

# Once a homeowner, always a homeowner? An analysis of moves out of owner-occupation

Amanda C. Helderma

Received: 15 April 2006 / Accepted: 15 February 2007 / Published online: 17 July 2007  
© Springer Science+Business Media B.V. 2007

**Abstract** This paper addresses the motives for which homeowners in the Netherlands move to a rented dwelling. By combining the results of multiple Housing Demand Surveys, it was possible to study the rare transition between housing tenures, using both descriptive methods and logistic regression analysis. While controlling for individual and household characteristics, period, and spatial characteristics, motives for moving emanating from divorce or separation incur the highest probability that the tenure outcome will be renting, closely followed by motives related to aging or health for one-person households.

**Keywords** Residential relocation · Housing tenure · Motives for moving

## 1 Introduction

In Western countries, consecutive homes in a housing career generally show an upward trend in price, size, and quality and the switch from rented to owner-occupied at some point in time. Research in the USA, for example, has shown that the vast majority of renters will make upward moves on the housing market (Clark et al. 2003), with a good chance of eventually obtaining an owner-occupied home. Perhaps because of this pattern, the research on transitions between tenures has nearly always focused on moves from rented to owner-occupied homes (Clark et al. 1994; Davies Withers 1998; Deurloo et al. 1987, 1994; Morrow-Jones 1988; Mulder and Wagner 1998).

For some people, that trend may be interrupted, even after owner-occupancy has been attained (Dieleman et al. 1995). This may entail a decrease in housing quality and may interrupt the build-up of equity that comes with repaying the mortgage and possible increases in house prices. These practical implications lead to

---

A. C. Helderma (✉)  
Department of Geography, University of Toronto, 100 St. George Street,  
Toronto, ON, Canada M5S 3G3  
e-mail: amanda.helderma@gmail.com

housing-market disparities other than those caused by socio-economic inequality. That is, people who would not normally have economic difficulties in accessing suitable housing may find themselves in unsuitable housing conditions because of circumstances relating to moving out of homeownership. After divorce or separation, for example, they find it more difficult to revert to homeownership. It is therefore important to trace the occurrence of moves from owner-occupied to rented homes and assess any changes in the relative effect of the underlying motives and circumstances.

In previous research, moving from owner-occupied to rented homes has been found to be associated with disruptive events in one's family life such as union dissolution (Dieleman et al. 1995; Feijten 2005a; McCarthy and Simpson 1991; Symon 1990). Divorce and separation have been shown to incur a substantially greater probability of moving to a rented home than moves for other motives (Feijten 2005a; McCarthy and Simpson 1991; Symon 1990; Van Noortwijk et al. 1992). It has also been hypothesized that the probability of moving to a rented home is greater for people who move to a different region, for example for job reasons (Dieleman et al. 1995; Feijten 2005a). Goetgeluk (1997) and Hooimeijer and Oskamp (1996) provided some evidence for the greater probability of moving to a rented home among those moving over great distances. Aging and deteriorating health have also been linked to the transition from owning to renting (Filius 1993; Vanderhart 1994). Additionally, differences in local housing market circumstances have been found to affect the probability of moving from an owner-occupied to a rented home (Dieleman et al. 1995).

Switching from owner-occupancy to renting may lead to involuntary decreases in housing quality and interrupt the build-up of equity. Depending on the motive for moving and personal circumstances, people do not have an equal chance of improving their situation. Moving from owner-occupied to rented homes is a relatively rare event. Therefore, many previous studies addressing such moves have suffered from too few observations, which limits the statistical power of the analyses (Feijten 2005a; Vanderhart 1994). Thus, the motives for switching to renting have not been studied in detail before, and little is known of their relative importance for such tenure changes. For this study, six consecutive Housing Demand Surveys were used. Because these surveys generate large datasets for a substantial period, the moves of individuals in the Netherlands can be analyzed at different life stages, under different circumstances, and with respect to different motives for moving.

This paper addresses the motives for moving from owner-occupied to rented homes. The aim is to discern the relative importance of these motives, after controlling for individual and household characteristics as well as for temporal and spatial characteristics. The Housing Demand Surveys 1981–2002 are subjected to logistic regression analysis. Destination choice models were used to analyze the housing tenure outcomes of persons moving from owner-occupied homes.

## 2 Theoretical background

Moving from owner-occupied to rented homes does not occur on a very large scale. This can be explained by the typical attractions of homeownership, the costs

involved in moving from an owner-occupied home, and the (household) circumstances owner-occupiers often find themselves in.

The attraction of owner-occupied homes is partly related to the accumulation of capital by paying off mortgage loans and the increasing house values, and (in the Netherlands) the tax deductibility of mortgage interest. Besides financial considerations, there also are emotional reasons to opt for homeownership. These relate to a sense of continuity and security, having full control over one's housing situation, and the status with which owner-occupancy is regarded in many societies (cf. Saunders 1990; Megbolugbe and Linneman 1993).

Moving from an owner-occupied home entails considerably more effort and expenditure than moving from a rented home. Homebuyers commit themselves to a (long-term) financial investment. They often prefer to continue the investment rather than undo it. By selling, they could incur a loss of the return on investment if the market value of the home is less than the purchase price because the timing of the sale is not optimal. To recoup the investment, another buyer has to be sought, which requires effort. And other transaction costs—e.g., the real-estate agent's commission, moving expenses, and penalties for terminating the mortgage early (as often is the case in the Netherlands)—make leaving an owner-occupied home an expensive affair.

