



# SIMSEG

## Interdisciplinary research on school segregation

INSTITUTE FOR ANALYTICAL SOCIOLOGY  
LINKÖPING UNIVERSITY

# The Institute for Analytical Sociology, Campus Norrköping, Linköping University





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## The overall purpose of SIMSEG:

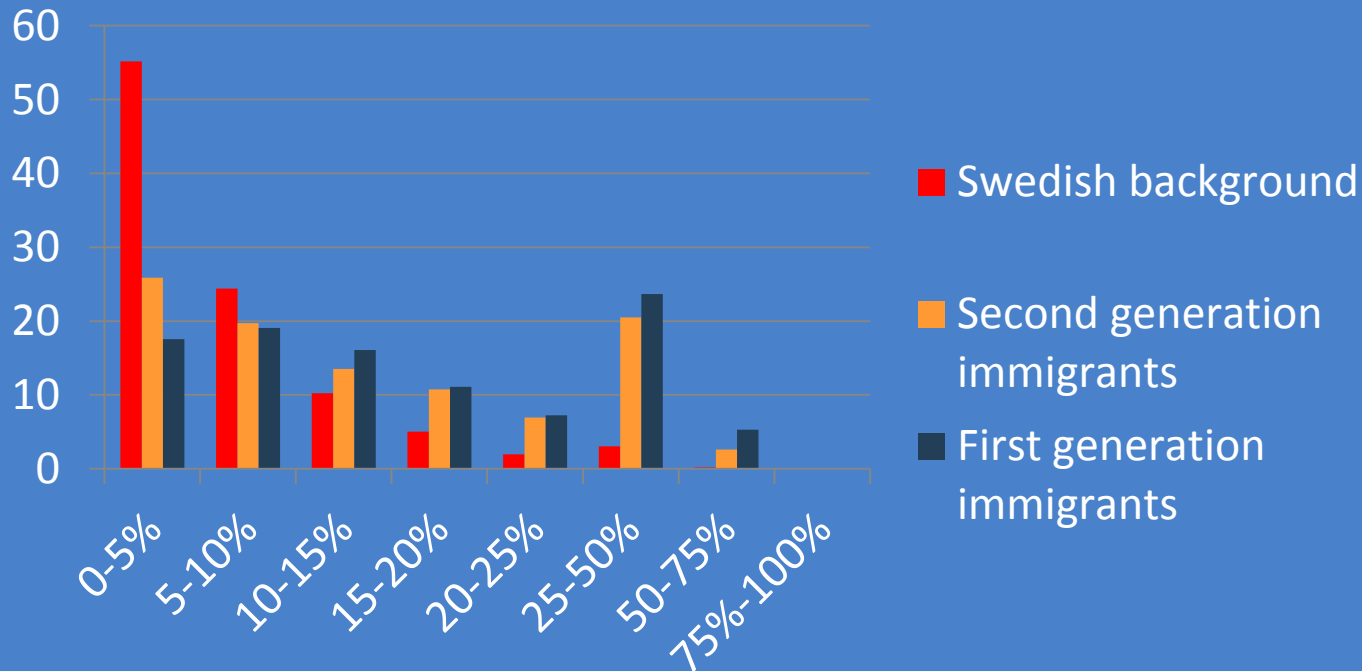
To improve our understanding of the **causes**  
and **consequences** of  
school segregation.



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## Ethnic segregation in 9<sup>th</sup> grade 2012

