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### No place like home?

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DOI:  
[10.33612/diss.178356380](https://doi.org/10.33612/diss.178356380)

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*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2021

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

de Jong, P. (2021). *No place like home? Residential mobility and housing preferences of older adults in the Netherlands*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen.  
<https://doi.org/10.33612/diss.178356380>

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# Chapter 2

## MOVING UP AND DOWN THE URBAN HIERARCHY: AGE-ARTICULATED INTERREGIONAL MIGRATION FLOWS IN THE NETHERLANDS

This chapter is reprinted from: De Jong, P.A., Brouwer, A.E., & McCann, P. (2016). Moving up and down the urban hierarchy: age-articulated interregional migration flows in the Netherlands. *The Annals of Regional Science*, 57(1), 145-164. <https://doi.org/10.1007/s00168-016-0772-7>. Minor editorial changes have been made for a better fit with the style of the thesis.

# Abstract

The 'age schedule of migration' has been studied fairly extensively. Yet, its regional implications have received only limited attention. The highly cited seminal paper of Plane and Jurjevich (2009) demonstrated in a novel manner on the basis of US Census data that, when interregional migration flows are disaggregated by age, radically different patterns of net population redistribution are observable in the sense of upward and downward movements within the urban hierarchy of the USA. This study aims to demonstrate how interregional migration flows play out in a different geographic setting by replicating the methodological approach of Plane and Jurjevich (2009) in the case of The Netherlands, a country with a very different urban system and spatial population pattern to the USA. Our aim is to identify whether the differing geographical context leads to different upward and downward movement. The most notably marked flows or 'demographically effective' flows in the Netherlands are the movements made by young adults and older adults aged 75 and over. We also observe recently emerging differences in the migration patterns of retirees, with the '75 and older' age cohort oriented towards smaller towns and rural areas, while the '65-74' age cohort are increasingly oriented towards urban areas. In addition, we comment on the possible consequences of these differing patterns of age-articulated interregional flows when allied with the emerging demographic changes.

Keywords: internal migration, population distribution, urban hierarchy, ageing, the Netherlands

## 2.1. Introduction

From previous research, it is known that migration propensities vary greatly over the life course (e.g. Rossi, 1955; Warnes, 1992a; Fischer & Malmberg, 2001). As such, migration is regarded as an age-selective process, with young adults being the most mobile group (Bernard et al., 2014). Typically the propensity to move peaks at young age, declining steadily with increasing age, potentially rising again around the age of retirement. The propensities of people to move at different stages in life constitutes such a strong empirical regularity (Rogers et al., 1978; Rogers & Castro, 1981), that it is regarded as an almost universal pattern (Fischer & Malmberg, 2001) – as depicted by the widely-used ‘age schedule of migration’ (Wilson, 2014). Figure 2.1 shows a stylized pattern of the age schedule of migration.

Underlying the regularities in the age schedule of migration is a collection of life course transitions (Warnes, 1992b; Rowland, 1979; Mulder, 1993). Many of these life course transitions occur at young age, as individuals and couples move for employment, higher education, partnering and so on, making those years ‘demographically dense’ (Rindfuss, 1991). From previous studies it is known that as adults pass through their thirties and forties, mobility progressively falls (see among others Plane et al., 2005). At this stage, good jobs, mortgages, children settled in school, and social networks act as ‘locational anchorages’, which reduce mobility (Wilson, 2014). In general, the declining migration intensities of children and teenagers are tied to the declining intensities of their parents (Plane & Jurjevich, 2009).

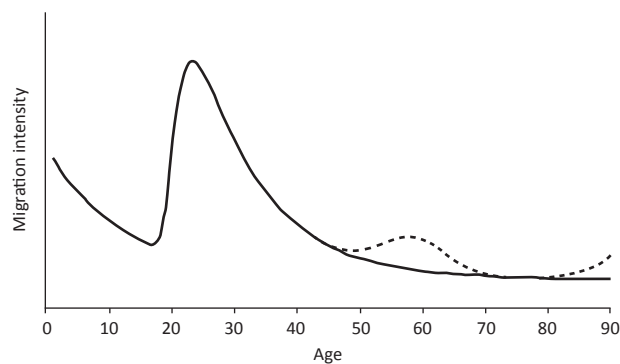


Figure 2.1 Age schedule of migration (with kind permission from Springer Science+Business Media: Applied Spatial Analysis, doi:10.1007/s12061-014-9124-0, 2014, page 2, Wilson T, Figure 1)

A renewed impulse for mobility takes place when the transition into ‘empty-nester’ status arises (Plane & Jurjevich, 2009). At this stage, some empty-nester couples, freed from the locational ties of employment and their children’s schooling, undertake moves to scenic

rural locations, favourite holiday areas, or to be close to family (as shown by the dashed line in Fig. 2.1) (Haas & Serow, 2002; Wilson, 2014). It is often thought that the traditional retirement age of 65 is the peak age of elderly migration, but much of the influx actually seems to occur at an earlier age (e.g. Bloem et al., 2008; Andersson & Abramsson, 2012).

Generally, three types of moves are typical for elderly migration (Litwak & Longino, 1987). The first type of movement (i.e. retirement moves) entails the relocation of older adults after retirement and is motivated by a desire for amenities and comfort. The second type (i.e. comfort moves) centres on older adults moving closer to children or other family members able to help with care when one becomes less able to manage everyday tasks due to increased disability or worsening health (Pope & Kang, 2010). Finally, a rise in mobility is sometimes seen at the highest ages (as shown by the second dashed line in Fig. 2.1). At this stage, older adults might relocate to a nursing home or other institutional setting when care needs increase and institutional care is required because family caregivers are no longer able to provide the appropriate level of support (i.e. care moves) (Litwak & Longino, 1987; Longino et al., 2008).

While the 'age schedule of migration' has been studied fairly extensively, its regional implications have received only limited attention (Plane, 2012). Yet, the passage through the life course not only results in different age-specific propensities to move, but also results in shifting likelihoods of residing in larger or smaller settlements. In 2009, Plane and Jurjevich demonstrated that, when interregional migration flows are disaggregated by age, quite different patterns of net upwards and downwards population redistributions operate within the urban hierarchy in the USA. Following this line of reasoning, interregional migration can therefore be understood and analysed as a phenomena closely linked to the structure of the urban hierarchy (Korpi et al., 2011). Instead, Bell (1995) had previously found distinct variations in interregional migration profiles in Australia depending not only on the distance of movement, but also the direction of flows within the settlement hierarchy. More recently, Bernard et al. (2014) observed considerable cross-national differences in interregional migration profiles among 25 countries around the world, and confirmed distinctive regional geographies.

This study therefore aims to demonstrate the regional implications of the 'age schedule of migration' in the Netherlands. By replicating the highly original methodological approach of Plane and Jurjevich (2009) in a non-American context, we are able to demonstrate how interregional migration flows play out in a different geographic setting. A descriptive overview of the Dutch setting will be presented in the next section; then, the data available will be outlined. Next, we detail how the relative propensity to migrate between Dutch regions systematically varies with age, and report on the interregional migration flows

up and down the Dutch urban hierarchy. In addition, we focus on the likely interactions and possible consequences of these mobility patterns when combined with demographic changes, and in particular the ageing of the Dutch population.

## 2.2. Empirical setting and data

### 2.2.1. The urban hierarchy in the Netherlands

The Netherlands is a highly urbanised and densely populated country within Europe. Rural regions in the Netherlands are relatively close to an urban centre in geographical terms and are becoming more connected by increased commuting between both regions (Delfmann et al., 2014). The OECD defines those areas with a population density below 150 inhabitants/km<sup>2</sup> as rural (OECD, 2008). According to this definition, rural areas do not exist in the Netherlands. This, however, does not correspond to the common perception among the Dutch themselves (Delfmann et al., 2014). The northern part of the county, for example, is generally considered to be a typical rural area (Haartsen, 2002; OECD, 2005, 2008). Therefore, we propose a different approach based on a residential density index, which is frequently used in Dutch policy (e.g. Steenbekker et al., 2008), but also in scientific papers (e.g. De Groot et al., 2011). The residential density index uses the concentration of human activities such as living, working and utilizing amenities as indicators of urbanisation: the lower the concentration of these activities, the lower the level of urbanisation (Haartsen, 2002). The relationship between urban population and residential density is well-known in the urban economics literature (McCann, 2013).