Homeowners often have stable nuclear family households for which the home forms a safe, secure, and personal environment. Unlike renters, homeowners have often adapted the dwelling to suit their personal preferences and needs. For many homeowners, interrupting the stable living situation and the continuity of a safe personal environment by moving is not a desirable prospect (Saunders 1990).

Owner-occupied homes are generally larger and of better quality than rented homes (Speare et al. 1975; Megbolugbe and Linneman 1993). This is probably why homeowners in many countries are more satisfied with their housing situation than renters (Elsinga and Hoekstra 2005). This greater satisfaction implies that moving is generally less practicable for homeowners than renters. When homeowners do decide to move, they are likely to move into another owner-occupancy dwelling. Most people want to maintain their level of housing quality. Owner-occupancy may offer a better match with their housing preferences because size and quality are less of a concern in the owner-occupied sector than for rentals. Furthermore, homeowners generally bring along equity from previous homes, facilitating a new purchase.

The housing tenure decision of moving homeowners may, however, not be in favor of owner-occupation. They may decide to switch tenure due to changes in resources, restrictions, or housing preferences. There are many different motives for moving that may lead homeowners to move to a rental dwelling. Whether such motives do indeed lead to a switch in tenure depends largely on whether any of the various reasons to move to a rented home are applicable. The decision to rent may have several causes: changing income (1); a changed need for living space—in terms of size or quality (2); limited time to decide (3); and limited knowledge of the local housing market at the place of destination (4). Furthermore, a desire to avoid responsibility for maintenance (5) or a desire to

withdraw equity from the owner-occupied home (6) are also possible causes for moving to a rented home.

First, a lower income or, more specifically, a lower budget for housing expenses may mean it is neither possible nor desirable to remain a homeowner (Clark et al. 2003; Feijten 2005a; McCarthy and Simpson 1991). If the drop in income or housing budget is considerable, the choice set for another home is constrained by costs, whereby opting for a rented home becomes more likely.

Second, a small number of household members (incurring a limited need for space), a decrease in household size (incurring less need for space), or aging and health issues may lead to a re-evaluation of, or a change in, the need or preference for housing consumption. A decrease in the number of household members may diminish the amount of living space that is suitable or desirable for the household (Clark et al. 2000). Smaller types of dwellings, such as apartments, are under-represented in the owner-occupied segment of the housing market. Few household members, a decrease in their number, or the presence of aging persons would therefore be likely to increase the probability of moving to a rented home.

Third, if there is an urgent need to move, and thus limited time to make a tenure decision, it is more likely that the move will be to a home with sub-optimal tenure—often a rented dwelling. It generally takes less time to find a home for rent than one for sale, at least in the privately rented segment of the housing market. If there is no urgency, people can put as much time and effort as needed into finding another owner-occupied home (Dieleman 2001; Feijten 2005b; Goetgeluk 1997; Hooimeijer and Oskamp 1996).

Fourth, unfamiliarity with the prospective housing market may also influence the housing tenure decision (Dieleman 2001; Feijten 2005b; Goetgeluk 1997; Hooimeijer and Oskamp 1996). This is even more evident if the new housing market is far from the current location. Unfamiliarity with housing market circumstances in distant places may be mitigated by spending time and money on investigating the area. Optimally familiarizing oneself with the new locale may not be possible, though, as it would require too much effort (learning about the new region) and expenditure (time and travel expenses). Moves to rented homes are more quickly and more easily accomplished than moves to owner-occupied homes in the Netherlands. Additionally, moving to a more expensive housing market area may limit the availability of appropriate housing. Familiarizing oneself with the housing market may be especially important in such circumstances. Unfamiliarity with the new housing market may therefore lead to a greater probability of moving to a rented home.

Fifth, a desire to rid oneself of responsibility for the maintenance of an owner-occupied home is an advantage to renting that is especially relevant for older people. Physically, people may no longer be fit enough to carry out maintenance themselves. And finding an agent may be very expensive and difficult to arrange. One may thus preempt such outlays of effort and expense by moving to a rented home.

Sixth, older people in particular may want to consume equity from their housing. As they get older, people may want to free up the savings locked up in their dwelling and use their built-up equity for another purpose. Freeing up a considerable share of the value of the home may entail a move to a rented home.

The causes for moving to a rented home are difficult to observe. Datasets provide little or no information on changes in budgets or on the amount of time available for housing decisions, for example. This is also true of the Dutch Housing Demand Surveys used in this study. The causes for moving to a rented home form the background of the motives for moving that are available in the data. The extent to which such motives are associated with the different causes of moving is likely to influence the probability with which a move from an owner-occupied dwelling has a rented home as its destination.

## 2.1 Analyzing housing tenure outcomes using motives for moving

Moving behavior involves a sequence of decisions (Brown and Moore 1970): a decision to move and a choice of destination. The multivariate analyses in this paper focus on one aspect of the destination choice, namely the housing tenure outcome. This approach is similar to the one applied by Mulder and Hooimeijer (1995) for the tenure choice of moving renters. When studying the housing tenure outcome of movers, the moving decision is assumed to be independent of the housing tenure decision. In other words, it should be likely that a move is not made because of tenure preferences.

The causes for moving and motives for tenure choice are diverse, and many may not be strictly independent. This problem is solved by ruling some motives out, either because they will almost by definition lead to a move to renting, or because they will not lead to a move. To make the assumption of independence of decisions credible, the motives for relocating that are under analysis should lead to a move even if housing of the preferred tenure is not available (Hachen 1988). This would not be the case if the motive were “I would like to move to a rented home” or “I would like to free up equity from my home.” Even though moving from owner-occupied to rented dwellings occurs rather frequently among people over 65, they do not express a preference for renting much more often than do people in other age groups (Housing Demand Surveys 1994, 1998). While on average 0.7% of all those moving mention a preference for renting as the main motive for relocating, 0.9% of people aged over 65 do so. Motives related to equity release are not among the pre-coded motives in the data used in this study. However, Haffner (2004) found not only that dis-investment in housing occurs on a very limited scale in the Netherlands but also, based on interviews and a literature study, that this motive very rarely leads to relocations. Similarly, but using data on the USA, Vanderhart (1994) found that financial considerations are of minor importance for moving from owner-occupied homes.

