

Current perspectives on spatial mobilities

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Longitudinal approaches in spatial mobility research

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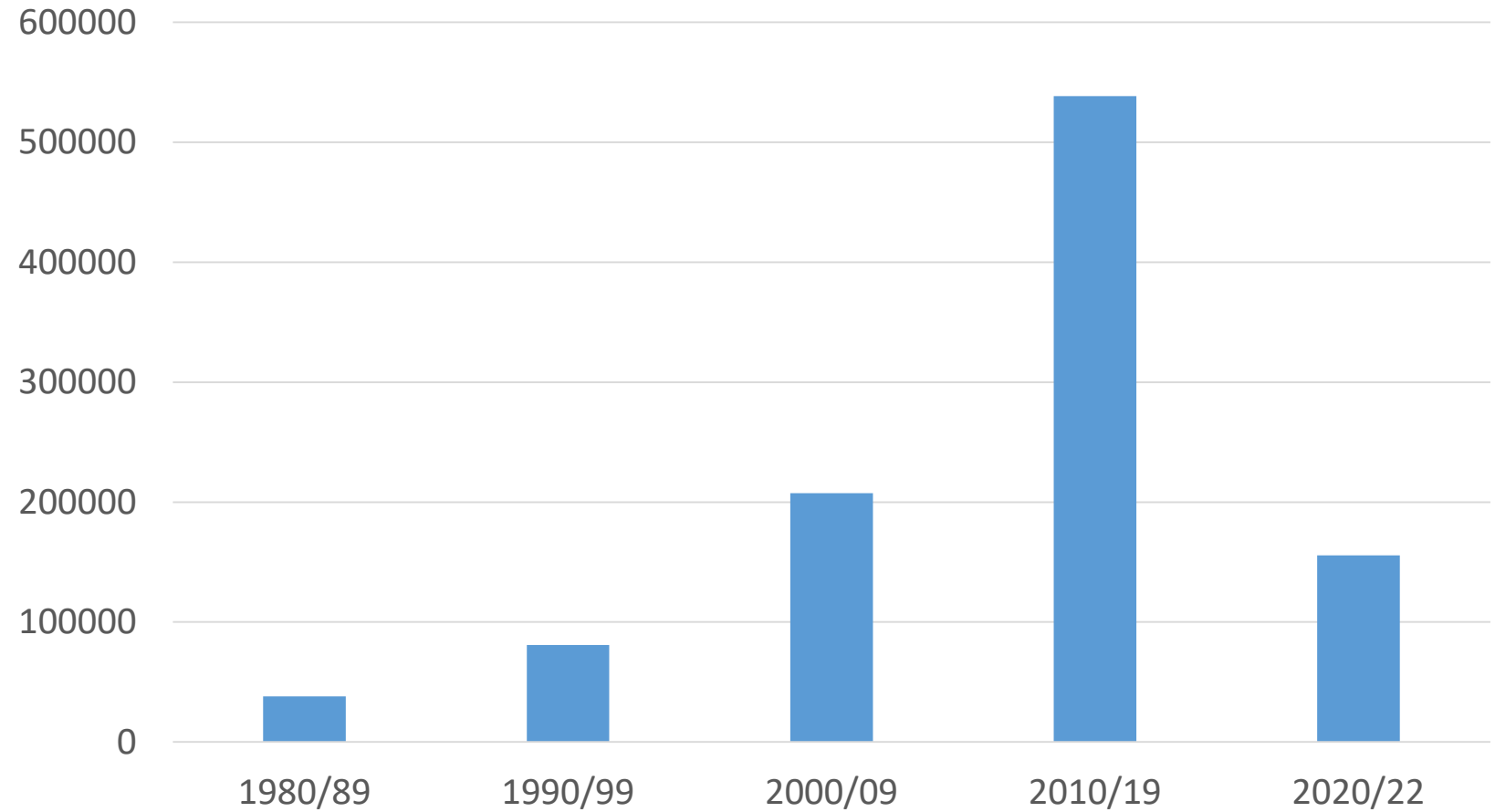


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Number of documents returned by *Google Scholar* containing the search terms “migration” and “longitudinal”



1. Advances in spatial mobility research using longitudinal data and methods* (*Brief and selective overview)
2. Lifetime mobility

1. Advances in spatial mobility research using longitudinal data and methods

Measurement

- Track time-related processes
 - Change over time
e.g. health or wage profiles after migration
 - Sedentarism and persistence in mobility practices
 - Sequential processes
e.g. realization of prior mobility intentions

Modelling

- Better assessments of causal relations w/ non-experimental data
 - Account for time-constant unobserved heterogeneity (omitted variable bias)
 - Model reciprocal and recursive causation
 - A wide range of adequate designs
e.g. estimating treatment effects, isolating maturation processes from generational differences, exploiting incomplete info on timing to events,...

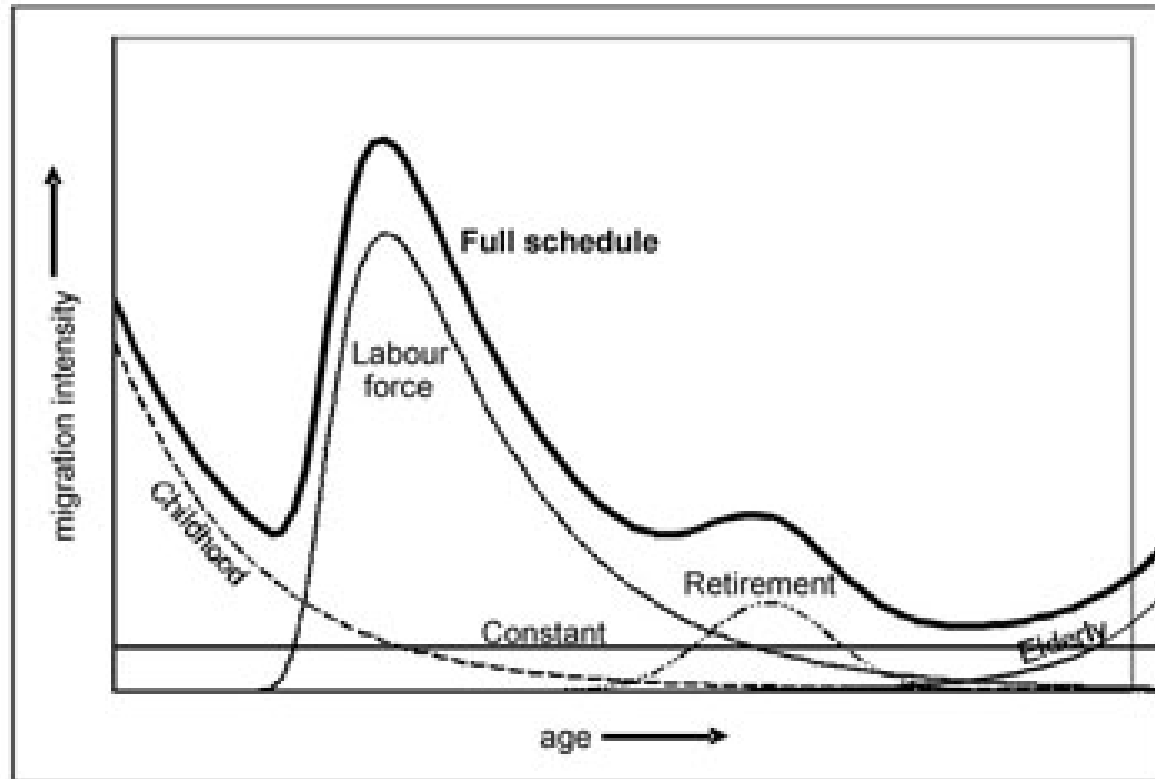
Review article: Vidal, S., & Lersch, P. M. (2021). **Panel data in research on mobility and migration: A review of recent advances.** *Comparative Population Studies*, 46, 187-214.