Table 2.1 Five levels of urbanity in the Netherlands, based on the residential density

| Level                | Density                              | Number of municipalities | Total population (2012) |
|----------------------|--------------------------------------|--------------------------|-------------------------|
| Extremely urbanised  | 2,500 surrounding addresses or more  | 14                       | 3,301,173               |
| Strongly urbanised   | 1,500 to 2,500 surrounding addresses | 62                       | 4,655,068               |
| Moderately urbanised | 1,000 to 1,500 surrounding addresses | 86                       | 3,390,263               |
| Hardly urbanised     | 500 to 1,000 surrounding addresses   | 145                      | 3,571,135               |
| Not urbanised        | Fewer than 500 surrounding addresses | 108                      | 1,812,709               |






The levels of the Dutch urban hierarchy are based on the residential density in each municipality. For each address within a given municipality, the average number of addresses per squared kilometre within a circle with a radius of one kilometre is calculated (Den Dulk et al., 1992). The five levels of the Dutch urban hierarchy are based on the class limits 2500, 1500, 1000 and 500 addresses per squared kilometre and listed in Table 2.1. Figure 2.2 is a map showing the five-level hierarchy in the Netherlands.

## Urban hierarchy

Level of urbanity, The Netherlands, 2012

### Legenda

#### Urban hierarchy

-  Extremely urbanised
-  Strongly urbanised
-  Moderately urbanised
-  Hardly urbanised
-  Not urbanised

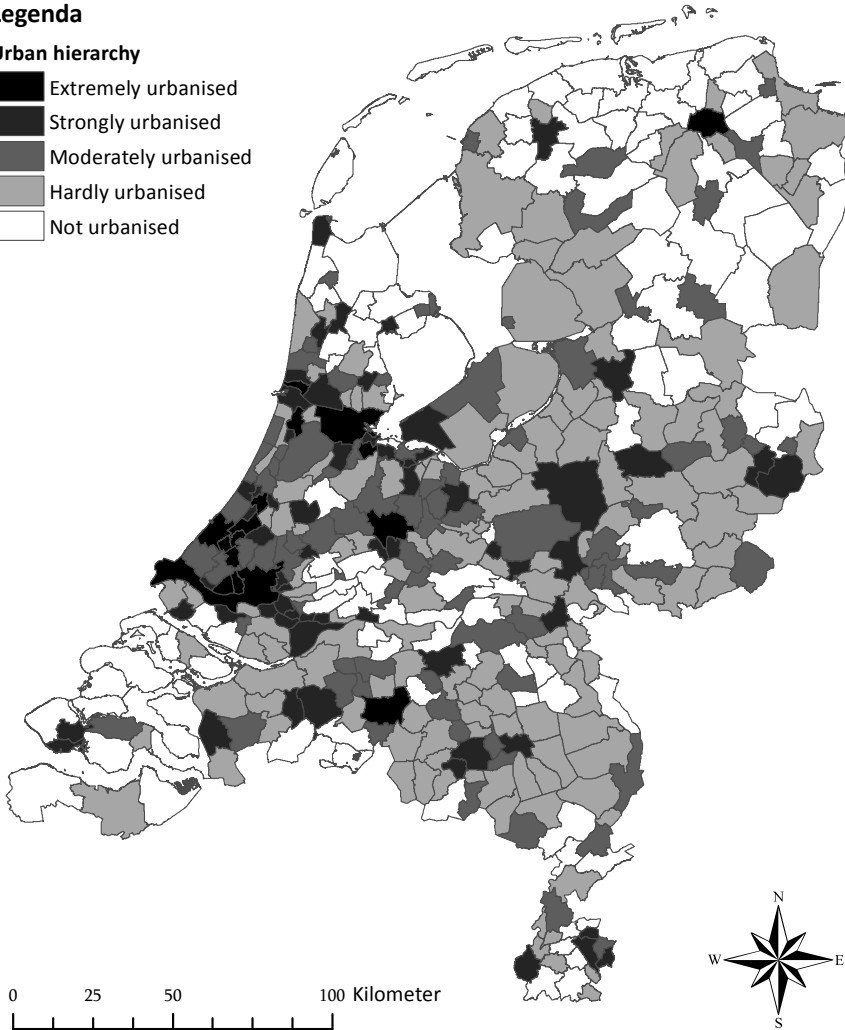


Figure 2.2 Urban hierarchy used in the study

### 2.2.2. The residential housing market in the Netherlands

Before looking at the interregional migration patterns within the Netherlands, it seems appropriate to look at the main factors determining processes on the residential housing market. The Netherlands has a long history of public involvement in the housing market and of highly interventionist housing policies with the aims of stimulating homeownership

and making good-quality (rental) housing affordable to low income households (Vandevyvere & Zenthöfer, 2012). At the moment, households in both the owner-occupied sector and the rental sector receive substantial explicit or implicit subsidies. Key subsidy instruments at the national level are mortgage relief for homeowners and the income-based housing allowance for renters. In addition, the central government also influences housing through spatial planning and land policy, regulation and supervision of housing associations, rent policy and financial guarantees (Vandevyvere & Zenthöfer, 2012).

In response to public policies, the Dutch housing market has shifted towards higher owner-occupancy over the past three decades (Vandevyvere & Zenthöfer, 2012) of which a majority of the homeownership is in the more rural areas (Statistics Netherlands, 2015). Currently, around 55% of the 7.4 million dwellings are owner-occupied, which is still comparatively low on a European scale. The social housing represents 31% of total housing stock, making it an important player on the Dutch residential housing market. The expansion of the social sector up to the mid-1990s was accompanied by a sharp fall in private renting, which currently accounts for 13% of the total housing stock (Systeem woningvoorraad, 2015).

Various empirical studies have addressed the relationship between the housing market and labour mobility. Micro-studies, using (longitudinal) data of individuals or households, find homeownership to be associated with lower residential mobility and lower job-to-job mobility (Van Leuvesteijn & Koning, 2004). For the Netherlands, Van der Vlist (2001) finds that homeowners are less likely to move to another home and to change jobs. This is in line with the study of Van Ommeren (1996) which concludes that homeowners are less likely to move to another home than tenants are. Herbers et al. (2014) find that this tendency increases with older homeowners, unless changes in the family forces the elderly out of homeownership. In 2011, Hoj demonstrated how housing market regulations, as described above, actually harm the labour market of the Netherlands. Transaction costs, for example, have a negative effect on the labour market flexibility. Transaction costs of owner-occupied housing include property transaction taxes, fees for the registration of property, notary or other legal fees and real estate agency fees. Transaction costs also exist in the rental market. Rules concerning social housing make it unattractive for dwellers of social housing to move to another area for a better-paid job (Vandevyvere & Zenthöfer, 2012). Due to the regionalised waiting-list system, tenants of social housing cannot move to another area without losing their entitlement for social housing. Given the fact that in the Netherlands density is high and urban areas are geographically small units, commuting between them is very feasible. Therefore, in the Netherlands, people often choose to change jobs without changing residence (Van Leuvesteijn & Koning, 2004; Van Ham & Hooimeijer, 2009).



### 2.2.3. Data and some preliminary results

The interregional migration patterns are analysed by using data from the Housing Research Netherlands (HRN) survey of 2002-2012. This survey is set up to provide more insights into the developments occurring on the Dutch housing market, and is carried out every 3 years by the Ministry of Internal Affairs. The HRN data are based on a large cross sectional survey in which information is gathered about the housing situation of people living in the Netherlands. The research population is representative of the Dutch population aged 18 and older, not living in an institution.

In total there were 42,587 persons (14,9%) in the HRN survey of 2002-2012, who are stated to have moved in the previous two years. Figure 2.3 shows the residential mobility for migrants from 2002 to 2012 broken down by age at time of movement. From Fig. 2.3 it becomes clear that, in occurrence with the 'age schedule of migration', the residential mobility peaks at the age 25-34, after which it steadily decreases with age. It also demonstrates that the majority of residential mobility is intraregional (i.e. a movement within the existing municipality). This is in line with previous research which demonstrated that just one-third of the residential mobility is interregional (i.e. a movement to a different municipality) (Feijten & Visser, 2005). In addition, Feijten and Visser (2005) find that 25% of all interregional mobility occurs within a distance of a mere 10 kilometres.

Following the argument of Plane and Jurjevich (2009), we know that the population size of the locality is of primary interest when we look at the interregional mobility. Figure 2.4 shows the average population of both the origin and the destination municipalities for interregional migrants from 2002 to 2012, broken down by age at time of movement. From Fig. 2.4 it becomes clear that interregional migrants, in general, move towards less populated municipalities. Interestingly, this is also true for those aged 25-34, the most geographically mobile cohort and often the group assumed to be oriented to the largest cities. In fact, only the youngest cohort moves towards the largest cities, and many do so when entering tertiary education. The pattern of movement towards smaller sized urban centres is even more explicit for older adults: the older people are, the more they tend to move away from highly populated municipalities. This is in line with previous research, which has shown that Dutch older adults (55+) are more likely to move away from, rather than towards, highly populated municipalities and urban areas (Fokkema, 1996). Van der Pers et al. (2015) underline the importance for intergenerational proximity for the oldest age groups in relocation. They find that elderly are more likely to move – in the direction of their children – when they lived further away from them. Since our data show that the children are also likely to move to and live in smaller sized urban centres, this could explain the direction of the relocation of the elder age groups.