Furthermore, some criteria for relocating related to housing and neighborhood preferences may only be met by moves to homes of certain housing tenures. Such a move could be postponed if a home of a certain tenure is not found instantly. By implication, the motive for moving may not lead to a move if a home in the preferred tenure is not available, and thus the assumption of independence of decisions is not correct. To be on the safe side, therefore, this analysis excludes motives for moving associated with housing and neighborhood characteristics.

Aging people often prefer smaller single-storied homes that are maintenance-free and may offer care facilities. The likely tenure outcome of a rented home, however, is not likely to be part of the motivation for relocating. Moves motivated by aging or health will not be postponed if an owner-occupied rather than a rented home is found.

In sum, the motives for relocating that meet the above criteria are related to union dissolution, union formation, changes in the labor career, and aging or deteriorating health. In the following sections, these motives are associated with the main causes for leaving the owner-occupied segment of the housing market that were identified above.

## 2.2 Motives for moving arising from the household career: union dissolution and union formation

Union dissolutions almost by definition necessitate the immediate move of one of the partners in a household. The immediacy that is embedded in this motive for relocation invokes urgency in the tenure decision. Couples benefit from pooled resources. As soon as a union is dissolved, either by separation or divorce, this benefit is lost. Subsequently, savings and assets are divided up; often, the portions are not sufficient to afford another owner-occupied home. If one of the partners stays in the marital home, the decreased budget might also make it harder or impossible to afford the present home without the partner (Feijten 2005a). For one of the partners, the housing budget may also be affected by paying alimony. Women have been found to stay in the marital home directly after a divorce more often than men (Symon 1990). Once women do leave the marital home after divorce or separation, however, they generally move to a rented home more often than men do (Feijten 2005a; Holmans 1990; Symon 1990; Wasoff and Dobash 1990). Less need for space after a divorce or separation is likely; in that case, a smaller home might be more suitable (Clark et al. 2000). A decreased budget, a change in housing consumption needs, and limited available time—all three conditions incur a greater probability of moving to a rented home. It is therefore expected that moves for union dissolution lead to considerably more often to moves to rented homes than moves for other motives for relocating.

Union formation has frequently been shown to be a life event that induces, or facilitates, the transition from a rented to an owner-occupied home (Clark et al. 1994; Feijten et al. 2003; Mulder and Manting 1994). A moving decision motivated by union formation is characterized by newly gained advantages such as pooled resources, while the desired level of housing consumption increases. Changes in household income and in the amount of space needed thus point in the opposite direction to those incurring a greater probability of moving to rented homes. Moves from owner-occupied to rented homes motivated by union formation thus indeed seem highly unlikely to occur. Marriage and cohabitation are expected to lead to a smaller probability of moving to rented homes than other motives for relocating do.

### 2.3 Motives for moving arising from the labor career: moving closer to an existing job and moving to a new job

A change of jobs may trigger a move if transaction costs are outweighed by improvement in the individual situation (Helderman et al. 2006; Sjaastad 1962; Van Leuvensteijn and Koning 2004; Van Ommeren et al. 2000). So, if someone moves for job reasons, the individual's income or budget for housing is likely to increase rather than decrease. Once a decision to move has been made, the time available for the tenure decision may be limited and a move to a rented home becomes more likely. That is especially true if the new job is so far from the present residence that a daily commute is unsustainable (Van Ommeren 1996). Unfamiliarity with a new housing market may also increase the probability of moving to a rented home (Hooimeijer and Oskamp 1996; Goetgeluk 1997).

At the beginning of this section, four causes for moving were identified as most likely leading to a tenure decision in favor of a rented home. Of these four causes, limited available time and unfamiliarity with the local housing market in the place of destination seem to be capable of being met. It is therefore expected that the probability to move to a rented home is greater for moves related to the labor career than it is for moves due to union formation, but smaller than for motives of union dissolution.

### 2.4 Motives for moving related to aging and health

As people age and encounter health problems, their daily routines, housekeeping, and maintenance may become increasingly problematic (Filius 1993; Vanderhart 1994). They may no longer be able to continue living in an independent owner-occupied dwelling. Older people may want or need a single-storied dwelling or one that is serviced by caretakers. Both single-storied homes and homes with care facilities are more common in rented than in owner-occupied housing (Kullberg and Ras 2004). If someone's state of health worsens suddenly or becomes critical, a move may be urgent. Tenure outcomes of people with motives for moving related to aging or health may thus in some cases be affected by the limited amount of time available to find an optimally suited owner-occupied home.

A change in housing preferences or needs and, for some, the limited time available are relevant for the motivation to move for aging or health reasons. It may therefore be expected that these relocation motives increase the probability of moving to a rented home, though not to the extent that divorce or separation does.

### 2.5 Individual and household circumstances

Apart from the motives for relocating, the situation in which individuals or households find themselves after the planned move is likely to influence the tenure decision outcome and should thus be taken into account. The greater the number of adults in the (new) household, the higher the level of the household's desired housing consumption will be and the smaller the probability of moving to a rented home is expected to be. For families with children, continuity of housing quality and

a reluctance to disinvest in housing might be greater inducements than for households without children. One-person households and single-parent households are therefore expected to be more likely to move to a rented home than more stable households with two adults and children (Dieleman et al. 1995).