Research advances in
mapping **trends and patterns**,
establishing **determinants** and
assessing a range of **outcomes**
of spatial mobility

- 1) Spatial mobility over an individual's life course
- 2) Stratification and selectivity of (in)mobile populations
- 3) Social embeddedness; spatial mobility as relational practices
- 4) Macro-level processes and change

Modelling complex human behaviour

- Pioneering research explaining the age-structure of spatial mobility ¹



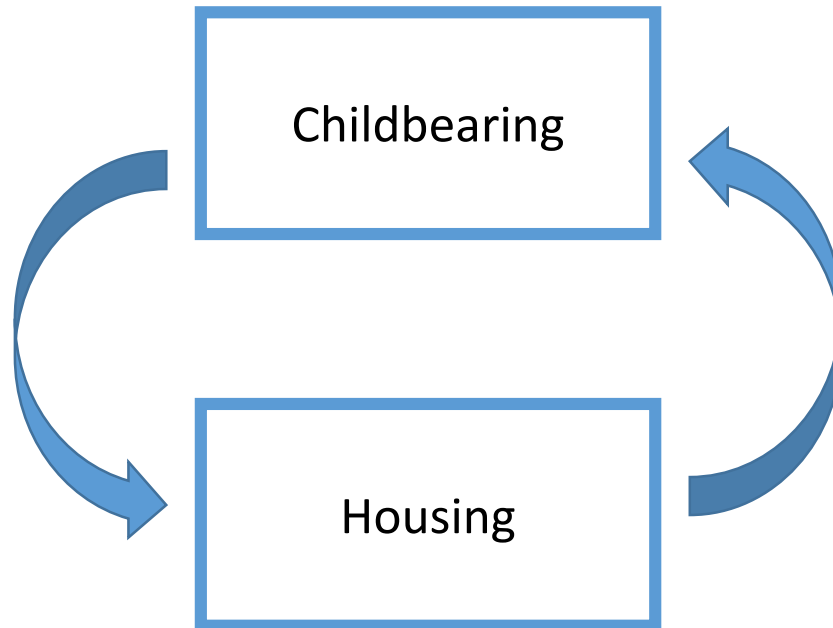
Life events that act as triggers of spatial mobility (e.g. starting a job or parenthood) are largely concentrated at earlier adult ages

Modelling complex human behaviour

- Complex interdependencies between spatial mobility and (trigger) life events

Kulu & Steele (2013):

*Interrelationships
between childbearing
and housing transitions
in the family life course*



Long-term family plans
and housing aspirations
are closely related

Families display

- A higher propensity to move after a childbirth
- Higher fertility intensities after moving (esp. to single-family housing)

Modelling complex human behaviour

- Time dynamics underlying outcomes of spatial mobility

Kratz and Brüderl (2013):

Returns to regional migration: Causal effect or selection on wage growth?

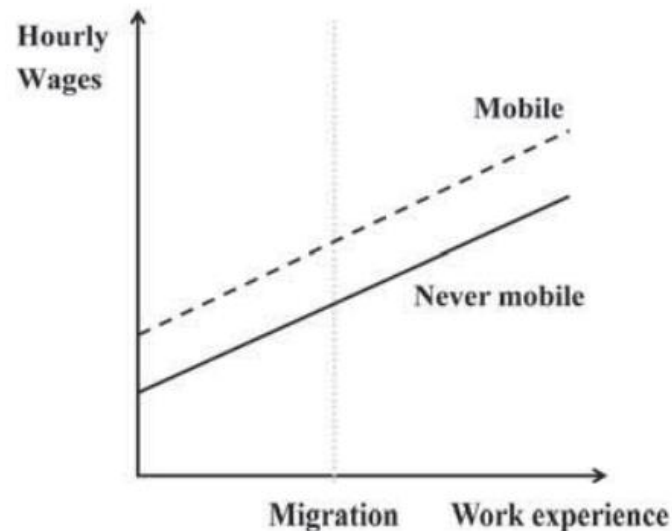


Figure 1: Selection on wage level

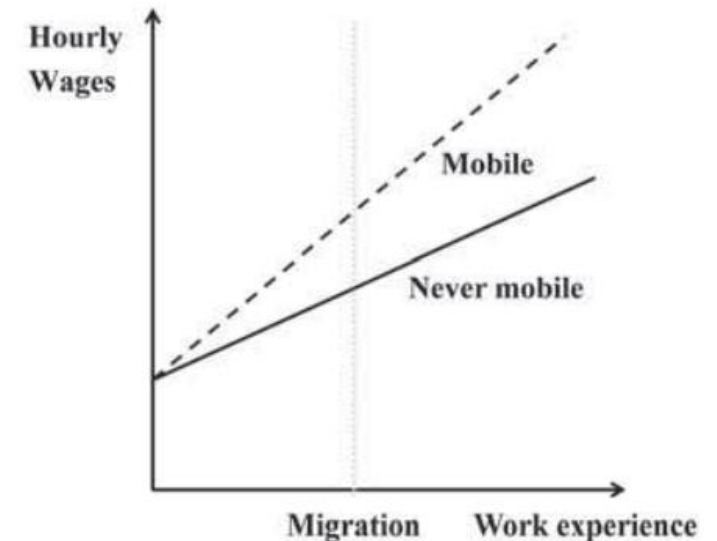


Figure 2: Selection on wage growth

Conventional fixed-effects models assume no differences in outcome trends (e.g. wage growth) between migrants and non-migrants (**Parallel trends assumption**)

Modelling complex human behaviour

The conventional fixed effects (FE) model “de-means” the data

$$Y_{it} = \alpha + \beta m_{it} + \varepsilon_{it}$$

Kratz and Brüderl (2013):

Returns to regional migration: Causal effect or selection on wage growth?

