

Leaving, moving, returning?

Identifying internal migration patterns of rural young adults using sequence analysis

Tineke Reitsma, Bettina Bock, Femke Cnossen, Tialda Haartsen

University of Groningen
Faculty of Spatial Sciences

Introduction

Growing up in a rural area offers both advantages and challenges for young adults. Rural areas are often valued for their safety, social cohesion, access to outdoor space, and the small scale of their communities (Niedomysl & Amcoff, 2011; Niedomysl & Hansen, 2010; Von Reichert et al., 2014). However, as young adults transition into new life stages, they may encounter limited opportunities with regards to higher education, diverse career prospects, while wishing to obtain new experiences (Drozdowski, 2008), which can be found abundantly in cities (Storper & Manville, 2006). These limitations lead to some rural young adults leaving their hometowns in search of opportunities elsewhere – a trend that has significant implications for both individuals and the rural communities they leave behind. For rural areas, this outmigration intensifies existing challenges, particularly in regions already facing high levels of population ageing and depopulation (Stockdale, 2004). The leaving of young adults accelerates these processes and puts additional pressure on rural labour markets.

This research studies the migration patterns of rural young adults using administrative data during the entire period between the ages of 11 and 35. Using sequence analysis, five distinct migration patterns are uncovered: (1) returning to the rural home area and staying, (2) leaving again after returning, (3) moving out once and settling in the new destination, (4) onward migration beyond the first destination, and (5) delayed outmigration at a later age. We find that the five types of leavers differ substantially in their timing of migration and sociodemographic characteristics. This insight is valuable for rural areas, as it highlights opportunities to re-attract young adult leavers. The findings offer guidance for rural policy initiatives by identifying when and how to effectively target different types of leavers.

Theoretical background

Rural areas are seeking ways to counteract the negative consequences of youth outmigration. One approach is actively trying to re-attract young adult leavers through targeted return initiatives. Such return initiatives can take various forms, e.g. yearly reunions, job markets, and providing information to (potential) returnees. When considering the potential success of such return initiatives, the intentions to return are shaped by everyday practices of maintaining contact, feelings of belonging, and perceptions of job opportunities, all of which are aspects rural areas can foster through communication strategies and events (Mærsk, 2022). Mærsk (2022) demonstrates that although the events are not sufficient to result in return, social connections and reminders of friends from their home region serve as indirect encouragement, by enhancing the sense of belonging. Likewise, examining return initiatives in Germany, Meister et al. (2022) also discovered that return initiatives stimulate interregional return migration, particularly among individuals employed at the higher end of the wage distribution. This can be particularly advantageous for rural areas facing a lack of skilled labour, as the areas can potentially benefit by receiving a transfer of (tacit) knowledge from workers who gained professional experience and built up a network during their time away.

Understanding the potential of rural return initiatives requires to consider migration as a dynamic and ongoing process. On the individual level, migration is rarely a one-time event. Instead, it is often part of an ongoing process driven by mismatches between an individual's current and desired place of residence (Bernard & Kalemba, 2022; Bernard & Perales, 2021; Coulter et al., 2016; Niedomysl &

Amcoff, 2011), which evolve in response to life course developments (Mulder & Hooimeijer, 1999). Migration frequently coincides with key life events such as completing education, starting a family, pursuing employment opportunities, retiring, or responding to adverse life events (Drozdowski, 2008; Kooiman et al., 2018; Nedomysl & Amcoff, 2011; Spring et al., 2024; Von Reichert et al., 2014; Wall & Von Reichert, 2013; Zorlu & Kooiman, 2019). While some individuals move onward to larger cities, following a pattern of escalator migration (Fielding, 1992), others eventually return to places they have previously lived (Newbold, 2001), including their rural places of origin.

Recognizing and unravelling these patterns of migration offers an opportunity to better understand how, when and why people move. This might also help us understand how we can motivate people to return to the rural, e.g. with the help of return initiatives.

Methods and data

To uncover patterns of internal migration among all rural young adults in the Northern Netherlands born between 1984 and 1987, we use the Social Statistical Dataset (SSD), provided by Statistics Netherlands. From the data, we first observe an individual's residential location between ages 11 and 16 at the municipal level. Based on this, we define one's 'home municipality' – the municipality of origin. Consecutively, we are able to follow the migration behaviour of all individuals throughout their adolescence and into adulthood, between the ages 17 and 35. Every year, we observe an individual's residential location.