Women have on average a somewhat lower income potential than men. The gender wage gap reflects the lower average wages for women than for men in similar positions. The frequency of part-time work, or withdrawal from the labor market altogether, among women—and particularly women with children—partly explains the differences in income potential in the Netherlands. It may thus be harder for women to fulfill their mortgage obligations. Therefore, it is expected that women have a greater probability of moving to a rented home than men.

As people get older, they prefer smaller residences with low maintenance and easy access, such as single-storied homes. These dwellings are found more often in the rented segment of the housing market. It is therefore expected that the older a person gets, the greater the probability that he or she will opt for a rented home. This expected effect of age is independent of whether the motive for relocating is aging or health.

A sufficient income is necessary to keep up the mortgage payments; out-of-pocket expenses are generally higher for homeowners than for renters. It is easier to afford mortgage payments when one's income is high. Therefore, a higher income is expected to lead to a smaller probability that the tenure outcome is a rented home.

A higher level of education generally implies not only a better income potential but also more knowledge of alternatives on the mortgage and housing market, options that facilitate maintaining homeownership. Higher levels of education are therefore expected to decrease the probability of opting for a rented home.

The farther away people move, the less they are likely to know about the new local housing market. Unfamiliarity with housing market circumstances in distant places may lead to sub-optimal housing tenure outcomes. It is therefore expected that the greater the moving distance, the greater the probability of moving to a rented home.

## 2.6 Spatial differences in the opportunity structures of housing markets

Maintaining homeownership after a move is more likely if owner-occupied homes are in large supply at the place of destination. The percentage of owner-occupied homes in the local housing stock, therefore, is expected to be important to housing tenure decisions. The local or regional price level of owner-occupied homes is also likely to influence the housing tenure outcome. If the price level of owner-occupied homes at the destination is high, the number of owner-occupied homes within reach of the potential buyer may narrow down, possibly making a move to a rented home likely. Alternatively, high house prices in an area may also indicate relatively high equity levels and a large budget for housing among people moving within such areas, possibly leading to a smaller probability of moving to a rented home. The degree of urbanization reflects the housing market structure. The housing market structure in urban areas is often characterized by a larger percentage of rented homes, higher prices for owner-occupied homes, and a higher turnover of homes



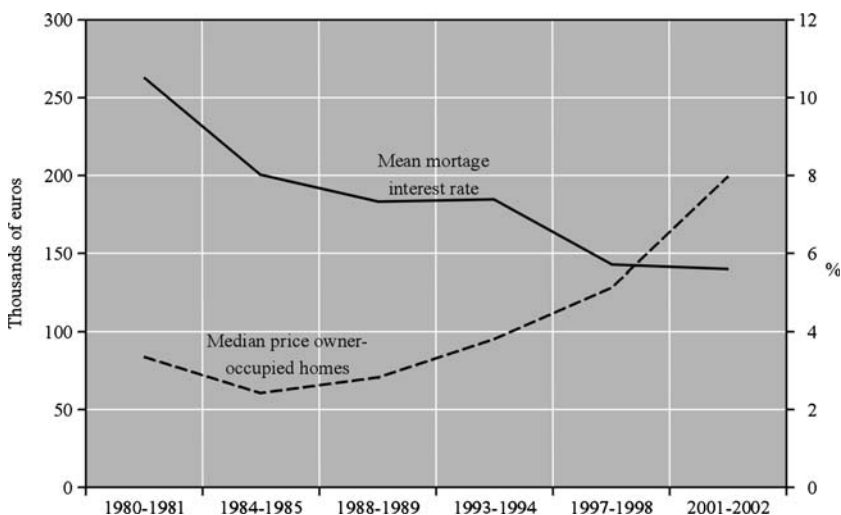
(Clark and Dieleman 1996; Helderma and Mulder 2007). Because of the larger supply of rented homes in urban centers, it is expected that people are more likely to move to a rented home at a highly urban destination than at a rural destination.

## 2.7 Temporal changes in the opportunity structure of the housing markets

Changes in the economic climate are important for the occurrence of moves from owner-occupied to rented homes. Economic changes affect fluctuations in house prices (Fig. 1) and thus, indirectly, the amount of built-up equity. Economic growth along with high and rising house prices may tempt homeowners to take another step in their housing career (Helderma et al. 2004, 2006). Economic growth provides better opportunities on the housing market, which is expected to cause smaller probabilities of moving to a rented home than under unfavorable economic circumstances.

Not only house prices but also mortgage interest rates fluctuate over time. Interest rates determine the price of financing and are therefore indicative of the difficulty with which people can obtain a new mortgage and thus a new home. High mortgage rates may hamper people's possibilities to opt for another owner-occupied home when moving.

Less favorable times on the Netherlands housing market could be discerned in 1980–1981, when prices decreased though mortgage rates were high (see Fig. 1). It is expected that there was an increased probability of moving to a rented home in 1980–1981 and 1984–1985—perhaps even up to 1993–1994 because house prices were still rising only slightly before 1994 while mortgage interest rates were relatively high.



**Fig. 1** Median price of owner-occupied homes (€1000s, left Y-axis) and mean mortgage interest rate (% , right Y-axis) 1980–1981 to 2001–2002. Source: NVM (Netherlands Network of Brokers and Real Estate Experts), 2005; Statistics Netherlands 2005

Favorable periods on the Netherlands housing market were 1997–1998 and 2001–2002, when house prices increased more than in previous years. From 1994 onwards, increasing house prices and decreasing mortgage interest rates created better opportunities on the housing market. Many may have entered into, or moved upward within, the owner-occupied segment of the housing market from then onwards. Especially in 1997–1998, owner-occupied homes were attractive investments and mortgages were renewed more easily than before. It is expected that there was a decreased probability of moving to a rented home in 1997–1998 and 2001–2002.

