Title: The Role of Repeated Moves and Heterogeneous Geographic Mobility Trajectories on Occupational Outcomes

Extended abstract

Deciding to leave one's home or region is often difficult, but typically driven by the pursuit of a better quality of life. The prevailing view in the literature is that geographic mobility (GM, from now on) or migration is primarily motivated by economic factors and is closely tied to social mobility, acting as a route to better employment prospects (Blau and Duncan, 1967). GM broadens individuals' job search areas, enabling them to overcome the limitations of their local job markets and access improved opportunities (Huinink et al. 2014). Empirical evidence generally supports this perspective, showing that GM is, on average, positively linked to socio-economic outcomes, such as higher occupational status or avoiding occupations with the lowest status or unemployment (Mulder & Van Ham, 2005; Nowok *et al.*, 2013; Ballarino and Panichella, 2021). However, this average effect conceals considerable variation *between* and *within* different population groups. A rather more developed research highlighting differences *between* popultation groups points to significant variations in employment status, occupational achievement, and income levels associated with GM, influenced by factors like gender, social background, and geographic origin (Vidal and Huinink, 2019; Ballarino and Panichella, 2021; Panichella and Cantalini, 2023).

Less attention has been paid to differences *within* population groups, which emphasize that the associations between GM and occupational outcomes can vary over the life course, with noticeable differences among individuals of the same population groups. Advances in longitudinal data insfrastructure and adequate methods (such as fixed-effects models, among other within-individual estimators) to assess these data enabled empirical research to address the temporality of these associations, suggesting that GM might not immediately and permanently affect wage growth or occupational attainment but effects can also be short-term, postponed, or even anticipated and selective based on individual characteristics (Kratz and Brüderl, 2013, Kratz and Netz 2016, Ballarino and Panichella 2021). While these research has improved the notion of heterogeneity in the study associations within rather than between individuals and groups, the literature has not fully acknowledged two crucial aspects of *within* variation: (i) GM is repeated and reinforces itself over the life course (Bernard 2017; Bernard and Vidal 2020), where prior moves affect the conditions that determine subsequent migration and life outcomes; (ii) it follows that the (multiple) GM experiences over individual life courses can have heterogeneous impacts on outcomes based on the timing of moves relative to critical life stages, the (multiple) motivations or reasons associated to changes in life circumstances, the direction with regards to moves onward or returns, or the geographical scope or distances covered (Bernard, 2023; Mulder and van Ham, 2005; Vidal and Huinink 2019). In this paper, I argue how ignoring that moves are repeated and the multifaceted nature of GM over individual life courses is a limitation that undermines our understaning of the associationes between GM and occupational attainment, among other relevant life otucomes.

This study aims to improve our understanding of the role of GM in social stratification by examining whether and how GM trajectories matter. We aim to:

1. Re-assess the causal associations between GM and occupational outcomes by considering repeated moves over the life course, thus treating geographic mobility as a time-varying exposure.
2. Unpacking the heterogeneity in geographic mobility experiences in individual trajectories underlying occupational outcomes by examining differences in frequency, age, direction, and type of moves that underlie geographic mobility trajectories.

Data, sample, measures and analytical strategy

For the empirical analyses, we use data from the Survey of Ageing, Health, and Retirement in Europe (SHARE), a series of nationally representative longitudinal surveys of the population aged 50 years and older. In Wave 3 (2009/10) and 7 (2017/18), the SHARE survey retrospectively collected complete life histories of respondents in 26 European countries. Retrospectively collected data cover various life domains, including detailed records of residential and employment trajectories. Data collection utilized life history grids, which visually mapped survey responses from birth to the present, aiding respondents in recalling past jobs and relocations (Belli 1998; Blane 1996). Although recall bias is a common concern with retrospective data, particularly for events from the distant past, recent validation studies have demonstrated that retrospective data can accurately capture significant life course events, like geographical mobility or long-distance moves, when compared with longitudinal data sources (Börsch-Supan 2020).