The fixed-effects individual slopes (FEIS) model also “de-trends” the data using a time-varying estimate of outcome growth (e.g. work experience)*

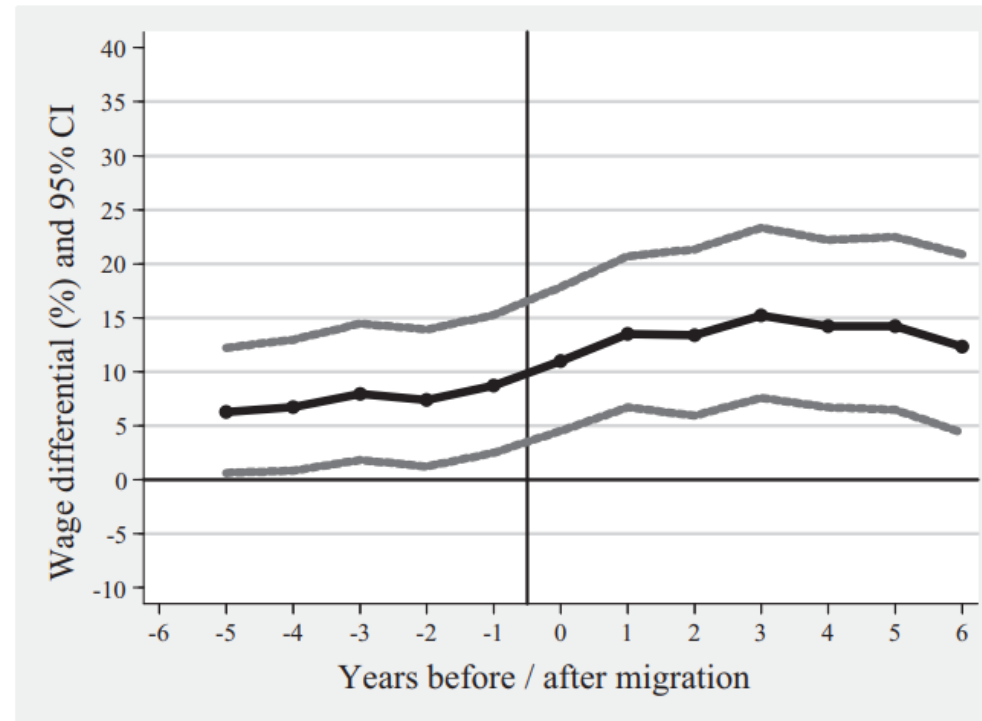
$$Y_{it} = \alpha + \alpha \exp_{it} + \beta m_{it} + \varepsilon_{it}$$

*Procedure explained in Wooldridge (2010: 377-81) or Brüderl and Ludwig (2015)

Modelling complex human behaviour

Kratz and Brüderl (2013):

Returns to regional migration: Causal effect or selection on wage growth?



Source: SOEP v27 (1984–2010), own calculations.

Figure 3: The time-path of the wage differential migrant/stayer

Migrants display steeper wage trajectories than non-migrants

Considering selection on wage growth (FE-IS model), the return to regional migration in Germany is about 3%

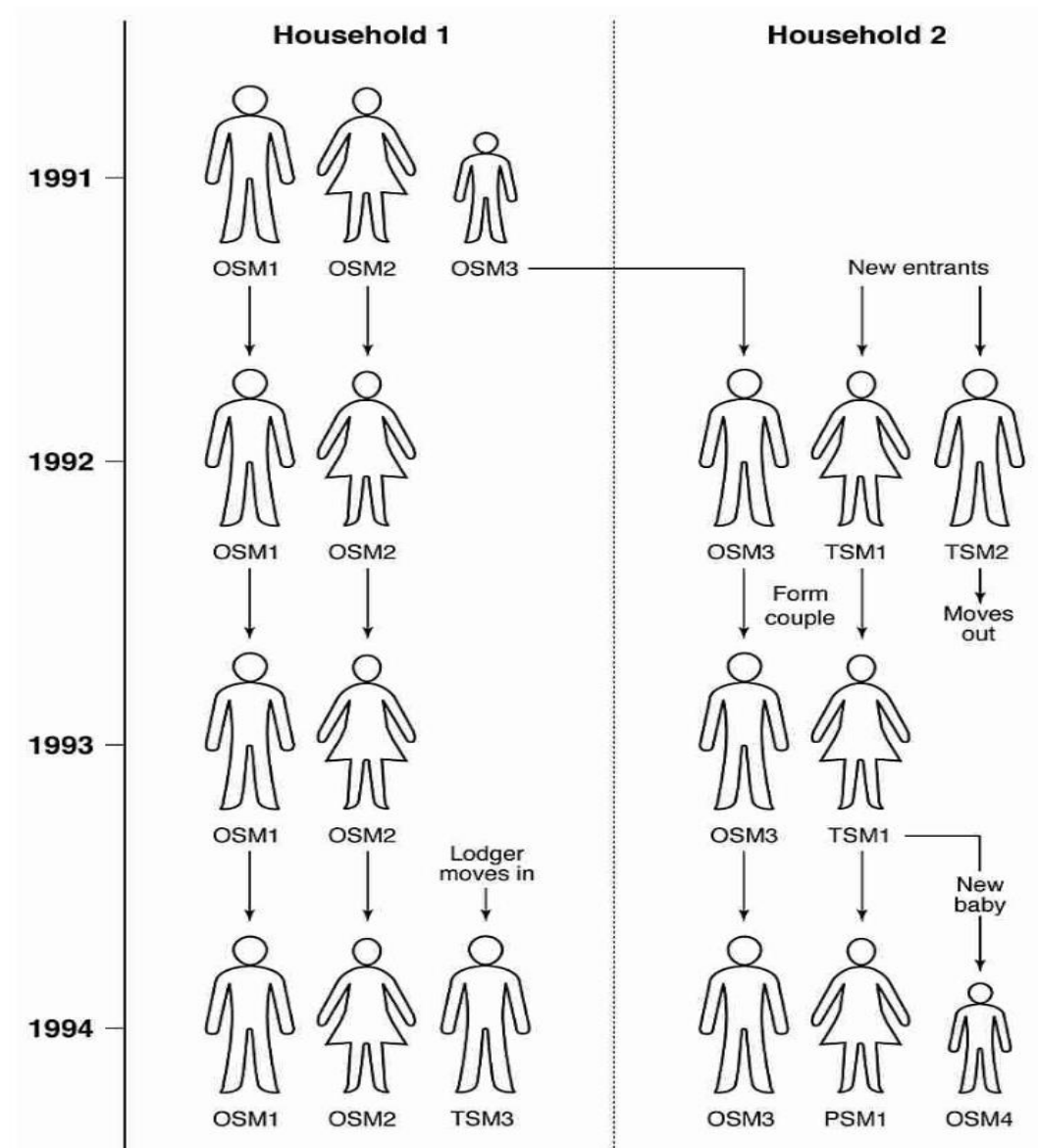
Using a conventional FE model, returns would be overestimated (ca. 7%)