The empirical strategy consists of three main steps. First, we examine the annual migration behaviour of all young adults in our sample. Each year, every individual is assigned one of five possible states: stay in the home municipality, move to a first new municipality, move onward to a subsequent municipality, return to home municipality, or leave home municipality again after returning. Next, we adopt a sequence analysis approach to categorise the migration trajectories of those who have moved at least once (i.e. "leavers") into clusters. Those who have never left their home municipality (i.e. "stayers") are placed in a separate cluster. After establishing the clusters, we analyse them based on sociodemographic characteristics and geographic context using logistic regression.

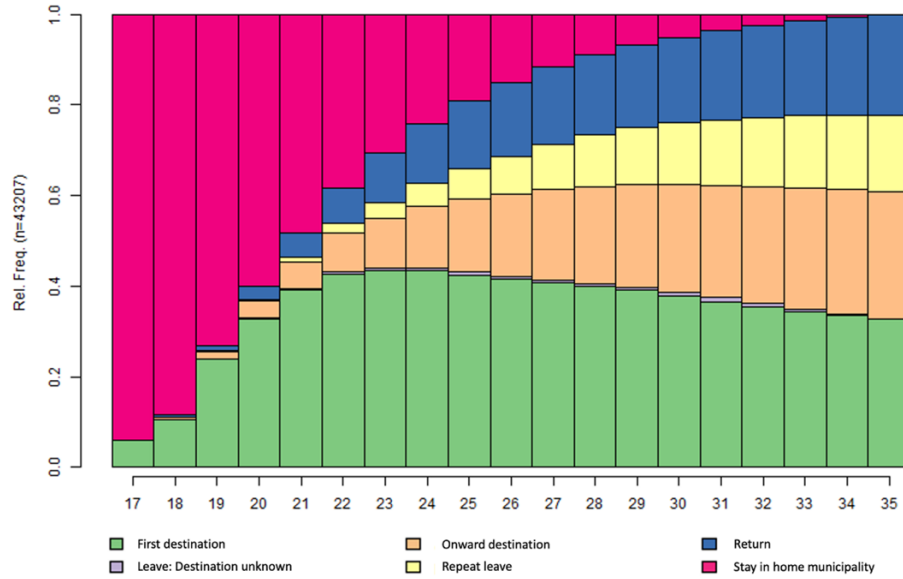
In the logistic regression, we explore an individual's age at the time of their first move, whether a move was to an urban or rural destination, and distance of the destination, measured based on the municipality of origin. This is done for the first, farthest, and final destination (this is the destination at age 35, which is the end of the observation period). We also assess one's sociodemographic characteristics based on household situation, parenthood, place of origin of partner, family background, level and field of education, and gender.

Preliminary results

The sequence analysis maps all migration trajectories of rural young adults. This is shown in Figure 1, where age is plotted on the x-axis, and the frequency of cases is plotted on the y-axis. The colors represent the different states.