*Distribution of pupils in schools with different shares of immigrants*

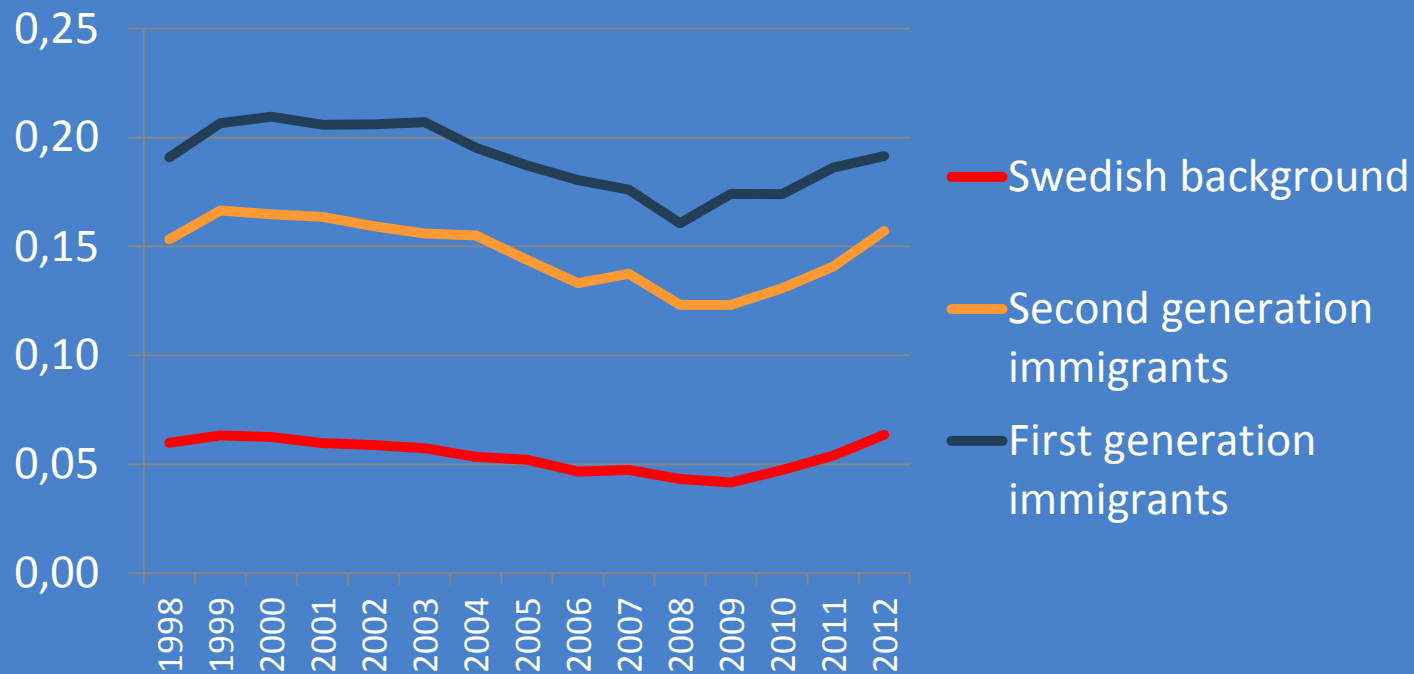




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# Ethnic segregation in 9<sup>th</sup> grade over time

