.

# Caveats

- The study contributes to a better understanding of patterns and on-going dynamics but cannot be argued to provide robust enough evidence of flight and avoidance driven by ethnic compositions per se.
- I control for only a few other neighbourhood characteristics (service level, employment, demographic composition). It is however unlikely that the results presented here will become very different if more such controls are added. The correlation between housing and socioeconomic characteristics and the proportion non-Nordic residents is very high.

# Ahead of us:

- In the next step of this project we will analyse data generated by a comprehensive questionnaire sent to 3,000 native-born respondents living in the Stockholm region. Half of these are sampled from the Decile 10 neighbourhoods (both stayers and out-movers) while the remaining will represent stayers in and movers from other types of neighbourhoods.
- Taken together, the register-based and the survey-based data will hopefully give us a solid ground for clearer but also nuanced conclusions about the flight-avoidance issue.

- Questions?