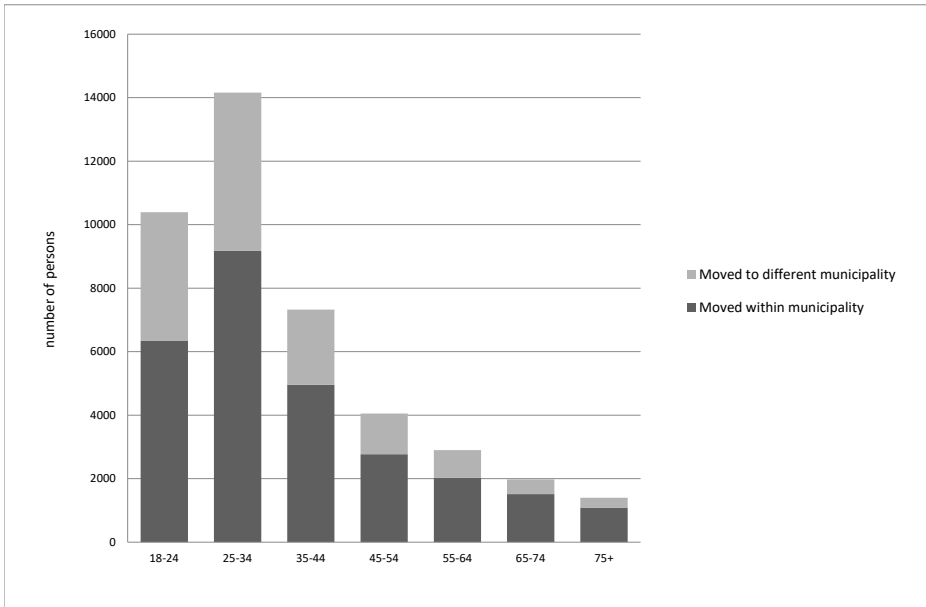


Figure 2.3 Age at time of move (Source: Calculated by the authors from HRN data 2002-2012)

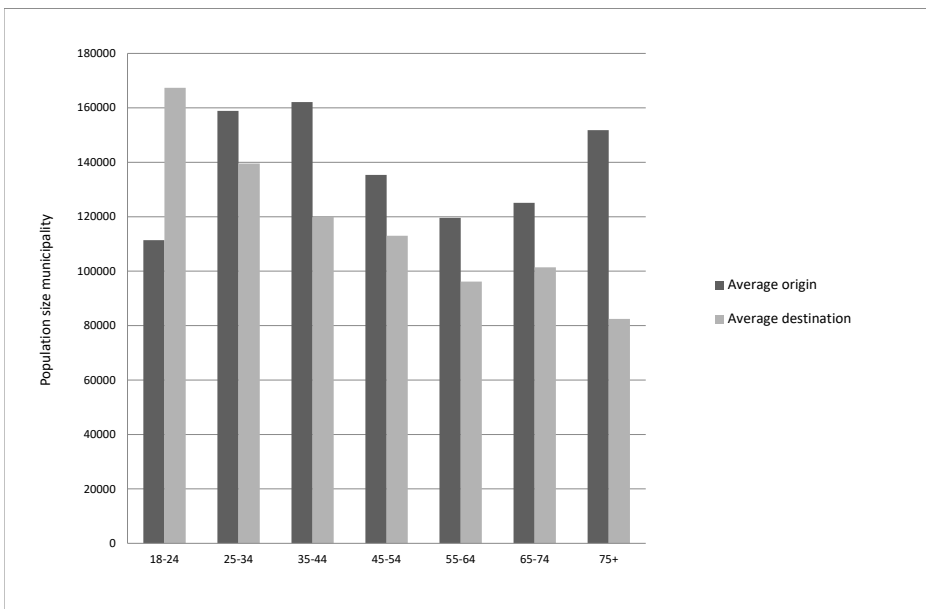


Figure 2.4 Average size of origin and destination by age at time of move (Source: Calculated by the authors from HRN data 2002-2012)

## 2.3. Age-cohorts and mobility within the Dutch Urban hierarchy

### 2.3.1. Net flows up and down the Dutch urban hierarchy

Following the methodological approach of Plane and Jurjevich (2009), we cross-calculated level-to-level flows of migrants in each of the seven age groups by the level of urbanity of the origin and destination municipality across the five urbanity categories of the Dutch urban hierarchy. Next, we calculated the net exchange of migrants between each pair of levels of the hierarchy. For each age group, there are ten net exchanges. For each net exchange the demographic effectiveness value is calculated, which is also known as the demographic efficiency. Demographic effectiveness is a widely used measure of the unidirectionality of movement within a migration system (Plane et al., 2005). The demographic effectiveness  $E_{ij}$  is calculated as follows:

$$E_{ij} = 100 (N_{ij} / T_{ij})$$

Here  $N_{ij}$  is the net exchange of migrants between a lower level of the urban hierarchy  $i$  and higher level  $j$ , and it is calculated as the difference between the gross upward flow  $M_{ij}$  and the gross downward flow  $M_{ji}$ . The total exchange of migrants  $T_{ij}$  is found as the sum of the gross upward and downward flows (Plane & Jurjevich, 2009). Hypothetically the demographic effectiveness varies from 0 and 100%, in which the upper limit of 100% would reflect the case where all migrants were moving either up or down the urban hierarchy with nobody going in the opposite direction, while a value of 0% would reflect the situation where exactly the same number of migrants were moving downwards as were moving upwards within the urban hierarchy (Plane & Jurjevich, 2009).

Figure 2.5 shows the demographic effectiveness of each of the various net exchanges in which the widths of the arrows are proportional to the percentage demographic effectiveness of the migration streams and counter streams. Figure 2.5A ( $n = 14,497$ ) presents a view of the total interregional movement between the different urban levels. Here, it is clear that the lion's share of the total interregional residential migration reflects an upward movement within the urban hierarchy. However, an examination of the total interregional residential migration alone misses the rich and variegated patterns of movements exhibited by persons within the different age cohorts (Plane et al., 2005). In fact, the overall pattern that we have noted in Fig. 2.5A, is being driven by a preponderance of migration of the young adults. Fig. 2.5B ( $n = 4,043$ ) shows the mobility flows that occur in the young adult years (i.e. 18-24 years of age), for which all but one of the net exchanges point up the hierarchy, a finding which Plane and Jurjevich (2009) similarly found for persons 20-29 years of age. The most effective exchanges are those for movements

towards the extremely urbanised areas, and especially pronounced are the flows upward from lowest two levels of the urban hierarchy to the most densely populated localities. This is most likely to be related to both the pursuit of higher education as Dutch higher educational institutions are mostly located in the larger cities, and also to employment-related migration into cities of university graduates (Venhorst et al, 2011).