Social embeddedness

- Inequalities and power relations within and across households
- Ties beyond the household

Multi-actor design of the British Household Panel Study

Figure 3.1 BHPS sample tracking procedures and naming conventions



Micro-macro linkages

- Selective moves across socio-spatial context ¹
- Assess how (change in) context influence spatial mobility ²
- Outcomes of persistence in context ³
- Role of individuals' mobility for context-level change ⁴

¹ Raabe and Taylor 2010; Downey et al 2017; Lee 2017

² Mishra and Massey 2011; Baker 2016; Sedova and Kalkuhl 2020

³ Musterd et al. 2012; Hedman et al. 2015

⁴ Brimblecombe et al. 2000; Norman et al. 2005

Micro-macro linkages

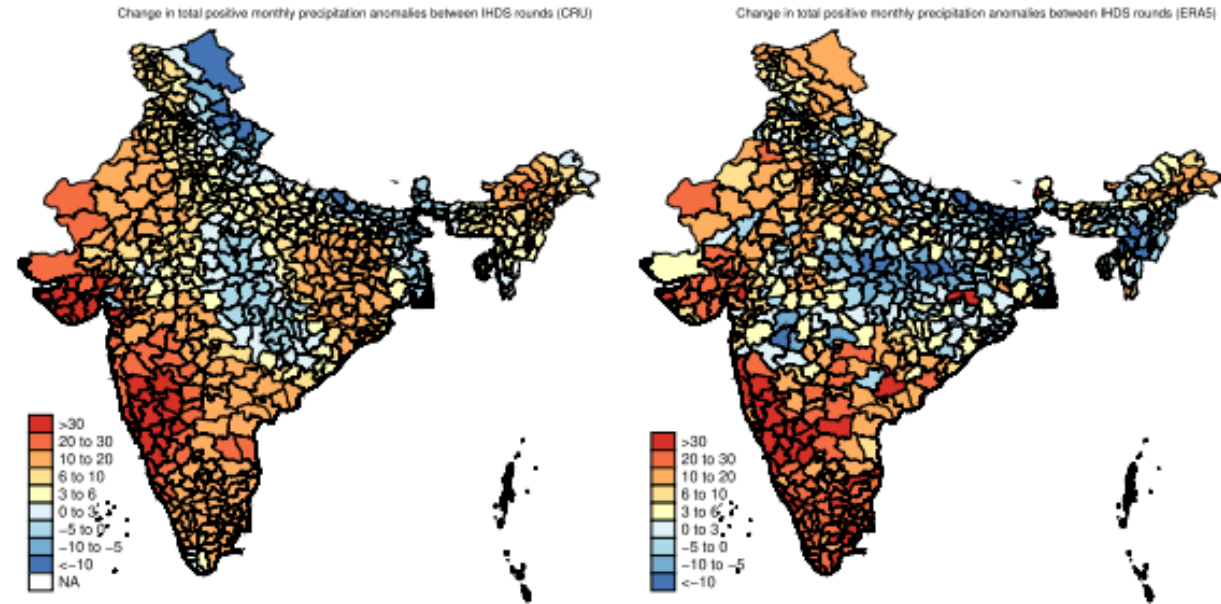
Sedova and Kalkuhl (2020):

Who are the climate migrants and where do they go?

Positive precipitation anomalies

1999–2003

2006–2010



- Adverse weather shocks decrease migration to nearby rural areas and international migration, but increases moves to cities
- Climate migrants are likely to be from the lower end of the skill distribution and from households strongly dependent on agricultural production

Future avenues

- Build expertise on longitudinal data analysis
- Exploit and combine new (big) data with traditional data sources
- Address the untapped potential of longitudinal data to examine underexplored research areas (e.g. international migration, sedentarism, linkages across mobility types, comparative analyses,...)
- Moving beyond a discrete-time approach in longitudinal research

2. Lifetime mobility

A *discrete-time* approach dominates longitudinal research, where the focus is on

- *single* events and practices
(mobile vs non-mobile)
- *point-in-time* and life stage-specific analyses
(isolation from individuals' wider trajectories)
- *singular* movement types
(disconnection across spatial levels and mobility forms)

Observation: Moves are often *repeated* over individual lifetimes

Azose and Raftery (2019):

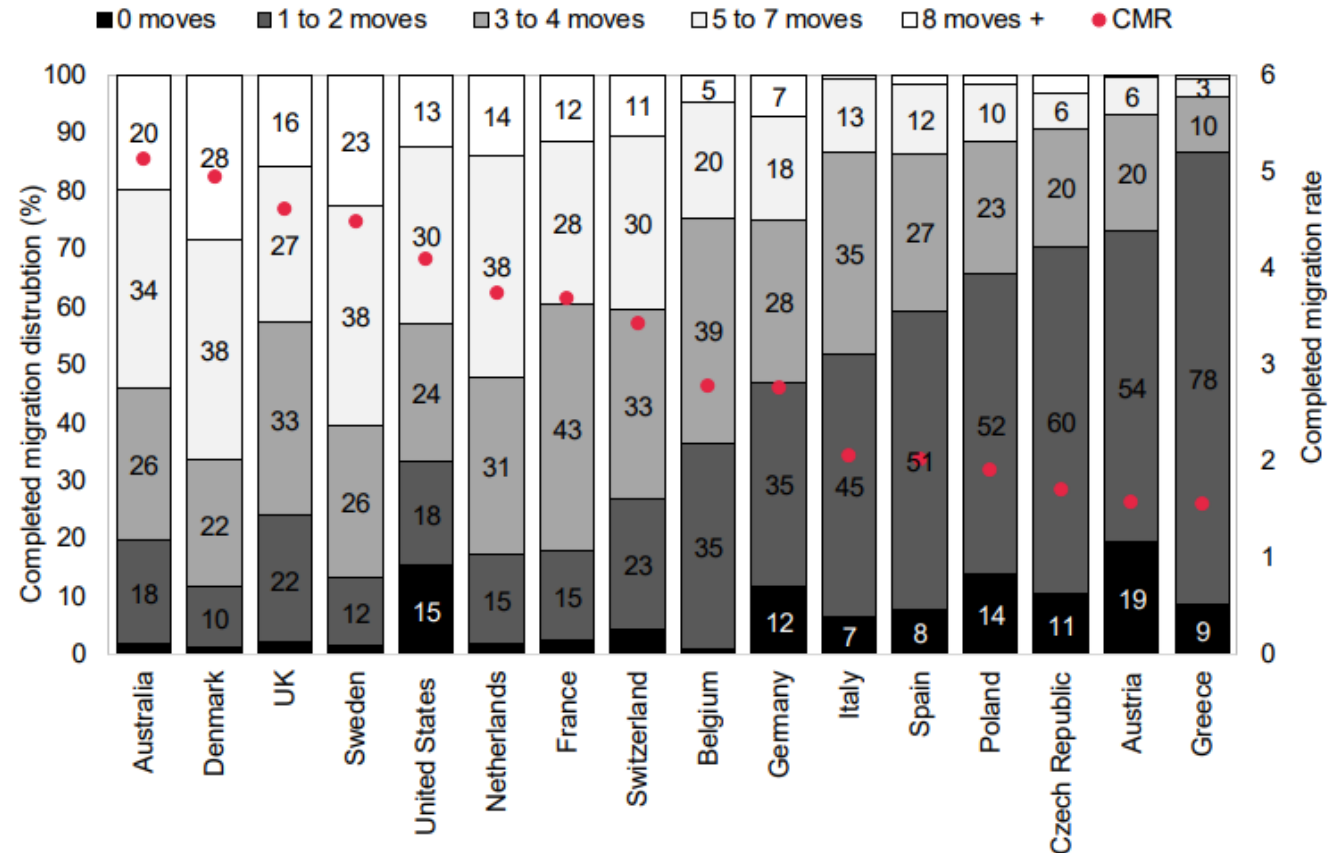
Return migration
accounts for 25% of
global migration flows
and transit migration 10%