*Average fraction of immigrant class-mates over time*

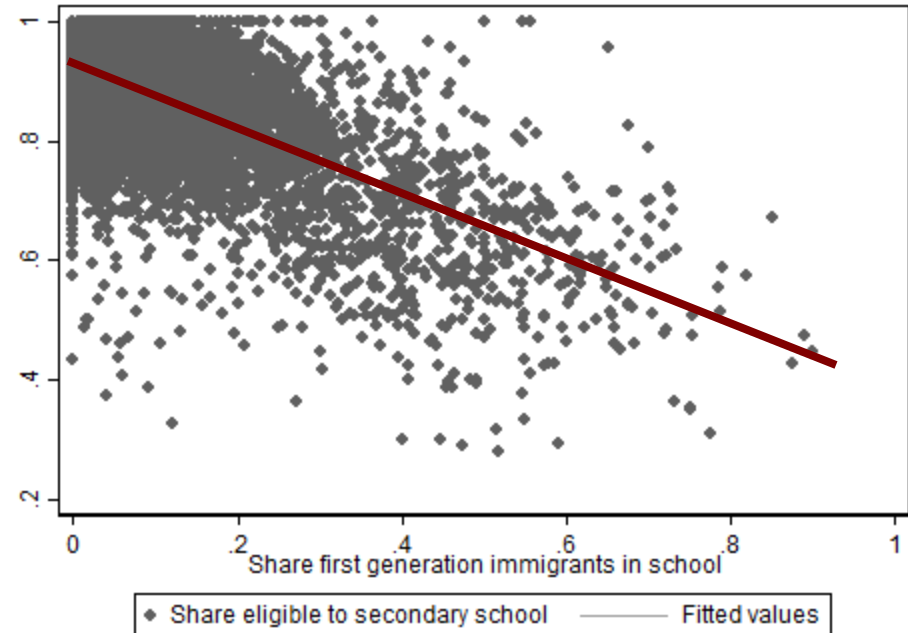
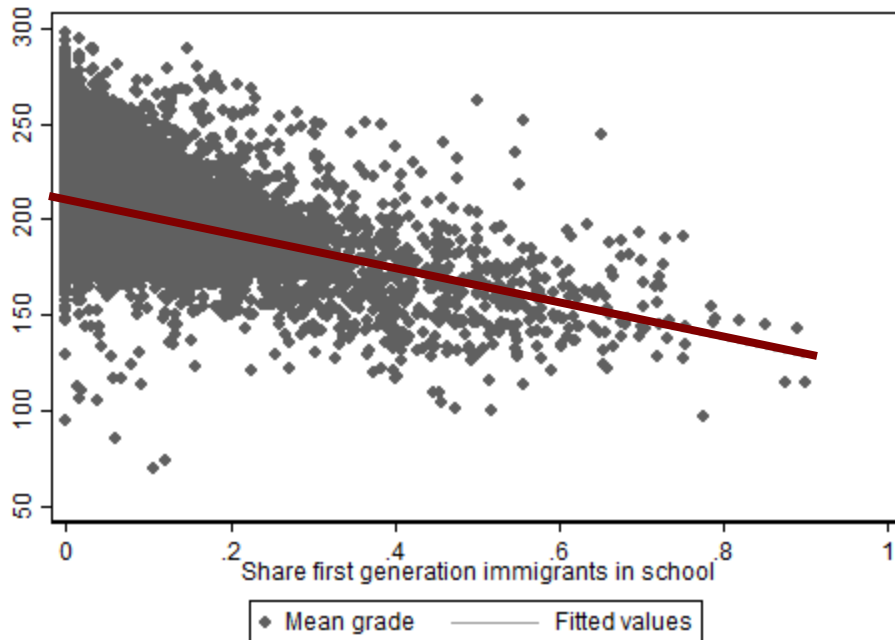




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# The raw association between school segregation and school outcomes

*Share of immigrants and mean grades/share eligible pupils  
In Swedish schools 1998-2012.*





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## **1. Dynamics of school segregation:**

The processes through which schools become segregated along various dimensions.

## **2. Effects of school segregation:**

How being embedded in segregated school environments affects grades and subsequent labor-market careers.



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# **The SIMSEG group**

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## The SIMSEG group



Peter Hedström, PI



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Johan Koskinen



Maria Brandén



Hernan Mondani



Fredrik Jansson



Selcan Mutgan



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- Interdisciplinary research group
- Backgrounds in (analytical) sociology, demography, economy, management, mathematics, statistics *et cetera*



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Some of the registers we make use of:

- Åk9-registret (the 9th grade)
- Lärarregistret (teachers)
- Registret över avgångna från gymnasieskolan (graduates from secondary education)
- Flergenerationsregistret (links individuals to parents, siblings, relatives)
- Geografidatabasen (coordinates 100X100 m<sup>2</sup>)



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Two of our recent studies / work in progress



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## Analyses of effects of being in segregated schools

- School segregation and school results in the 9<sup>th</sup> grade
- How does ethnic segregation affect (1) grade points (meritvärde) and (2) eligibility to secondary school?
- Peer effects or selection effects?
- Statistical techniques to disentangle segregation effects from selection effects (sibling-and-school-fixed-effects)
  
- All pupils finishing 9<sup>th</sup> grade 1998-2012 (n=1,574,237)
- 1,339 schools



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## Analyses of effects of being in segregated schools

- Average grades relatively unaffected, when we adjust for selection processes
- Eligibility to secondary school negatively affected by ethnic segregation
- Immigrants' school results (both grades and eligibility) positively affected by large share of coethnics in school
- Next steps: what are the long term consequences?