### 3 Data and method

#### 3.1 The housing demand surveys

The data used in this study are derived from six Housing Demand Surveys, which are conducted approximately every four years by Statistics Netherlands and the Netherlands Ministry of Housing, Spatial Planning, and the Environment (*WoningBehoeftte Onderzoeken* 1981; 1985–1986; 1989–1990; 1994, 1998 and 2002). The samples are representative of the country's population aged 18 and over and not living in institutions. Both individual and household characteristics can be found in the datasets, and the respondent is taken as reference for the household. The Housing Demand Surveys are cross-sectional datasets that jointly provide a large number of cases over a total research period of more than two decades. What makes the Housing Demand Survey particularly suitable for this study is the data on the most recent residential move in the four years preceding the interview, or two years for the data from 2002. The motives for moving, information about the previous tenure, geographic location of the residences, and the household and housing situation are available.

#### 3.2 Measurements

The measurement of motives for moving was not always consistent across subsequent Housing Demand Surveys. Over time, the questionnaires have featured more categories of possible motives for moving for the respondents to choose from as the best answer to represent the most important motive for their most recent move. As a consequence, motives for moving have been measured more accurately over time, capturing more diverse motives for relocating within separate answer categories. Detail over time has been gained on motives related to housing and neighborhood characteristics. The structure of the questions relating to motives for residential relocations was also slightly different over time. In the datasets of the 1980s and early 1990s, the questions directly targeted the most important motive. In contrast, the surveys of 1998 and 2002 first made an inventory of reasons related to the latest move; on that basis, the respondents identified the most important motive for moving. This could lead to a more accurate evaluation before singling out the most important motive for the last

move. However, it is not clear if a more accurate evaluation actually occurred. To make the data recorded in the different research periods comparable, the categories were designed to capture the detailed descriptions of later surveys without losing information from the earlier ones. This resulted in the following categories of motives for relocating: marriage or cohabitation; divorce or separation; aging or health; labor career; housing characteristics; neighborhood characteristics; and 'other' motives for moving. The residual category was later eliminated from the analyses because these other motives were very diverse and rarely mentioned.

Table 1 summarizes the statistics and definitions of the variables used. The first series relates to all homeowners moving except those with motives that could not be classified, while the second series relates to all homeowners whose motives were selected for the multivariate analysis (see the section on Multivariate Methods).

All variables, including household characteristics, were measured at the time of interview, that is after the move. It can be assumed that the housing tenure was decided within this (new) household context. The percentage of owner-occupied homes in the municipality (ABF Real Estate Monitor 2002) and the mean price of owner-occupied homes in the housing market area (Housing Demand Survey, 2002) were all recorded in 2002. It was assumed that municipalities with many owner-occupied homes in 2002 were also characterized by many owner-occupied homes in the other periods under observation and that relatively expensive areas in 2002 were expensive in all periods.

### 3.3 Descriptive method

The descriptive results consist of bivariate analyses of the motives for moving from an owner-occupied home. The descriptive analyses were restricted to respondents whose former residence was an independent owner-occupied dwelling. Respondents who previously lived or are living in institutional homes, (hotel) rooms, and dwellings such as houseboats, mobile homes, and temporary structures were excluded from the analyses. People still living or previously living with their parents were also excluded, because their (former) housing tenure is in fact their parents'. Households with incomes higher than €150,000 were also excluded from the analyses, to prevent outliers from influencing the regression coefficients. Of all homeowners with these characteristics (149,292) in the Housing Demand Surveys, 7.3% (10,904) had moved within two years before the time of interview. For the Housing Demand Survey of 2002, only moves up to two years before the interview were available. The descriptive analyses covered all previous moves recorded in the data; where available, moves more than two years before the interview were recorded as well. The respondents selected for the analyses excluded homeowners whose motives could not be classified. The combined dataset contains 12,609 selected homeowners who had moved for the selected motives ( $N_{1981} = 1,773$ ;  $N_{1985-1986} = 1,285$ ;  $N_{1989-1990} = 1,951$ ;  $N_{1994} = 2,559$ ;  $N_{1998} = 2,614$ ;  $N_{2002} = 2,427$ ). Of these, 26.6% (3,353) had moved to a rented home.

**Table 1** Variable summary statistics and definitions

	Moving homeowners, all classified motives			Moving homeowners, selected motives		
	Mean	SD	Range	Mean	SD	Range
Whether moved to a rented home (rent = 1)	0.27			0.42		0, 1
<i>Motives for moving from owner-occupied home</i>						
Marriage or cohabitation	0.06		0, 1			
Divorce or separation	0.06		0, 1			
Labor career	0.12		0, 1			
Aging and health	0.18		0, 1			
Housing characteristics	0.43		0, 1			
Neighborhood characteristics	0.16		0, 1			
<i>Motive for moving with household composition and gender</i>						
Couple, moved for work				0.40		0, 1
Single, moved for work				0.02		0, 1
Female single, moved for divorce				0.10		0, 1
Male single, moved for divorce				0.05		0, 1
Couple, moved for marriage/cohabitation				0.16		0, 1
Couple, moved for aging/health				0.22		0, 1
Female single, moved for aging/health				0.05		0, 1
Male single, moved for aging/health				0.01		0, 1
Children in household				0.52		0, 1
<i>Female</i>						
Age				46.02	15.59	18–88
Level of education						
Primary				0.17		0, 1
Secondary				0.56		0, 1
Tertiary				0.28		0, 1
Household income (1998€10,000s)				2.67	1.64	0.0–14.59
<i>Period of observation</i>						
1980–1981				0.15		0, 1
1984–1985				0.15		0, 1
1988–1989				0.15		0, 1
1993–1994				0.20		0, 1
1997–1998				0.16		0, 1
2001–2002				0.20		0, 1
<i>Degree of urbanization</i>						
Very urban				0.11		0, 1
Urban				0.21		0, 1
Moderately urban				0.25		0, 1
Moderately rural				0.21		0, 1
Rural				0.16		0, 1
Very rural				0.07		0, 1