Bernard (2017):

Older Europeans moved
between 5 times (Denmark)
and 1.6 times (Greece) in
early and mid-adulthood

Migration trends accounting for repeat moves

Bernard (2017):
Cohort measures of migration

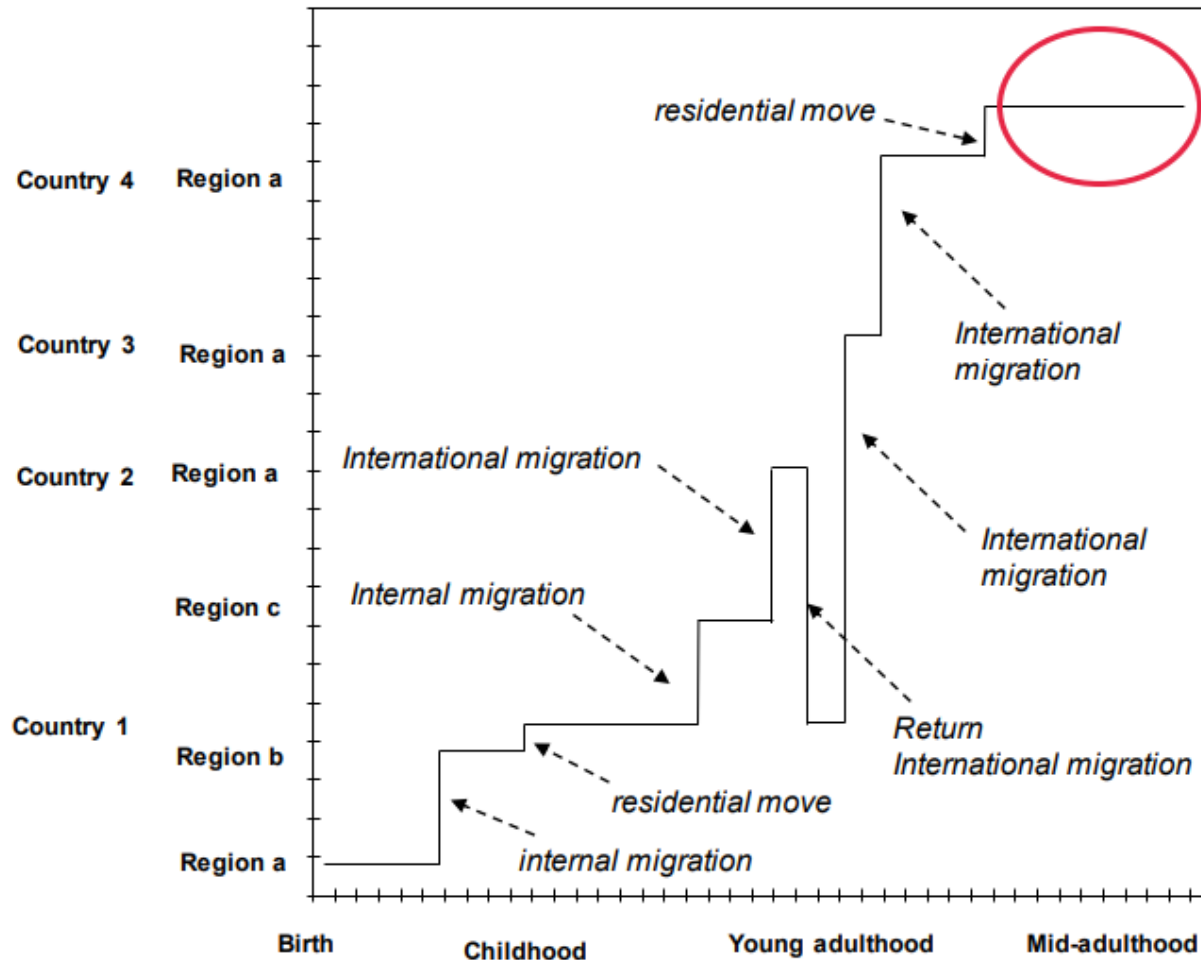


Source: Bernard et al. 2017, data from SHARE, HRS and LHH
Note: Average number of changes of address from 18 to 50 years of age, baby-boomers born between 1946 and 1964

Cohort measures offer complementary evidence on mobility trends net of tempo effects (e.g. postponement) and addressing repeat or order of moving

E.g. Country variation in internal migration rates is related to variation in age at first-order moves