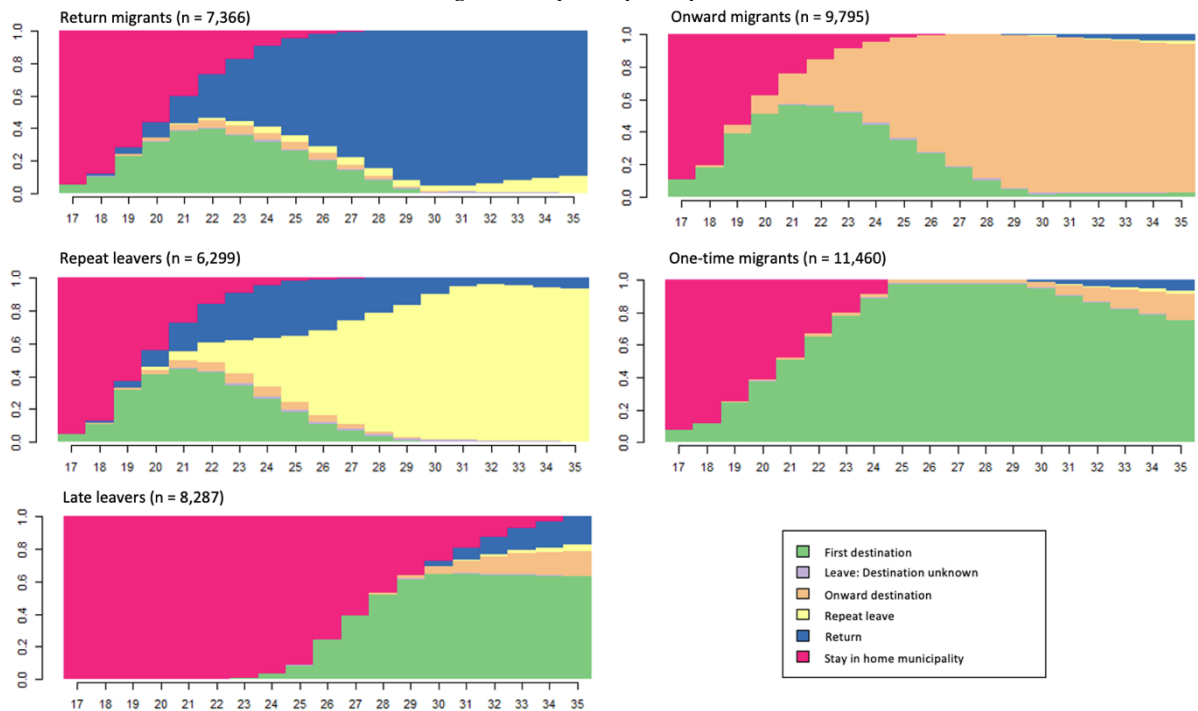
Based on the trajectories in Figure 1, the most similar migration trajectories are grouped into five clusters, representing the most common internal migration patterns. This is displayed in Figure 2. The clusters include (1) return migrants; (2) repeat leavers; (3) one-time migrants; (4) onward migrants; and (5) late leavers. A sixth category, those that stay in the same municipality throughout the observation period, is not included in the cluster analysis but is included in the explanatory analysis on sociodemographic characteristics and geographic context.

Figure 1: Sequence distribution plot



Studying the different clusters in Figure 2, the first cluster is characterised by high levels of return migration and referred to as the *return migrants*. These individuals leave their municipality of origin at an average age of 21.1 and often return after a short or, in some cases, extended period. Interestingly, most returnees move back from their first destination after leaving, with relatively few making multiple moves before returning.

Figure 2: Sequence plots by cluster



The second cluster consists of individuals who leave their rural municipality of origin, return for a short period, and leave again. This group, called the *repeat leavers*, leaves the municipality of origin for the first time at an average age of 20.5.

The third cluster comprises individuals who stay in their municipality of origin for an extended period before eventually leaving. These are termed the *late leavers*. They leave relatively late, at an average age of 28.8.

The fourth cluster captures individuals who undertake multiple moves, starting at a relatively young age. Referred to as the *onward migrants*, these individuals leave their municipality of origin at an average age of 20.2.

The fifth cluster comprises individuals who leave their municipality of origin in their early twenties and remain primarily in their first destination. Known as the *one-time migrants*, they leave at an average age of 21.3. While most individuals in this cluster remain in their first destination, a small proportion eventually move again after a relatively very long time in the first destination, with some eventually returning to the municipality of origin.

Next steps and preliminary conclusion

In the next steps, the observed patterns in the five clusters are further examined based on types of moves and age-related trends. Additionally, differences between individuals in the various clusters are analysed to determine what characterises each cluster.

Using the insights from sequence and cluster analysis, along with subsequent logistic regression analyses, we can better understand the migration behaviour of rural young adult leavers after their initial departure. This information is valuable for designing return initiatives, as it highlights that leaving the rural area is often just one step in a broader migration trajectory. Recognizing these consecutive moves presents an opportunity for rural areas to re-attract young adult leavers, though different strategies may be needed for different types of leavers and returners.