Table 1 Variable summary statistics and definitions

	Moving homeowners, all classified motives			Moving homeowners, selected motives		
	Mean	SD	Range	Mean	SD	Range
Percentage owner-occupied homes in municipality				58.2	12.3	18.3–84.0
Value of owner-occupied home in housing market area (in 1998€)				57.46	13.58	7.50–84.00
Moving distance (for those who have moved; measured in km)				28.20	45.78	0–279.88
Number of respondents	12,607			2,256		

Source: Housing Demand Surveys, 1981–2002 and ABF Real Estate Monitor 2002

### 3.4 Multivariate method

Logistic regression analysis is performed to ascertain whether the differences in the probabilities for moving to rented homes for various motives can still be discerned after controlling for other personal and household characteristics. Furthermore, an attempt is made to show the effect of unfamiliarity with new housing market circumstances, taking the moving distance as a proxy. The analyses model the probability of having a rented home as a destination among owner-occupiers who had moved in the two years before the time of interview. Only moves and tenure outcomes in the preceding two years were analyzed because of the differences in retrospective observation periods between the Housing Demand Survey of 2002 (two years) and all other Housing Demand Surveys (four years). The dependent variable describes whether the tenure decision outcome of those moving from owner-occupied homes was an owner-occupied (0) or a rented home (1). Compared with the descriptive analysis, homeowners who moved for reasons of housing or neighborhood characteristics were excluded from the multivariate analysis (see the Theoretical Background;  $N_{\text{total}} = 2,256$ ). For all missing values, list-wise deletion was applied. According to Allison (2002), list-wise deletion of cases renders less biased parameters than substitution of missing values by the average (Cohen and Cohen 1975). Using the average would lead to overestimation of the parameters of the variables with the missing cases and to underestimation of all other parameters.

It was not known whether one model for the research period of roughly 20 years could be used without having to account for potential changes in the parameters over that period. Therefore, separate logistic regression models were also run for every individual Housing Demand Survey. The parameters of most variables are fairly stable for the different periods regarding direction (−/+ ) and size. The parameters for motives for moving to a rented home combined with household composition and gender show larger differences between Housing Demand Surveys and even a change in direction. These parameters, however, also are particularly large and have large standard errors. This implies that there are too few cases to

permit an analysis of the motives for relocating from owner-occupied to rented homes on the ground of individual surveys.

The degree of urbanization, percentage of owner-occupied homes in the municipality, and the mean value of owner-occupied homes in the housing market area are very likely to be associated with each other. To avoid the risk of overcontrolling for spatial characteristics, several multivariate models were estimated to show each parameter separately from that of other spatial attributes as well as in the same model. The observations of spatial characteristics (percentage owner-occupied homes and mean price of owner-occupied homes) are not independent among respondents. Rather, they are clustered in different spatial entities: municipalities and housing market characteristics. The standard errors of the estimates for the effects may therefore be biased. To correct for this possible bias, analyses were also run while correcting for the clustering of respondents in housing market areas. These analyses did not render different results.

## 4 Results

### 4.1 Descriptive results

Among moving homeowners, the percentages moving to a rented home have been different depending on the year of observation. The percentages among all moving homeowners have varied between 22.0% (2001) and 33.3% (1984). Yet there have been few homeowners who moved to a rented home within a year: between 0.7% (1980) and 1.5% (1997) (Housing Demand Surveys, 1981–2002).

Divorce or separation has been the motive for relocating most often leading to a rented home during the entire observation period. Between 65.4% and 78.6% of owner-occupiers moving for this motive have moved to a rented home (see Table 2). Among owner-occupiers moving to rent, divorce or separation seems to have been of increased importance in 1982–1986 (15.3%) and 2001–2002 (22.1%; see Fig. 2). If the motive for moving is divorce or separation, the probability of moving to a rented home is considerable. Nonetheless, divorce or separation is not the motive that is most frequently mentioned for moving to a rented home (Fig. 2).