We limit our sample to individuals who completed the life histories questionnaires in either Wave 3 or Wave 7. In Wave 3, data were gathered from respondents across 14 countries: Austria, Belgium, Czechia, Denmark, France, Germany, Greece, Italy, Ireland, Netherlands, Poland, Spain, Sweden, and Switzerland. Wave 7 included respondents from 14 additional countries—Bulgaria, Croatia, Cyprus, Estonia, Finland, Hungary, Latvia, Lithuania, Luxembourg, Malta, Portugal, Romania, Slovakia, and Slovenia—that joined SHARE between Waves 4 and 7, and did not participate in Wave 3. Additionally, Wave 7 incorporated refreshment samples from the original 14 countries, drawn between Waves 4 and 6. We further narrow our sample to include only individuals born in the participating survey countries, aiming to avoid issues related to left truncation. However, we retain individuals who have moved between survey countries or who have temporarily left and then returned to a survey country, as this approach allows us to capture the full scope of geographic mobility, including (temporary) international migration. Finally, we exclude respondents who are occupied in the armed forces because geographic mobility is partly shape by their occupation. The final analytic sample comprises over 20,000 individuals.

Employment status and occupational attainment are assessed using three indicators, following a similar approach to Ballarino and Panichella (2021). These indicators are derived from retrospective job episode data and the corresponding ISCO-08 codes. The first indicator is employment status, coded as 1 if the respondent is employed and 0 if unemployed or inactive. The second indicator identifies upper-class occupations, coded as 1 if the respondent is in a high-status job—specifically in the service or higher-grade routine non-manual categories as defined by the EGP class scheme (EGP I-II-IIIa,

Erikson & Goldthorpe, 1992)—and 0 if in a lower-status job. The third indicator measures the avoidance of working-class occupations, coded as 1 if the respondent is in a non-working-class job and 0 if in a working-class role, defined as skilled and unskilled manual labor in the industrial sector (EGP V-VI-VIIa) or agricultural work (EGP IVc-VIIb). These indicators are calculated annually for each respondent from ages 25 to 50, representing their prime working years. For the two occupational attainment indicators, the last known occupation is imputed in cases of unemployment or inactivity. As a robustness check, we will also estimate occupational attainment by excluding periods of unemployment and inactivity from the analysis.

Geographic mobility is assessed as changes in the region of residence, both within and across the 26 study countries, based on data from up to 30 address changes for periods of six months or longer, starting from birth. Each move is recorded by the NUTS-2 region, a classification that captures spatial and social heterogeneity across regions and standardizes internal migration measurement across countries (Bell et al. 2002; Courgeau et al. 2012). NUTS-2 regions align with the administrative divisions commonly used to study internal migration within the EU (Van der Gaag and van Wissen 2008). We track geographic mobility for each respondent from birth to age 50, allowing us to examine how early mobility influences subsequent moves. To capture the diversity in mobility trajectories, we define specific measures: the number of moves (0, 1, 2, 3+), the life stage at which moves occur (ages 0-17, 18-29, 30-50), the direction of moves (onward or return), and the scope of moves (internal vs. international).

Conventional statistical methods to control for confounding in observational studies can introduce bias in the presence of time-varying confounding affected by past exposure due to over-adjustment and selection bias. Therefore, we use G-methods, which are robust to time-varying confounding.

Preliminary results, further work and contribution

Preliminary analysis show that time-varying confounding are affecting the associations between (repeated) moves and occupational attainment in the prime working years. We find that not accounting for previous moves, and not considering that prior moves affect confounders are upwardly biasing the study associations. Further work will further elaborate on these results and address the second research objective.

This study makes several important contributions. First, we enhance our understanding of the outcomes of geographic mobility by acknowledging that migration is repeated over the life course and addressing that prior moves can influence the oft-examined associations between the most recent move observed and the study outcome. Relatedly, we innovate by using G-methods to properly address the issue of time-varying confounding. That way, we contribute to get better estimates of socio-economic outcomes of migration in contexts where repeat moving over the life course is salient. Last, we unpack the heterogeneity of geographic mobility experiences underlying migration outcomes by examining the dimensions of frequency, life stage, direction, and geographical scope of movement. Innovatively, we consider internal and international moves over the life course as determinants of occupational attainment within a single research design. This furthers knowledge on the complementary and substition role of internal and international migration. Overall, our novel approach

reveals that previous studies may conflate relevant differences in geographic mobility experiences that are critical for social stratification. The study informs policy-relevant debates that are too often geared towards the outcomes of movers and stayers, and ignore the plurality of migration and socio-spatial dynamics between and over individuals' lives.

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