Observation: Spatial mobility trajectories are diverse and complex

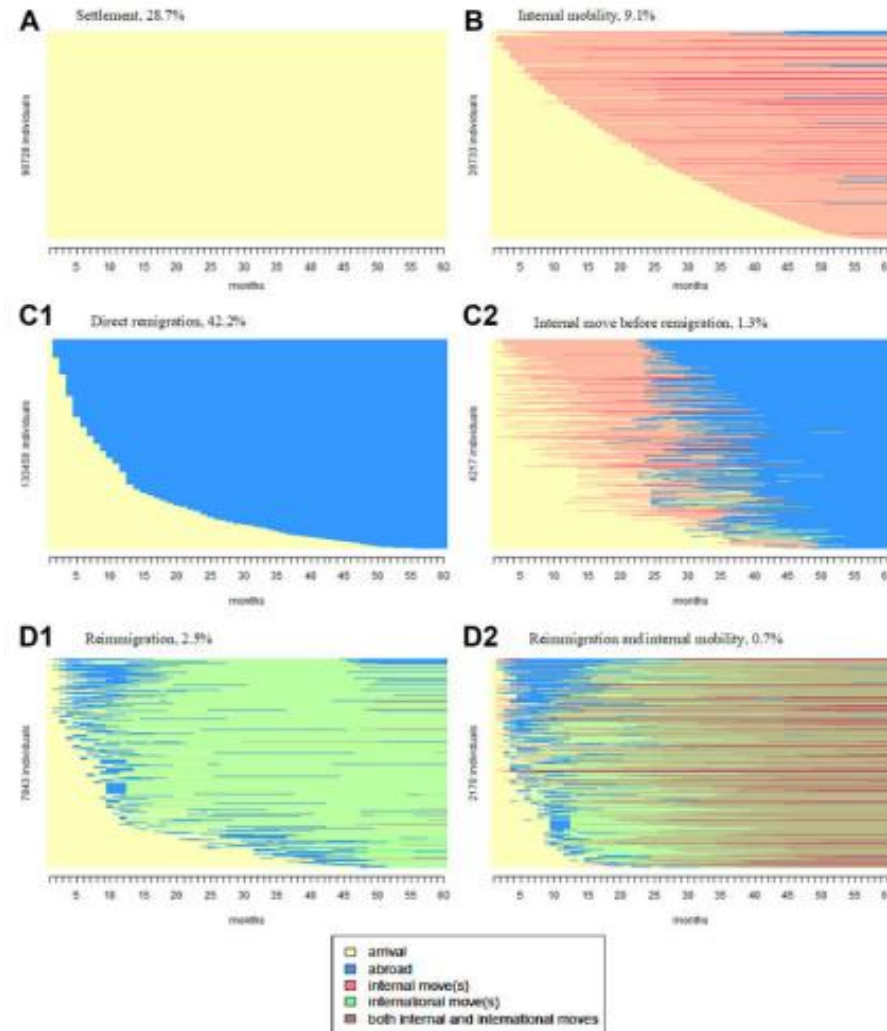


Example of a fictitious individual trajectory

Descriptions of regularities in spatial mobility trajectories

Zufferey et al (2021):

The many forms of multiple migrations



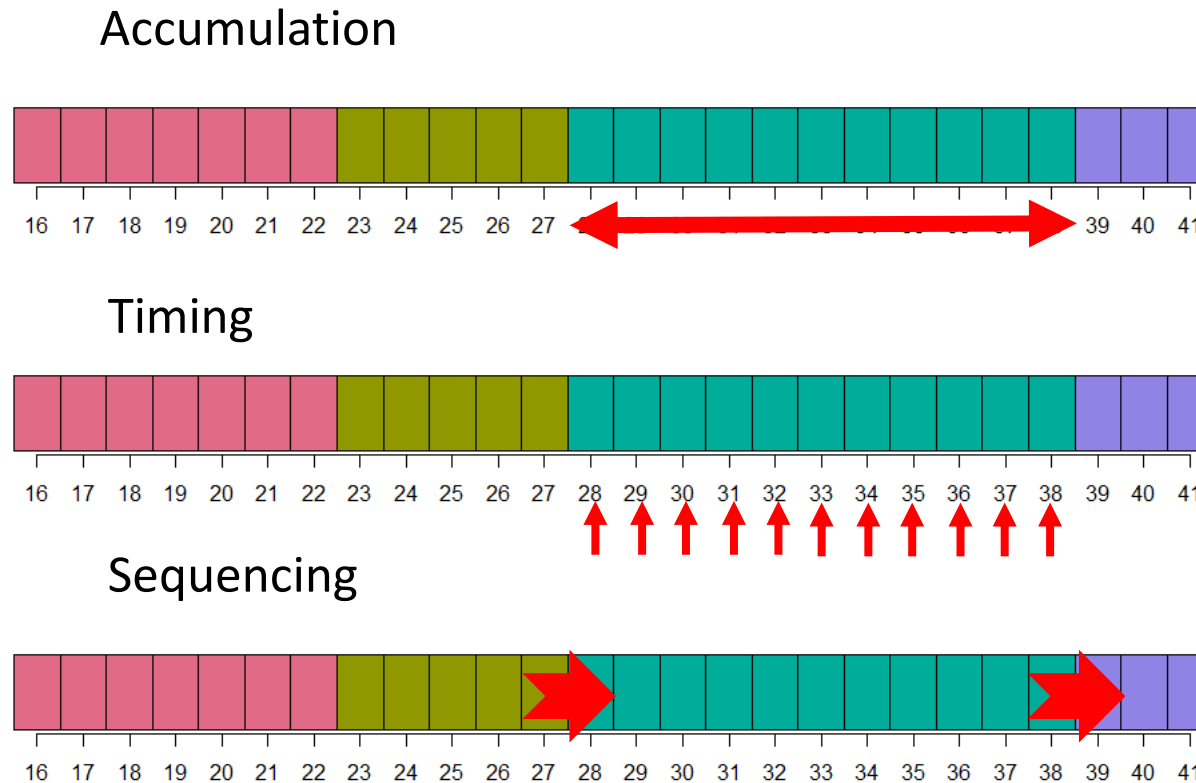
Used sequence analysis on linked longitudinal register data to unveil high heterogeneity in internal and international mobility practices among migrants in Switzerland

Typical trajectory patterns ranged from direct and definitive settlement (more common) to serial or chronic mobility (least common)

Biographical experiences and impacts on outcomes

Troost et al (2022):