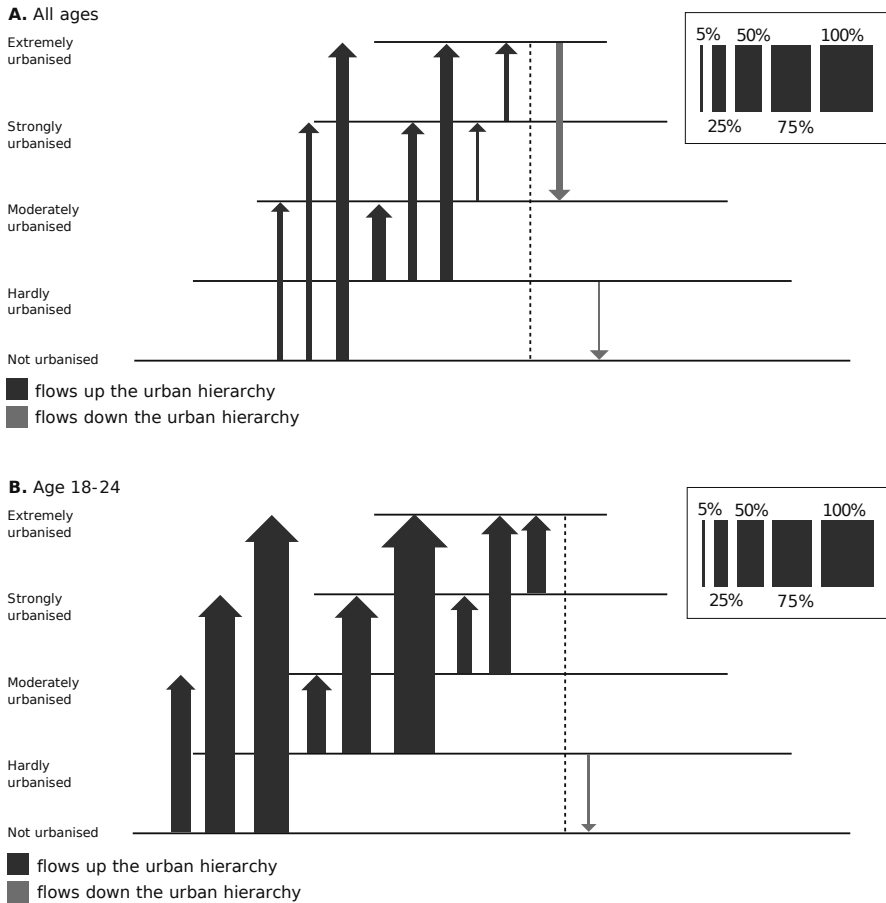
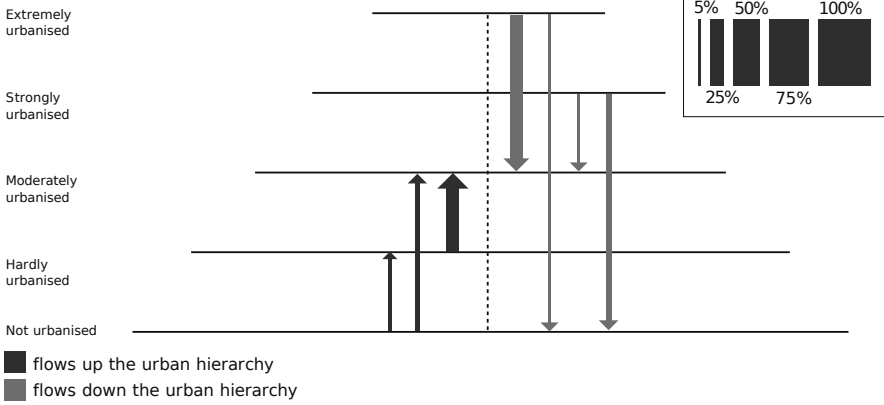
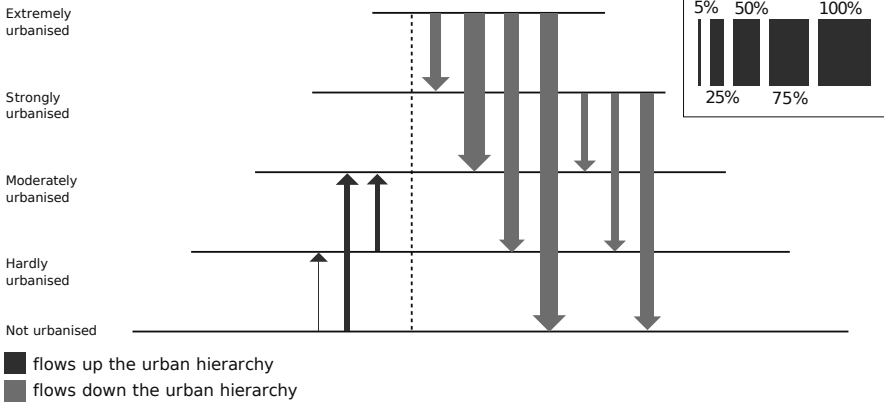


Figure 2.5 Demographic effectiveness percentages for age-specific net migration exchanges between urban hierarchy levels. (Source: Calculated by the authors from HNR data 2002-2012)

**C. Age 25-34**



**D. Age 35-44**



**E. Age 45-54**

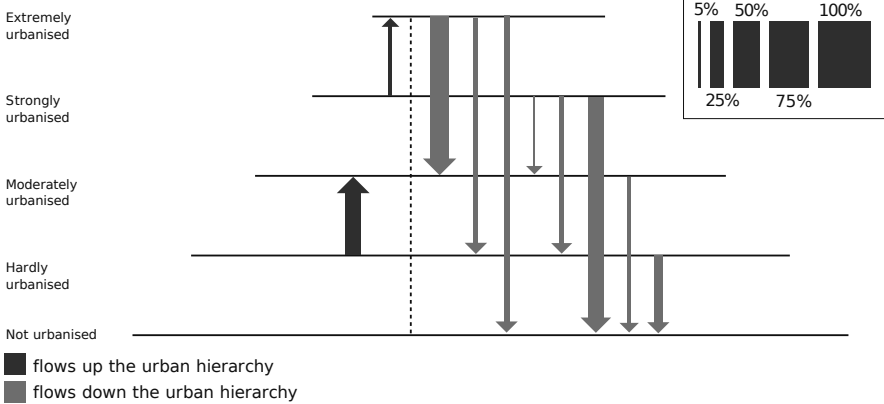
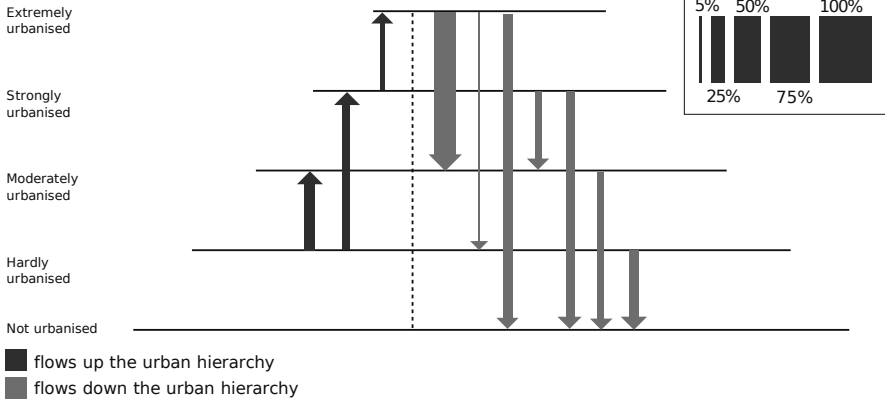
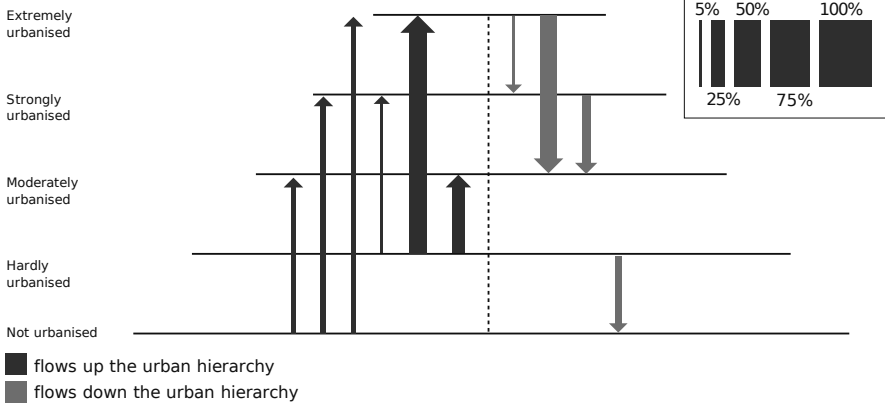


Figure 2.5 Continued

**F. Age 55-64**



**G. Age 65-74**



**H. Age 75+**

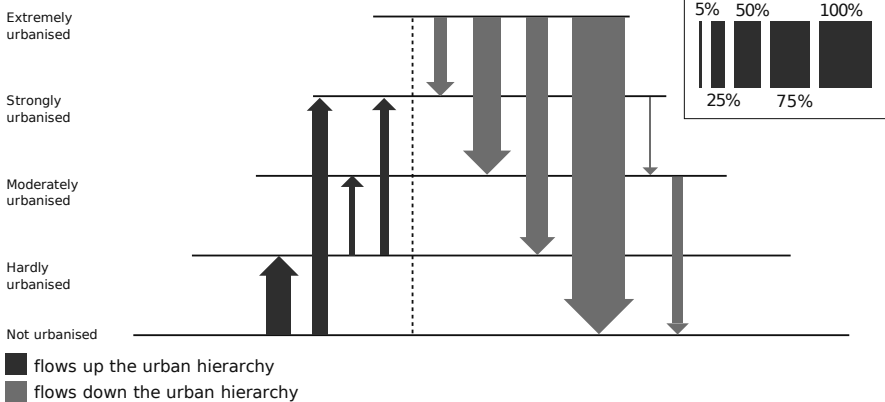


Figure 2.5 Continued

For the age group 25-34 year olds (Fig. 2.5C;  $n = 4,976$ ), the movement patterns are far less unidirectional than those for 18-24 year-olds. In line with the literature, the absolute mobility rates are the highest among this age group, and this stage contains many of the critical life course events that impel persons to migrate (Rindfuss, 1991; Plane et al., 2005) to various levels in the urban hierarchy. The migration flows display only moderate demographic efficiency at this stage of life, although there are very large numbers of migrants moving in both directions between the different levels of the urban hierarchy. In fact between three pairs of levels of the hierarchy the demographic effectiveness is close to zero (and therefore not shown in Fig. 2.5C), indicating that the flows in both directions between these pairs of levels of the hierarchy are almost equal in size, this could be partly explained by the need for intergenerational proximity (Van der Pers et al., 2015; Bijker et al., 2012).