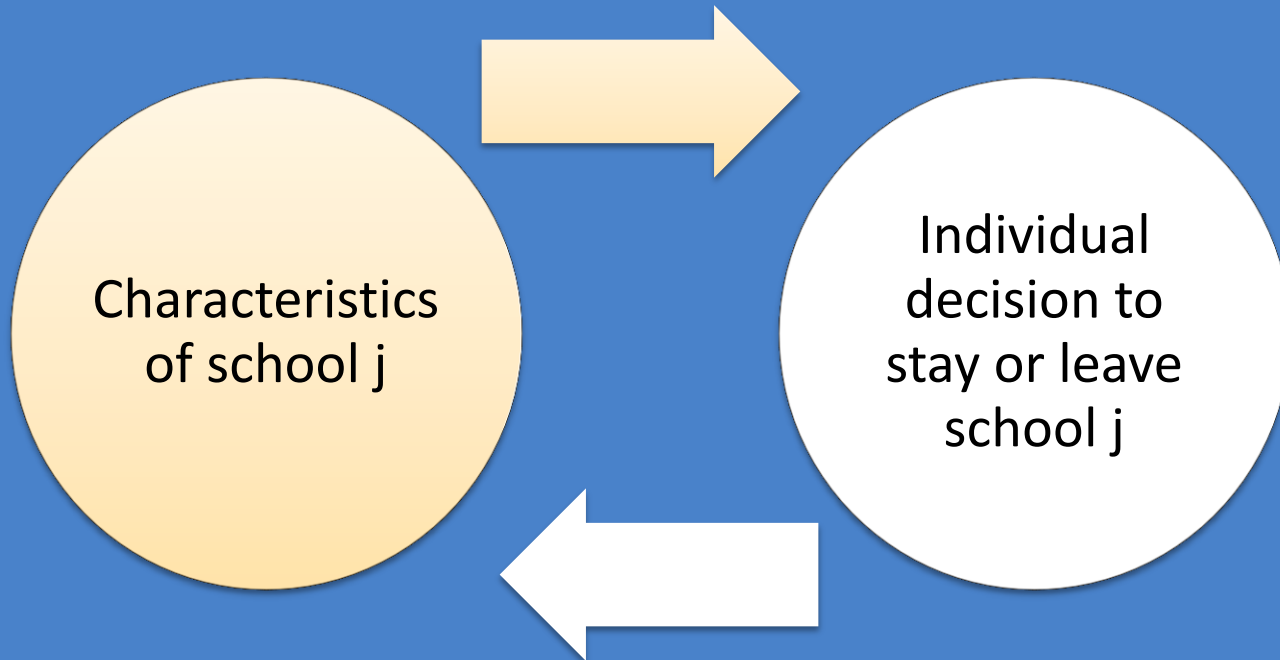
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## Analyses of segregation processes

- Examines dynamic interplay between (1) individuals' school choices and (2) the characteristics of schools that these choices give rise to.
- For example
  - How do ethnic composition of a school influence individuals' choices whether to stay or to leave the school?
  - And how does this in turn change the ethnic composition of the school and the choices of others at later points in time?



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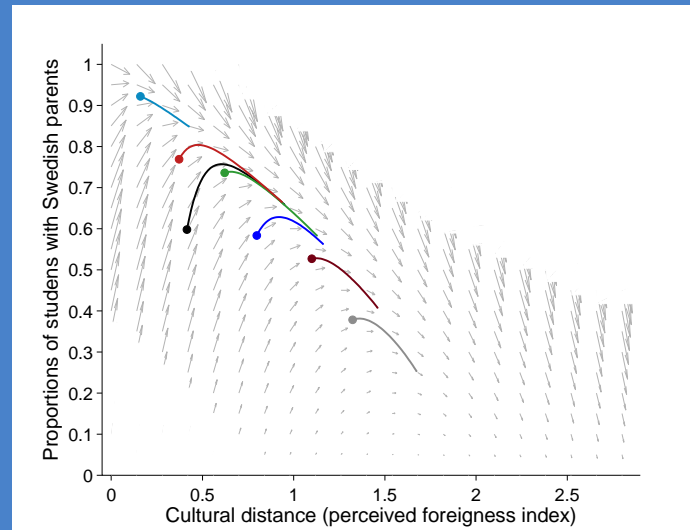




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## Analyses of segregation processes

Identification of tipping points, i.e., ethnic compositions at which children of Swedish origin start to leave the school at an increasing rate:





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## **Analyses of segregation processes**

Next step: estimate discrete-choice models to establish the factors that influence school choice:

Will form the core of large-scale agent-based simulation models.

Simulation models will be used for performing “what-if” experiments

Will improve our understanding of the processes through which large numbers of individuals, in interaction with one another, bring about school environments that are segregated along various dimensions.



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Many thanks for your attention!



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# Ethnic segregation in 9<sup>th</sup> grade over time

*'Overexposure' to immigrants, by immigrant background*