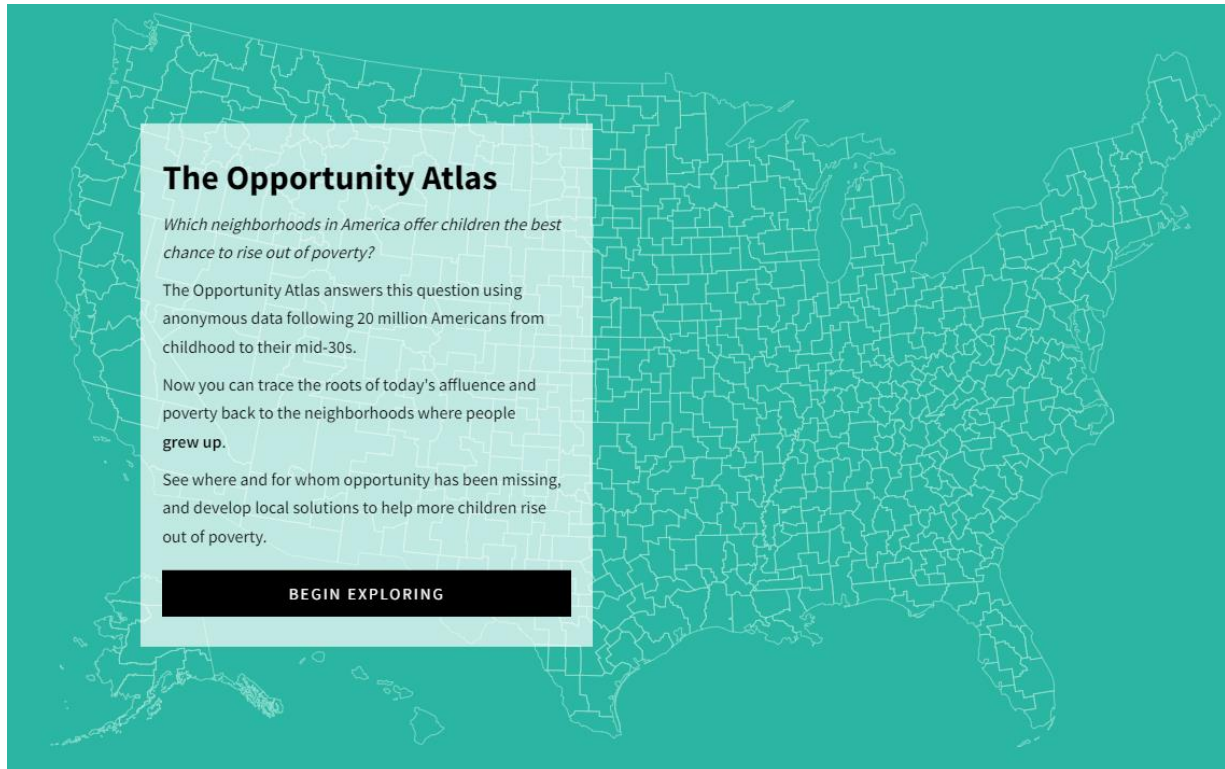
The role of exposure to neighbourhood poverty on educational attainment



The relationship between neighbourhood exposure and educational attainment depends on how exposure is conceptualised and measured

Choosing just one dimension could lead to under- or overestimation of the importance of neighbourhood exposure

Observation: Individuals' backgrounds shape opportunities and outcomes over the life course



The Opportunity Atlas

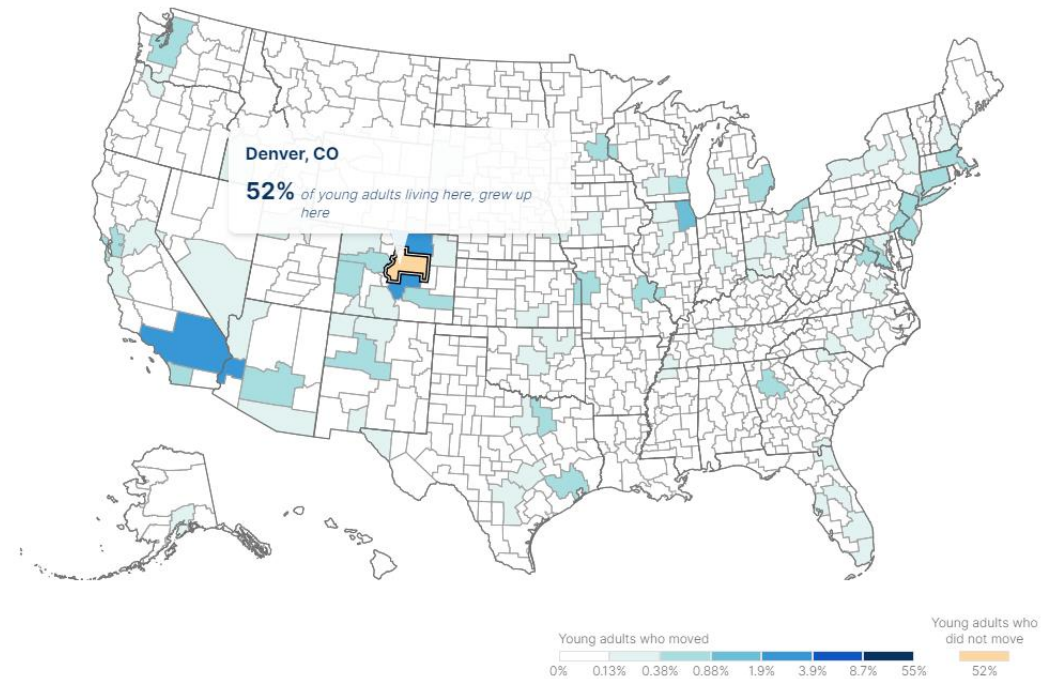
Which neighborhoods in America offer children the best chance to rise out of poverty?

The Opportunity Atlas answers this question using anonymous data following 20 million Americans from childhood to their mid-30s.

Now you can trace the roots of today's affluence and poverty back to the neighborhoods where people grew up.

See where and for whom opportunity has been missing, and develop local solutions to help more children rise out of poverty.

BEGIN EXPLORING



Childhood background and intergenerational reproduction

“Those who moved more often as children and adolescents moved more often as adults, and were more likely to move in response to several life course transitions”

Myers (1999):

Residential mobility as a way of life: Evidence of intergenerational similarities.

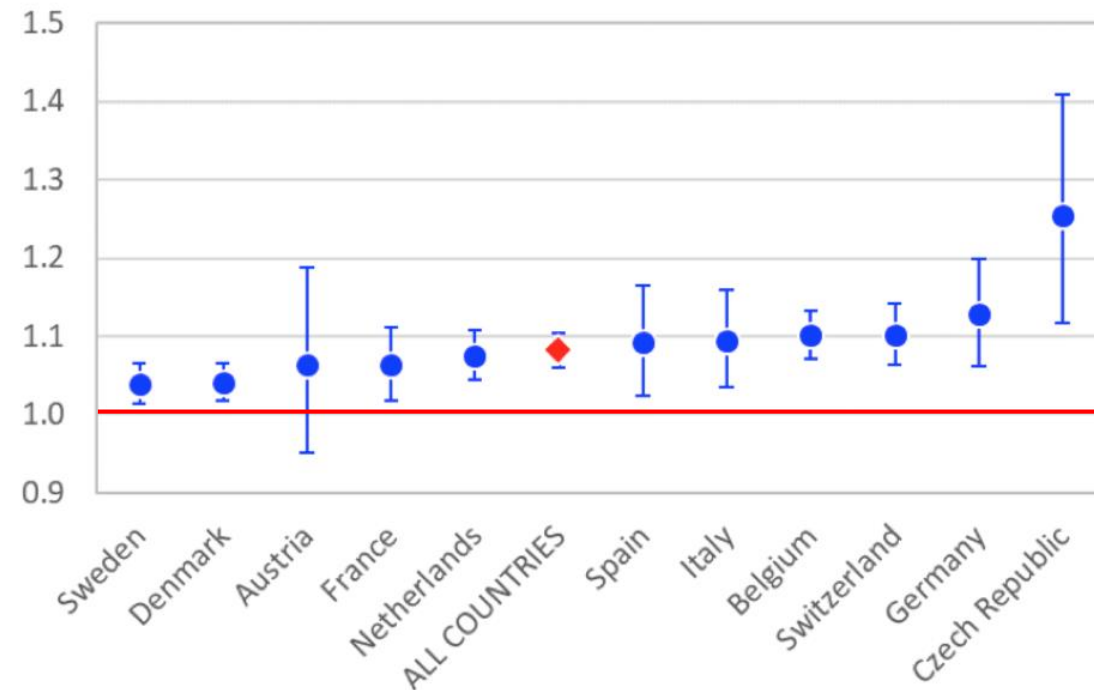
Childhood background and intergenerational reproduction

Bernard and Vidal (2021):

Do childhood migration experiences affect migration behaviour in adulthood?