During the mid-career and childrearing years we observe a pattern away from the most urbanised areas. By the ages 35-44, seven of the ten gross net exchanges point in the direction of net movements to the smaller settlement size classes (Fig. 2.5D;  $n = 2,362$ ). It has been suggested that during this age span housing costs, school quality and suburban road congestion are becoming major concerns (Plane et al., 2005), which possibly explains the preference for less populated areas. This tendency to move down the urban hierarchy is persistent until retirement ages. Figures 2.5E ( $n = 1,282$ ) and 2.5F ( $n = 869$ ) show the interregional movement pattern of migrants in age cohort 45-54 years and the age cohort 55-64 years, respectively. These age groups move, on balance, toward the middle tier of the urban hierarchy. This observation concurs with the findings in many European countries which reveal that the older adults are more likely to leave than to move to the big cities (Fokkema, 1996; Serow et al., 1996).

However, in contrast to much of the literature, for the 65-74 age cohort, we find strong evidence again of upwards movements within the urban hierarchy. As a result, Fig. 2.5G ( $n = 461$ ) shows two sets of arrows: upward ones from the bottom two levels of the hierarchy, and downward ones from the highest two levels to the moderately urbanised areas. The migrants moving up the urban hierarchy are likely to be those who are moving in anticipation of getting old. As a result the migration patterns of these cohorts appear to be directed towards the places which are large enough to have a range of public services including hospitals with a wide range of (geriatric) specialty care facilities (Plane & Jurjevich, 2009). In addition, it has been suggested (Kresl & Ietri, 2010) that older adults of the baby boom generation are less attracted to the sun and golf retirement locations than has been the case in recent decades. Instead, many of these young retirees may be more interested in the greater locational density and variety of public and private services which are available in cities and in urban functions of intellectual activity and culture and

the arts (also compare Haas & Serow, 2002). As such, the migrants moving down the urban hierarchy appear to reflect more traditional notions of retirement mobility, generally motivated by a desire for amenities and comfort (Pope & Kang, 2010), while the upward flows could represent something of a new phenomenon. This new phenomenon could be explained by the retirement of the baby boom generation, which generates a whole new experience on the housing market – in the USA (Myers & Ryu, 2008) and a need to be close to children/family caused by a strong ageing in place policy in the Netherlands (Van der Pers et al., 2015). Also, the need to be in proximity of friends and family is found in the US migration patterns of elderly as well (Serow et al., 1996), especially when the role of potential support in the vicinity becomes more pressing (Redfoot et al., 2013)

Figure 2.5H ( $n = 310$ ) clearly demonstrates the demographic efficiency down the urban hierarchy of migrants aged 75 and over<sup>1</sup>. However, on balance, the age group of 75 and over moves towards the middle tier of the Dutch urban hierarchy, a finding which is broadly consistent with Plane and Jurjevich (2009). Part of the explanation for this observation may relate to the fact that these medium-sized urban areas are also among the most favoured locations for people at the midcareer and child-rearing stage. As such, this suggests that the movements to medium-sized cities in Fig. 2.5G, H are older adults that wish to re-join younger family members in these locations (Plane & Heins, 2003; Plane & Jurjevich, 2009; Van der Pers et al., 2015).

A comparison of all eight panels of Fig. 2.5 reveals how strongly the stage of life affects the settlement size (i.e. urbanity) preferences of migrants. Again, if we look at the total interregional residential migration, this suggests a strong upward movement in the urban hierarchy. However, when we look at the patterns of movements exhibited by persons within different age cohorts, we witness a pattern in which many of the major movements in the system of interregional migration are actually flows down the urban hierarchy. Our results are based on somewhat different age cohorts and a rather different urban classification system to Plane and Jurjevich (2009), but already we see many parallels as well as a quite few differences between the age-related migration flows within the urban hierarchies of the USA and The Netherlands. We now therefore use the second empirical technique employed by Plane and Jurjevich (2009), namely the calculation of the migration-destination odds, to further explore the nature of these flows.

<sup>1</sup> The most effective movement is from the very strongly urbanised areas to the non-urbanised areas. The demographic efficiency of this movement is calculated as 100%, indicating that all migrants between these two levels were moving down the urban hierarchy, although this is also a small sample observation ( $n = 5$ ).



### 2.3.2. Migration destination odds

In addition to the diagrammatic approach depicted in Fig. 2.5, we use the migration destination odds measure to further illustrate how residential and mobility preferences shift across the life course, and how people situated at one level of the urban hierarchy choose to move to a different level. This measure is calculated as:

$$O_{aij} = P_{aij} / P_{.ij}$$

Where  $O_{aij}$  represents the odds of a person of age group  $a$  living in a municipality at level  $i$  selecting a destination at level  $j$ . These odds are calculated as the ratio of two probabilities (Plane & Jurjevich, 2009), namely the probability of a migrant of age group  $a$  originating from a municipality at hierarchy level  $i$  selecting a destination at level  $j$ , divided by the probability of a migrant of any age originating at level  $i$  choosing a destination at level  $j$ . The age group probability is calculated as:

$$P_{aij} = M_{aij} / \sum_h M_{aih}$$

While the all-age probability is given by:

$$P_{.ij} = \sum_a M_{aij} / \sum_a \sum_h M_{aih}$$

As Plane and Jurjevich (2009) explain, an odds value above 1.0 indicates a greater relative attractiveness of municipalities at hierarchy level  $j$  to persons in a particular age group than to all people who are living in areas categorised at level  $i$ . On the other hand, an odds value below 1.0 suggests a relative unattractiveness of level  $j$  municipalities to those in a particular age group.

Table 2.2 presents the age-specific destination odds for migrants who lived in extremely urbanised municipalities (A); strongly urbanised municipalities (B); moderately urbanised municipalities (C), hardy urbanised municipalities (D); and not urbanised municipalities (E). Boldface highlights the level of origin, whereas the various rows correspond to the level of the destination of the migrants.