References

- Bernard, A., & Kalembe, S. (2022). Internal migration and the de-standardization of the life course: A sequence analysis of reasons for migrating. *Demographic Research*, 46, 337–354. <https://doi.org/10.4054/DemRes.2022.46.12>
- Bernard, A., & Perales, F. (2021). Is Migration a Learned Behavior? Understanding the Impact of Past Migration on Future Migration. *Population and Development Review*, 47(2), 449–474. <https://doi.org/10.1111/padr.12387>
- Coulter, R., Ham, M. V., & Findlay, A. M. (2016). Re-thinking residential mobility: Linking lives through time and space. *Progress in Human Geography*, 40(3), 352–374. <https://doi.org/10.1177/0309132515575417>
- Drozdowski, D. (2008). ‘We’re moving out’: Youth Out-Migration Intentions in Coastal Non-Metropolitan New South Wales. *Geographical Research*, 46(2), 153–161. <https://doi.org/10.1111/j.1745-5871.2008.00506.x>
- Fielding, A. J. (1992). Migration and Social Mobility: South East England as an Escalator Region. *Regional Studies*, 26(1), 1–15. <https://doi.org/10.1080/00343409212331346741>
- Kooiman, N., Latten, J., & Bontje, M. (2018). Human Capital Migration: A Longitudinal Perspective. *Tijdschrift Voor Economische En Sociale Geografie*, 109(5), 644–660. <https://doi.org/10.1111/tesg.12324>
- Mærsk, E. (2022). *There and Back Again: The intertwining of educationally related (im)mobility choices of young adults from peripheral regions with contemporary identity and place narratives* [University of Groningen]. <https://doi.org/10.33612/diss.232625632>
- Meister, M., Peters, J. C., & Rossen, A. (2022). Welcome back! The impact of ‘return initiatives’ on return migration to rural regions. *Journal of Economic Geography*, 24(5), 759–784. <https://doi.org/10.1093/jeg/lbae028>
- Mulder, C. H., & Hooimeijer, P. (1999). Residential relocations in the life course. In *Population Issues: An interdisciplinary focus*. Springer Science+Business Media.
- Newbold, K. B. (2001). Counting Migrants and Migrations: Comparing Lifetime and Fixed-Interval Return and Onward Migration. *Economic Geography*, 77(1), 23–40. <https://doi.org/10.1111/j.1944-8287.2001.tb00154.x>
- Niedomysl, T., & Amcoff, J. (2011). Why return migrants return: Survey evidence on motives for internal return migration in Sweden. *Population, Space and Place*, 17(5), 656–673. <https://doi.org/10.1002/psp.644>
- Niedomysl, T., & Hansen, H. K. (2010). What Matters more for the Decision to Move: Jobs versus Amenities. *Environment and Planning A: Economy and Space*, 42(7), 1636–1649. <https://doi.org/10.1068/a42432>
- Spring, A., Gillespie, B. J., & Mulder, C. H. (2024). Internal migration following adverse life events: Assessing the likelihood of return migration and migration toward family. *Population, Space and Place*, 30(3), e2711. <https://doi.org/10.1002/psp.2711>
- Stockdale, A. (2004). Rural Out-Migration: Community Consequences and Individual Migrant Experiences. *Sociologia Ruralis*, 44, 167–194. <https://doi.org/10.1111/j.1467-9523.2004.00269.x>
- Storper, M., & Manville, M. (2006). Behaviour, Preferences and Cities: Urban Theory and Urban Resurgence. *Urban Studies*, 43(8), 1247–1274. <https://doi.org/10.1080/00420980600775642>
- Von Reichert, C., Cromartie, J. B., & Arthun, R. O. (2014). Reasons for Returning and Not Returning to Rural U.S. Communities. *The Professional Geographer*, 66(1), 58–72. <https://doi.org/10.1080/00330124.2012.725373>
- Wall, T., & Von Reichert, C. (2013). Divorce as an Influence in Return Migration to Rural Areas. *Population, Space and Place*, 19(3), 350–363. <https://doi.org/10.1002/psp.1719>
- Zorlu, A., & Kooiman, N. (2019). Spatial trajectories in early life: Moving on or returning home? *Population, Space and Place*, 25(7), e2268. <https://doi.org/10.1002/psp.2268>