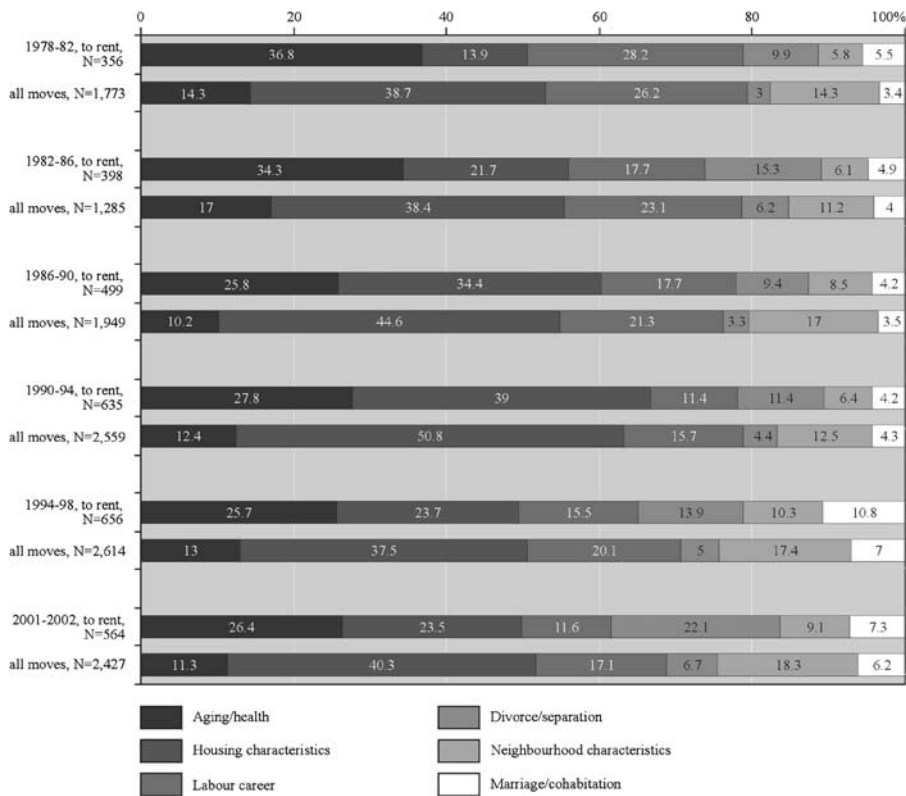
Among those moving for aging or health motives, the percentage of people moving to a rented home was high (varying between 50.4 and 66.0; see Table 2). Although aging or health has been the motive for moving for only a minority of moving homeowners (10.2–17.0%; see Fig. 2), it has been the most common motive among those moving from an owner-occupied to a rented home (25.7–36.8%; see Fig. 2).

A striking finding is that among moves motivated by marriage or cohabitation, higher percentages of moves to rented homes were found (24.9–43.4) than among moves for work-related motives (14.3–24.2; Table 2). Previous research has shown that marriage and cohabitation often induce moves from rented to owner-occupied housing (Clark et al. 1994; Feijten et al. 2003; Mulder and Manting 1994). It should be borne in mind that only a small minority—between 3.4% and 7.0% of moving homeowners and between 4.2% and 10.8% of homeowners moving to rent—gave

**Table 2** Percentage moving to rented homes of all moving homeowners by motive for moving

	1978–1982	N	1982–1986	N	1986–1990	N	1990–1994	N	1994–1998	N	2001–2002	N
Divorce/separation	68.6	46	77.4	74	74.1	57	65.4	95	78.6	112	70.2	203
Aging/health	53.9	243	63.4	217	66.0	192	56.6	313	56.5	343	50.4	231
Marriage/cohabitation	30.2	60	41.2	52	29.5	65	24.9	105	43.4	157	25.1	198
Labor career	22.6	478	24.2	295	21.7	431	18.3	416	21.8	535	14.3	371
Housing characteristics	7.6	689	17.6	502	20.7	869	19.4	1306	17.9	1013	12.5	954
Neighborhood characteristics	8.1	251	16.9	145	13.1	337	12.9	322	16.7	454	11.0	417
All motives	24.8		33.3		26.5		25.4		28.8		22.0	
$N_{\text{moving homeowners}}$	1,767		1,285		499		1,951		2,557		2,614	
$N_{\text{moving to rent}}$	356		398				635		656		564	

*Source:* Housing Demand Surveys 1981–2002



**Fig. 2** Share of motives for relocating among homeowners moving to a rented home and among moving homeowners. Source: Housing Demand Surveys 1981–2002

marriage or cohabitation as their motive for moving (Fig. 2). The labor career has been associated with a motive for moving relatively often by those moving to a rented home (11.4–28.2%; see Fig. 2).

Not surprisingly, the motives relating to housing and neighborhood characteristics have not often led to moves to rented homes (Table 2). These motives may reflect a desire for more space, better housing quality, or a better neighborhood. Owner-occupied homes therefore are a much more likely tenure outcome.

The descriptive results give a general impression of which motives lead homeowners to move to rented homes. The results regarding the motives for relocating were not all straightforward. To get a better idea of the way motives for moving influence the probability of moving to a rented home, it is necessary to analyze the motives for moving to a rented home while controlling for individual and household characteristics.

#### 4.2 Multivariate results

The multivariate results consist of three logistic regression models of housing tenure outcome (Table 3). Corresponding with the descriptive results, divorce or separation



incurs the highest probability of rented tenure outcomes, as becomes obvious from the large positive effects for both males and females (Model I, Table 3). Only the motive of aging or health for one-person households does not appear to have a significantly smaller probability of moving to a rented home. Males and females appear to have a different probability of moving to a rented home, which was expected, but the difference is not found to be significant. There may in fact not be any difference between the probability to move to a rented home by gender. Not finding a difference may also be due to the limited number of males moving for motives relating to divorce or separation ( $N = 108$ ) and thus to limited statistical power. The motive of aging or health incurs the second greatest probabilities of moving to a rented home, though couples moving for aging or health have a significantly smaller probability than singles moving for the same motive. A difference between males and females could not be discerned for the motive of aging or health either. Not finding a difference may be due to limitations in statistical power in this case as well; only 23 males were found to move for aging or health reasons. The third greatest probability of moving to a rented home appears to be incurred by marriage or cohabitation. Couples who move for their work have a significantly smaller probability of moving to a rented home than other motives for moving measured in this study except that of marriage or cohabitation and aging or health for couples ( $p = 0.123$ ) (Table 3, Model I). Couples moving for work are thus significantly less likely to move to a rented home than one-person households moving for work, as expected.