Table 2.2 Age-specific migration destination odds for migrants

|                                 | 18-24        | 25-34        | 35-44        | 45-54        | 55-64        | 65-74        | 75+          |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| A. Origin: extremely urbanised  |              |              |              |              |              |              |              |
| <b>Extremely urbanised</b>      | <b>1.508</b> | <b>1.077</b> | <b>0.808</b> | <b>0.742</b> | <b>0.714</b> | <b>0.518</b> | <b>0.416</b> |
| Strongly urbanised              | 1.062        | 0.997        | 0.958        | 0.931        | 0.977        | 1.164        | 0.762        |
| Moderately urbanised            | 0.628        | 0.884        | 1.265        | 1.362        | 1.335        | 1.702        | 2.208        |
| Hardly urbanised                | 0.465        | 1.080        | 1.236        | 1.251        | 1.042        | 1.044        | 1.854        |
| Not urbanised                   | 0.884        | 0.924        | 0.981        | 1.201        | 1.638        | 1.158        | 1.298        |
| B. Origin: strongly urbanised   |              |              |              |              |              |              |              |
| Extremely urbanised             | 1.636        | 0.930        | 0.585        | 0.852        | 0.734        | 0.666        | 0.511        |
| <b>Strongly urbanised</b>       | <b>1.150</b> | <b>1.001</b> | <b>0.961</b> | <b>0.733</b> | <b>0.917</b> | <b>0.628</b> | <b>1.220</b> |
| Moderately urbanised            | 0.714        | 1.045        | 1.205        | 1.104        | 1.290        | 1.516        | 1.218        |
| Hardly urbanised                | 0.609        | 1.061        | 1.448        | 1.110        | 1.094        | 1.459        | 1.368        |
| Not urbanised                   | 0.543        | 1.002        | 1.291        | 1.759        | 1.282        | 1.340        | 1.058        |
| C. Origin: moderately urbanised |              |              |              |              |              |              |              |
| Extremely urbanised             | 1.653        | 0.887        | 0.806        | 0.649        | 0.445        | 0.697        | 0.581        |
| Strongly urbanised              | 1.274        | 1.025        | 0.787        | 0.831        | 0.716        | 0.721        | 0.606        |
| <b>Moderately urbanised</b>     | <b>0.618</b> | <b>1.015</b> | <b>1.244</b> | <b>1.319</b> | <b>1.190</b> | <b>1.808</b> | <b>1.782</b> |
| Hardly urbanised                | 0.679        | 1.083        | 1.240        | 1.101        | 1.536        | 0.950        | 1.397        |
| Not urbanised                   | 0.477        | 1.033        | 1.234        | 1.569        | 2.087        | 1.308        | 1.356        |
| D. Origin: hardly urbanised     |              |              |              |              |              |              |              |
| Extremely urbanised             | 1.505        | 0.907        | 0.579        | 0.585        | 0.384        | 0.903        | 0.501        |
| Strongly urbanised              | 1.411        | 0.870        | 0.770        | 0.572        | 0.816        | 0.788        | 1.167        |
| Moderately urbanised            | 0.765        | 1.173        | 0.990        | 1.432        | 1.286        | 0.826        | 1.359        |
| <b>Hardly urbanised</b>         | <b>0.601</b> | <b>1.098</b> | <b>1.518</b> | <b>1.295</b> | <b>1.338</b> | <b>1.576</b> | <b>1.194</b> |
| Not urbanised                   | 0.677        | 0.978        | 1.494        | 1.558        | 1.434        | 1.179        | 0.599        |
| E. Origin: not urbanised        |              |              |              |              |              |              |              |
| Extremely urbanised             | 1.908        | 0.742        | 0.368        | 0.576        | 0.539        | 0.594        | 0.000        |
| Strongly urbanised              | 1.518        | 0.776        | 0.591        | 0.680        | 0.691        | 1.125        | 1.160        |
| Moderately urbanised            | 0.746        | 1.053        | 1.382        | 1.205        | 1.402        | 1.184        | 0.677        |
| Hardly urbanised                | 0.619        | 1.185        | 1.523        | 1.153        | 1.188        | 0.980        | 1.645        |
| <b>Not urbanised</b>            | <b>0.475</b> | <b>1.322</b> | <b>1.356</b> | <b>1.535</b> | <b>1.294</b> | <b>1.067</b> | <b>1.791</b> |

Note the high 1.508 value for persons aged 18-24 on the top row of Table 2.2A. This indicates that young adults are substantially more likely than persons of all other ages to move from one big city to another. Equally, note the cluster of high values for movement by the 'old-elderly' to the middle tier of the urban hierarchy. In fact, the 2.208 odds for those aged 75 and older migrating from extremely urban areas to

moderately urban areas are the highest odds calculated for any age group and for any pairing of origin and destination levels. This could be indicative for the movement of older adults to be in close proximity to family (Van der Pers et al., 2015).

In contrast, Table 2.2E shows the age-specific migration destination odds of migrants originating from the lowest level in the Dutch urban hierarchy. Here we observe that the age cohort 65-74 is relatively orientated to move from non-urbanised areas to moderately or even strongly urbanised areas, as it to a slightly lesser extent to the age cohort 75 and over. This could be indicative of the move towards amenities (Serow et al., 1996). Yet in Table 2.2D we see that the over 75 cohort living in hardly urbanised areas display a high propensity to move to moderately or even strongly urbanised areas, this might be indicative as the move to care institutions which are not available at all urban levels and more available on higher urban levels (Van der Pers et al., 2015). As such, these two older age cohorts all show an orientation which is upwards through the urban hierarchy. In Table 2.2E, we also observe a high 1.791 value for persons aged 75 and older on the bottom row of Table 2.2E. 'Old-elderly' are thus more likely than persons of all other ages to move from one non-urban municipality to another, while unsurprisingly, there is a particularly low value of 0.475 for persons ages 18-24, indicating a relative unattractiveness for young people to make such a move.

For the migrants originating from strongly urbanised municipalities (Table 2.2B) - with the exception of persons aged 18-24 - we can observe a relative attractiveness of municipalities placed lower in the urban hierarchy. Note, too, the greater relative attractiveness of medium sized municipalities for persons aged 65-74 in Table 2.2C. They are substantially more likely than persons of all other ages to move between municipalities which are moderately urbanised. Since these interregional migration flows do not entail a change of level in the Dutch urban hierarchy, they do not appear in the diagrammatic approach depicted in Fig. 2.5. The urbanisation categories which most consistently appear to be attractive for most age groups are those defined as moderately urbanised, hardly urbanised and not urbanised, with only the 18-24 age cohort being relatively orientated to either extremely or strongly urbanised areas. Furthermore, the Dutch regions are quite small – especially in comparison to US regions – as such a short distance relocation in the USA would be considered local, while in the Netherlands this might be between regions (compare Serow et al., 1996).

## 2.4. Interactions between age-articulated interregional migration and population ageing

A current and significant demographic event we are faced with is the coming of age of the post-war baby boom generation. In the year 2015, 17.8% of the Dutch population will be aged 65 and older, but by the year 2040 this figure will rise to approximately 26.4% (Statistics Netherlands, 2015). In many Western societies, this increasing proportion of older adults is of special concern for the future (Abramsson & Andersson, 2012; European Union, 2012), and the Netherlands is no exception to this.

Traditionally, the residential mobility patterns among older adults have been assumed to be low, with older adults typically remaining in their current dwelling for as long as possible and with only a small minority relocating (Long, 1992; Lord & Luxembourg, 2007). This is reflected in the pattern revealed in Fig. 2.3. However, the increase in the proportion of older adults within the overall population and the discussion about lifestyle changes among older adults raise questions about possible changing patterns of residential mobility. The next generation of older adults are very different from today's older adults, particularly the baby boomers, who have different expectations and abilities, due to their having experienced expanded education opportunities, as well as significant social, political and economic emancipation and participation (Kramer & Pfaffenbach, 2009; Myers & Ryu, 2008; Redfoot et al., 2013). Therefore, future older adults are expected to develop different lifestyles, which will likely lead them to favour different residential locations than previous generations at that age, not so much moving to sunnier climates, but keeping into mind that family proximity might be necessary and anticipated moves accordingly (Kramer & Pfaffenbach, 2007; Haas & Serow, 2002).

Our data and results reported here, and particularly those results which are related to the younger group of retirees, suggests that these shifts are already well underway<sup>2</sup>. The ageing cohorts approaching retirement not only display greater mobility than in the past, but also display markedly different mobility patterns than has generally been

<sup>2</sup> Our data sample contains 14,497 observations of inter-urban movers, but the subsets of inter-urban movers over 65 years old contain just  $n = 410$  for 65-74 year olds and  $n = 361$  for over 75s, which together amount to just over 5% of the total sample moving population. However, the patterns of movers broken down by age cohort (as represented in Figure 2.5) in our sample almost perfectly reflects the age-related mobility patterns evident in the UK (see Figure 3.6 on page 33 of Fielding (2012), a country which also has identical aggregate interregional mobility rates to The Netherlands (OECD 2013) at the levels of OECD-TL3 small regions. Our sample data are therefore likely to be highly representative of The Netherlands as a whole.

observed amongst previous generations. Moreover, there are several characteristics of the baby boom generation which suggest that their mobility rates are likely to increase in the near future. Firstly, their higher levels of education and income increase the probability of moving (Clark & Dieleman, 1996; Bureauvrijftig, 2015). However, in the USA this trend might change with the decreased chance to sell one's house in the US housing market due to the large group of baby boomers leaving homeownership and a smaller younger cohort that is able to buy their houses (Myers & Ryu, 2008). Secondly, marital status is an important factor influencing residential mobility (Haan & Perks, 2008; Richards & Rankaduwa, 2008) with widowed and divorced elderly being found to have a higher probability of moving (Richards & Rankaduwa, 2008; Herbers et al., 2014). Particularly, among the baby boomers we witness a higher divorce rate than in previous generations, which has distinct effects on the housing market especially for ownership property (Hooimeijer, 2007; Herbers et al., 2014). Thirdly, it is known that previous moves increases the likelihood of moving again (DaVanzo, 1981; Mulder, 1993), and baby boomers, in general, have a higher likelihood of having previously undertaken moves for reasons of study or for jobs (Andersson & Abramsson, 2012). Since older adults are likely to exhibit much lower levels of place attachment than their predecessors (Fischer & Malmberg, 2001), it is argued that mobility amongst older age groups may significantly be easier than in earlier generations (Malmberg et al., 2004, as cited in Abramsson & Andersson, 2012).