- Childhood moves (ages 0-17) significantly increase the likelihood of moving in adulthood (ages 18-50)
- Particularly true in countries where moving (as a child) is less common

Figure 2 Incidence rate ratios of the number of moves in childhood on adult moves, 1946-1957 birth cohorts



*Analysis based on retrospective records for representative samples of individuals aged 50+ in 11 European countries

Childhood background and intergenerational reproduction

Hermansen et al (2022):

Do neighbourhood contexts in adulthood among descendants of immigrants resemble those of their childhood?

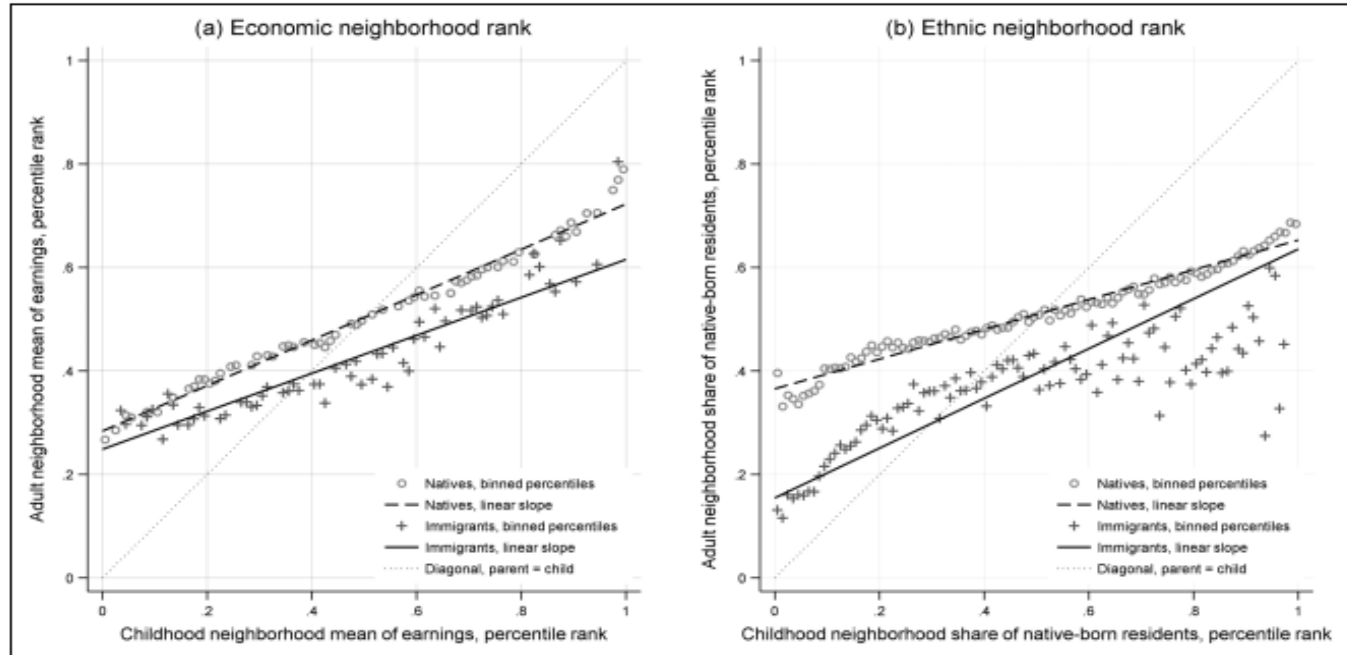


Figure 3. Economic and ethnic neighborhood ranks in adulthood by childhood neighborhood rank separately for natives and immigrant descendants.

- Immigrant descendants persist in socio-spatial context, feat. higher economic disadvantage and ethnic concentration
- Childhood neighborhood explains immigrant-native gaps in neighborhood attainments (well over individual's social position)

Mobile lives in space and time

Spatial mobility as

- a temporal process that is recurrent, repeated and reinforcing
- interdependent forms of movement at multiple spatial scales
- underlying biographical and inter-generational mechanisms

Growing calls to adopt a *broader* life course perspective in spatial mobility research:

Findlay et al. 2015; Coulter et al 2016; Vidal and Huinink 2019;
McCollum et al. 2020; Bernard 2022

IUSSP Panel on lifetime migration (2023-2025)

Objectives:

- Recognize the heterogeneity of migration behaviors in individual lives, from lifetime sedentarism to repeat migration
- Integrate research on internal and international migration
- Establish how migration trajectories underlie individual and societal wellbeing

International Union for the
Scientific Study of Population
(IUSSP)



Check out the website
(<https://www.iussp.org/en/panel/lifetime-migration>)

IUSSP Panel activities

- Training workshops
 - “Mining migration trajectories with R” (International Forum on Migration Statistics)
 - “Feature selection models with R” (online)
- Special sessions at international conferences
 - Conference of British Society for Population Studies, Newcastle
 - International Population Conference, Brisbane
- Webinars
 - “International migration data” (IUSSP)
 - “Long-term impacts of spatial mobility on health” (Asian Demographic Institute)
- Scientific workshops
 - One-day workshop at the European Population Conference, Edinburgh



LIFELONGMOVE

Understanding spatial mobility
from early life into adulthood

**European Research Council
Consolidator Grant (CoG)**

Ref: 101043981

Period: Jan 2023 – Dec 2027



European Research Council
Established by the European Commission

Objectives:

How is spatial mobility “lived”?

- To document the diverse and complex pathways of lifelong mobility (from childhood into adulthood)

How earlier life influences movement?

- To establish whether and how childhood mobility experience influence spatial mobility over the life course

What are the consequences of lifelong mobility?

- To document the impacts of lifelong mobility on life conditions

1 postdoctoral & 1 predoctoral researchers

- **4-year positions** at the Universitat Autònoma de Barcelona – Centre d’Estudis Demogràfics
- Expertise using quantitative methods on complex and large longitudinal data
- Interests in spatial mobility, social inequality, and lifecourse is an asset

Thank you!

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