Based on the patterns of interregional migration presented in this study, it is possible to argue that the trends revealed here are likely to be harbingers of what is yet to come. In particular, we might expect to witness an intensification of these patterns with more 'young elderly' (i.e. persons aged 65-75) moving up the hierarchy - in particular those originating from the lowest tiers of the urban hierarchy -, and more 'pre-elderly' (i.e. persons aged 55-64) and 'old-elderly' (i.e. persons aged 75 and over) moving down the urban hierarchy.

## 2.5. Conclusion

In order to examine the patterns of age-articulated interregional mobility in the Netherlands several analytical steps were made. Following the methodological approach of Plane and Jurjevich (2009), we first calculated the demographic efficiency and subsequently the age-specific destination migration odds of seven age cohorts. Our findings support many of the age related migration patterns evident from the migration and the life course literature, and they also highlight that the passage through successive life stages not only results in fairly predictable age-specific propensities to move, but also results in fairly-predictable shifting likelihoods of residing in larger or smaller settlements.

In general, as people age through the life course, they move for very different reasons and their choices reflect different considerations and preferences (Warnes, 1992a; Whisler et al., 2008). At some ages, large agglomerations are preferable; at other, sparsely settled environments hold key advantages (Plane & Jurjevich, 2009). As such, academic research needs to move away from modelling 'the migration' and 'the migrant decision', and instead allow more for a more varied and nuanced age-related approach.

The results for the Netherlands are for the most part comparable to the trends of mobility found in the USA by Plane and Jurjevich (2009). Even though the geographical setting and urban hierarchy levels are very different, the overall patterns of movements exhibited by persons within different age cohorts down the urban hierarchy are strikingly similar. However, the upward flows from the lowest tiers of the urban hierarchy of the 'young elderly' are a new and previously-unobserved pattern of mobility for the Netherlands. In the USA, such cultural and amenity seeking relocation behaviour was observed by Serow et al. (1996).

Even though a full explanation of the economic and social factors underlying the interregional patterns of migration in the Netherlands lies outside the scope of the current study, we did reflect on the possible repercussions of these patterns in light of demographic change, and notably on the ageing of the Dutch population. With the coming of age of the baby boomers, the proportion of older adults in the Dutch population will rise to approximately 26.5% of the total population by the year 2040. Simply due to the large numbers that these cohorts represent, their migration decisions are likely to impact spatial structures.

Our data and results, and particularly those results which are related to the 'young elderly', suggest that future older adults display greater mobility than in the past, but also display markedly different mobility patterns than has generally been observed amongst previous generations. The combination of demographic weight and high voting probability among older age cohorts makes that we might expect a significant electoral power of the grey vote and an expanding over-representation of older voters in national (and regional) elections (Goerres, 2007). Such considerations are likely to have major implications for spatial planning, and in particular, for the location, organisation and provision of public facilities and public services, private sector services, as well as the provision and design and spatial layout of housing and infrastructure. Moreover, these impacts are likely to differ markedly between different types of places according to the degree of urbanisation and the specific ageing profile of the local population.

## References

- Abramsson, M., & Andersson, E. (2012). Residential Mobility Patterns of Elderly: Leaving the House for an Apartment. *Housing Studies*, 27(5), 582-604. <https://doi.org/10.1080/02673037.2012.697553>
- Andersson, E., & Abramsson, M. (2012). Changing Residential Mobility Rates of Older People in Sweden. *Ageing & Society*, 32(6), 963-982. <https://doi.org/10.1017/S0144686X11000808>
- Bell, M (1995). *Internal migration in Australia 1986–1991. Overview Report*. Australian Government Publishing Service.
- Bernard, A., Bell, M., & Charles-Edwards, E. (2014). Life course transitions and the age profile of internal migration. *Population and Development Review*, 40(2), 213–239. <https://doi.org/10.1111/j.1728-4457.2014.00671.x>
- Bijker, R.A., Haartsen, T., & Strijker, D. (2012). Migration to less-popular rural areas in the Netherlands: Exploring the motivations. *Journal of Rural Studies*, 28(4), 490-498. <https://doi.org/10.1016/j.jrurstud.2012.07.003>
- Bloem, B., Van Tilburg, T.G., & Thomése, F.(2008). Residential Mobility in Older Dutch Adults: Influence of Later Life Events. *International Journal of Ageing and Later Life*, 3(1), 21-44. <https://doi.org/10.3384/ijal.1652-8670.083121>
- Bureauvijftig. (2015). *Woonmonitor 2015: Landelijk onderzoek naar wensen en behoeften van ouderen ten aanzien van wonen* [National research into the wishes and needs of older adults with regard to housing]. Bureauvijftig.
- Clark, W.A.V., & Dieleman, F.M. (1996). *Households and Housing: Choice and Outcomes in The Housing Market*. Center for Urban Policy Research.
- DaVanzo, J. (1981). Repeat migration, information costs, and location-specific capital. *Population and Environment*, 4(1), 45-73. <https://doi.org/10.1007/BF01362575>
- De Groot, C., Mulder, C.H., & Manting, D. (2011). Intentions to Move and Actual Moving Behaviour in the Netherlands. *Housing Studies*, 26(3), 307-328. <https://doi.org/10.1080/02673037.2011.542094>
- Delfmann, H., Koster, S., McCann, P., & Van Dijk, J. (2014). Population change and new firm formation in urban and rural studies. *Regional Studies*, 48(6), 1034-1050. <https://doi.org/10.1080/00343404.2013.867430>
- Den Dulk, C.J., Van de Stadt, H., & Vliegen, J.M. (1992). Een nieuwe maatstaf voor stedelijkheid: De omgevingsadressendichtheid [A new measure for degree of urbanisation: The address density of the surrounding area]. *Maandstatistiek van de Bevolking*, 40, 14-27.
- European Union. (2012). *The 2012 Ageing Report: Economic and budgetary projections for the 27 EU Member States (2010-2060)*. (European Economy 2|2012).
- Feijten, P., & Visser, P. (2005). Binnenlandse migratie: verhuismotieven en verhuisafstand. *Bevolkingstrends*, 53(2e kwartaal), 75-81.
- Fielding, T. (2012). *Migration in Britain*. Edward Elgar Publishing.
- Fischer, P.A., & Malmberg, G. (2001). Settled people don't move: On life course and (im-) mobility in Sweden. *International Journal of Population Geography*, 7(5), 357-371. <https://doi.org/10.1002/ijpg.230>
- Fokkema, C.M. (1996). *Residential Moving Behaviour of the Elderly: An Explanatory Analysis for the Netherlands* [Doctoral dissertation, VU University Amsterdam].
- Goerres, A. (2007). Why are Older People more Likely to Vote? The Impact of Ageing on Electoral Turnout across Europe. *The British Journal of Politics and International Relations*, 9(1), 90-121. <https://doi.org/10.1111/j.1467-856x.2006.00243.x>

- Haan, M., & Perks, T. (2008). The housing careers of older Canadians: An investigation using cycle 16 of the general social survey. *Canadian Studies in Population*, 35(2), 223-242. <https://doi.org/10.25336/P6S32X>
- Haartsen, T. (2002). *Platteland: boerenland, natuurterrein of beleidsveld? Een onderzoek naar veranderingen in functies, eigendom en representaties van het Nederlandse platteland* [Countryside: farmland, nature area or policy field? An investigation into changes in functions, ownership and representations of the Dutch countryside] [Doctoral dissertation, University of Groningen].
- Haas, W.H., & Serow, W.J. (2002). The baby boom, amenity retirement migration and retirement communities: Will the golden age of retirement continue? *Research on Aging*, 24(1), 150-164. <https://doi.org/10.1177/0164027503024001009>
- Herbers, D.J., Mulder, C.H., & Mödenes, J.A. (2014). Moving out of home ownership in later life: The influence of the family and housing careers. *Housing Studies*, 29(7), 910-936. <https://doi.org/10.1080/02673037.2014.923090>
- Hoj, J. (2011). *Improving the Flexibility of the Dutch Housing Market to Enhance Labour Mobility* (OECD Economics Department Working Papers No 833). OECD Publishing. <https://doi.org/10.1787/5kgkdgfxxr12-en>
- Hooimeijer, P. (2007). *Dynamiek in de derde leeftijd: De consequenties voor het woonbeleid* [Dynamics in life's third act: consequences for housing policy]. Ministerie van VROM.
- Korpi, M., Clark, W.A.V., & Malmberg, B. (2011). The urban hierarchy and domestic migration: the interaction of internal migration, disposable income and the cost of living, Sweden 1993-2002. *Journal of Economic Geography*, 11(6), 1051-1077. <https://doi.org/10.1093/jeg/lbq043>
- Kramer, C., & Pfaffenbach, C. (2009). Persistence preferred- on future residential (im)mobility among the generation 50plus. *ERDKUNDE*, 63(2), 161-172. <https://doi.org/10.3112/erdkunde.2009.02.04>
- Kresl, P.K., & Ietri, D. (2010). *The Aging Population and the Competitiveness of Cities. Benefits to the Urban Economy*. Edward Elgar Publishing.
- Litwak, E., & Longino, C.F., Jr. (1987). Migration patterns among the elderly: A developmental perspective. *The Gerontologist*, 27(3), 266-272. <https://doi.org/10.1093/geront/27.3.266>
- Long, L. (1992). Changing residence comparative perspectives on its relationship to age, sex and marital status. *Population Studies, A Journal of Demography*, 46(1), 141-158. <https://doi.org/10.1080/0032472031000146056>
- Longino, C.F., Jr., Bradley, D.E., Stoller, E.P., & Haas, W.H. (2008). Predictors of non-local moves among older adults: A prospective study. *The Journals of Gerontology: Series B*, 63(1), S7-S14. <https://doi.org/10.1093/geronb/63.1.S7>
- Lord, S., & Luxembourg, N. (2007). The mobility of elderly residents living in Suburban Territories: Mobility experiences in Canada and France. *Journal of Housing For the Elderly*, 20(4), 103-121. [https://doi.org/10.1300/J081v20n04\\_07](https://doi.org/10.1300/J081v20n04_07)
- Malmberg, B., Abramsson, M., Magnusson, L., & Berg, T. (2004). *Från eget småhuss till allmännyttan* [From Owner Occupation to Municipal Rental Housing] (Report #10). Institute for Future Studies.
- McCann, P. (2013). *Modern Urban and Regional Economics*. Oxford University Press.
- Mulder, C. (1993). *Migration Dynamics. A Life Course Approach* [Doctoral dissertation, University of Amsterdam].
- Myers, D., & Ryu, S. (2008). Aging baby boomers and the generational bubble: Foresight and mitigation of an epic transition. *Journal of the American Planning Association*, 74(1), 17-33. <https://doi.org/10.1080/01944360701802006>
- OECD. (2005). *New Approaches to Rural Policy: Lessons from Around the World*. Organisation for Economic Co-Operation and Development. , <https://doi.org/10.1787/9789264010130-en>
- OECD. (2008). *OECD Rural Policy Reviews: Netherlands*. Organisation for Economic Co-Operation and Development. <https://doi.org/10.1787/19909284>



- OECD. (2013). *Regions at a Glance 2013*. Organisation for Economic Co-Operation and Development. <https://doi.org/10.1787/19990057>
- Plane, D.A. (2012). What about aging in regional science? *The Annals of Regional Science*, 48, 469-483. <https://doi.org/10.1007/s00168-011-0493-x>
- Plane, D.A., & Heins, F. (2003). Age articulation of U.S. inter-metropolitan migration. *The Annals of Regional Science*, 37, 107-130. <https://doi.org/10.1007/s001680200114>
- Plane, D.A., Henrie, C.J., & Perry, M.J. (2005). Migration up and down the urban hierarchy and across the life course. *Proceedings of the National Academy of Sciences*, 102, 15313-15318. <https://doi.org/10.1073/pnas.0507312102>
- Plane, D.A., & Jurjevich, J.R. (2009). Ties That No Longer Bind? The Patterns and Repercussions of Age-Articulated Migration. *The Professional Geographer*, 61(1), 4-20. <https://doi.org/10.1080/00330120802577558>
- Pope, N.D., & Kang, B. (2010). Residential Relocation in Later Life: A Comparison of Proactive and Reactive Moves. *Journal of Housing For the Elderly*, 24(2), 193-207 <https://doi.org/10.1080/02763891003757122>
- Redfoot, D., Fienberg, L., & Houser, A. (2013). *The aging of the baby boom and the growing care gap: A look at future declines in the availability of family caregivers*. AARP Public Policy Institute.
- Richards, J.L., & Rankaduwa, W. (2008). Housing Canada's Oldest-Old: Correlates of their residential status. *Journal of Housing For the Elderly*, 22(4), 376-403. <https://doi.org/10.1080/02763890802458478>
- Rindfuss, R.R. (1991). The young adult years: Diversity, structural change, and fertility. *Demography*, 28(4), 493-512. <https://doi.org/10.2307/2061419>
- Rogers, A., & Castro, L. (1981). Age patterns of migration: cause specific profiles. In A. Rogers (ed), *Advances in Multiregional Demography*. International Institute for Applied Systems Analysis (pp 125-159). International Institute for Applied Systems Analysis.
- Rogers, A., Raquillet, R., & Castro, L.J. (1978). Model migration schedules and their applications. *Environment and Planning A: Economy and Space*, 10(5), 475-502 <https://doi.org/10.1068/a100475>
- Rossi, P. (1955). *Why families move: A study in the social psychology of urban residential mobility*. The Free Press.
- Rowland, D.T. (1979). *Internal Migration in Australia*. Australian Bureau of Statistics.
- Serow, W.J., Friedrich, K., & Haas, W.H. (1996). Residential relocation and regional redistribution of elderly in the USA and Germany. *Journal of Cross-Cultural Gerontology*, 11, 293-306. <https://doi.org/10.1007/BF00115797>
- Statistics Netherlands. (2015, November). *Statline*. Statistics Netherlands. <http://statline.cbs.nl>
- Steenbekker, A., Simon, C., Vermeij, L., & Spreeuwens, W.J. (2008). *Het platteland van alle Nederlanders. Hoe Nederlanders het platteland zien en gebruiken* [The countryside of all Dutch people. How the Dutch see and use the countryside]. Sociaal en Cultureel Planbureau.
- Systeem woningvoorraad. (2015, November). *Stand woningvoorraad 2015*. Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. <https://syswov.datawonen.nl/>
- Van Ham, M., & Hooimeijer, P. (2009). Regional Differences in Spatial Flexibility: Long Commutes and Job Related Migration Intentions in the Netherlands. *Applied Spatial Analysis and Policy*, 2(2), 129-146. <https://doi.org/10.1007/s12061-008-9016-2>
- Van Leuvesteijn, M., & Koning, P. (2004). The effect of home-ownership on labor mobility in the Netherlands. *Journal of Urban Economics*, 55(3), 580-596. <https://doi.org/10.1016/j.jue.2003.12.001>
- Van Ommeren, J.N. (1996). *Commuting and relocation of jobs and residences* [Doctoral dissertation, VU University Amsterdam].
- Van der Pers, M., Kibele E., & Mulder, C.H. (2015). Intergenerational proximity and the residential relocation of older people to care institutions and elsewhere. *Ageing & Society*, 35(7), 1429-1456. <https://doi.org/10.1017/S0144686X14000300>

- Van der Vlist, A.J. (2001). *Residential mobility and commuting* [Doctoral dissertation, VU University Amsterdam].
- Vandevyvere, W., & Zenthöfer, A. (2012). *The housing market in the Netherlands* (Economic Papers No. 457). European Commission.
- Venhorst, V.A., Van Dijk, J., & Van Wissen, J.L.G. (2011). An analysis of trends in spatial mobility of Dutch graduates. *Spatial Economic Analysis*, 6(1), 57-82. <https://doi.org/10.1080/17421772.2010.540033>
- Warnes, A.M. (1992a). Migration and the life course. In A.G. Champion & A.J. Fielding (eds), *Migration processes and patterns, Vol. 1: research progress and prospects* (pp 175-187). Belhaven Press.
- Warnes, A.M. (1992b). Age-related variation and temporal change in elderly migration. In A. Rogers (ed), *Elderly Migration and Population Redistribution* (pp 35-57). Belhaven Press.
- Whisler, R.L., Waldorf, B.S., Mulligan, G.F., & Plane, D.A. (2008). Quality of life and the migration of the college educated: A life-course approach. *Growth and Change*, 39(10), 59-94. <https://doi.org/10.1111/j.1468-2257.2007.00405.x>
- Wilson, T. (2014). The impact of education-bound mobility on inter-regional migration age profiles in Australia. *Applied Spatial Analysis and Policy*, 8, 371-391. <https://doi.org/10.1007/s12061-014-9124-0>