A somewhat unexpected result is that the presence of children does not appear to be very important for the housing tenure outcome: the impact is small and insignificant. Even though the presence of children might be instrumental for women to retain the marital home in case of a divorce, the results do not indicate an importance of the presence of children's influence for the housing tenure outcome in its own right.

Older people have a smaller probability of moving to a rented home than younger people. According to the model estimation, from approximately 48 years of age onwards, however, a rented home becomes an increasingly probable housing tenure outcome. The expected additional effect of age, while controlling for the motive of aging or health, is thus found.

The higher one's income is, the less likely it is that one will move to a rented home. The level of education appears to have a similar effect: the higher the level of education, the less likely it is that the housing tenure decision comes out in favor of a rented home.

The often-assumed relation between unfamiliarity with a new and distant local housing market (by proxy of moving distance) and moving to a rented home could not be discerned. A negligible and insignificant effect was found for moving distance.

During the periods 1997–1998 and 2001–2002, the probability of moving to a rented home was significantly smaller than in 1980–1981, as expected. When controlling for the degree of urbanization in Model I, 1984–1985 appears to have been a period in which people were significantly more likely to move to rented homes than in 1980–1981. However, no significantly different effect for

**Table 3** Logistic regression analysis of housing tenure outcome (0 = owner-occupied, 1 = rented) for households moving from an owner-occupied home motivated by union formation, household dissolution, motives for moving related to the labor career, or aging or health

	Model I		Model II		Model III	
	B	S.E.	B	S.E.	B	S.E.
<i>Household composition with motive for moving (ref = couples moved for work)</i>						
One-person households moved for work	0.636*	0.363	0.611*	0.363	0.612*	0.363
One-person households moved for divorce/separation female	2.151 ***	0.221	2.241***	0.222	2.193***	0.222
One-person households moved for divorce/separation male	1.821***	0.265	1.818***	0.265	1.815***	0.266
Couple moved for marriage/cohabitation	0.122	0.178	0.119	0.178	0.110	0.179
Couple moved for aging/health	0.287	0.186	0.303*	0.186	0.293	0.187
One-person household moved for aging/health female	1.847***	0.378	1.850***	0.378	1.855***	0.379
One-person household moved for aging/health male	1.291**	0.578	1.448**	0.580	1.457**	0.584
Presence of children in household (after move)	0.048	0.126	0.048	0.126	0.047	0.126
Age	-0.163***	0.024	-0.158***	0.024	-0.162***	0.024
Age squared	0.002***	0.000	0.002***	0.000	0.002***	0.000
Household income (1998€ 10,000s)	-0.302***	0.046	-0.288***	0.046	-0.294***	0.046
<i>Level of education (ref. = primary)</i>						
Secondary	-0.584***	0.152	-0.569***	0.151	-0.569***	0.152
Tertiary	-1.120***	0.184	-1.114***	0.183	-1.113***	0.184
<i>Period of observation (ref. = 1980–1981)</i>						
1984–1985	0.316*	0.183	0.291	0.183	0.292	0.184
1988–1989	0.244	0.181	0.229	0.182	0.219	0.182
1993–1994	0.131	0.174	0.082	0.174	0.087	0.175
1997–1998	-0.359*	0.183	-0.376*	0.183	-0.410**	0.184
2001–2002	-0.412**	0.198	-0.453**	0.198	-0.454**	0.199
Moving distance	0.000	0.001	0.000	0.001	0.000	0.001
<i>Degree of urbanization (ref. = very urban)</i>						
Urban	-0.097	0.196			0.169	0.220
Moderately urban	-0.573***	0.194			-0.212	0.245
Moderately rural	-0.741***	0.201			-0.313	0.285
Rural	-0.738***	0.212			-0.308	0.307
Very rural	-0.761***	0.260			-0.321	0.353
Percentage of owner-occupied homes in municipality			-0.024***	0.004	-0.014*	0.007
Mean value of owner-occupied home in housing market area (2002€ 10,000s)			-0.040***	0.013	-0.045***	0.013
Constant	4.524***	0.616	6.268***	0.730	5.852***	0.717

**Table 3** continued

	Model I		Model II		Model III	
	B	S.E.	B	S.E.	B	S.E.
Initial -2 log likelihood	3065		3064		3064	
Model -2 log likelihood	2359		2350		2345	
Improvement	706; df = 24; $p = 0.00$	714; df = 21; $p = 0.00$	720; df = 26; $p = 0.00$			
Nagelkerke $R^2$	0.362		0.365		0.368	
$N = 2,256$						

Notes: Significance at \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Source: Housing Demand Surveys 1981–2002

1984–1985 is found when the value of owner-occupied homes is also taken into account (Model III).

All spatial characteristics render significant effects. Moving to a rented home appears to be less likely in rural areas than in urban areas (Model I). According to expectations, the higher the percentage of owner-occupied homes on the local housing market, the less likely it is for someone to move to a rented home (Model II). Additionally controlling for the degree of urbanization (Model III) renders the effect of the percentage of owner-occupied homes just barely insignificant ( $p = 0.050$ ). In areas with higher house prices, the probability of opting for a rented home appears to be significantly smaller than in less expensive areas (Model II). High mean house prices do not seem to limit the choice options of movers to the extent that the probability of moving to a rented home increases. The finding provides some evidence for the alternative hypothesis introduced in the section on Theoretical Background: people moving within an area with high mean house prices often have considerable buying power. The degree of urbanization has smaller and insignificant effects after controlling for the percentage of owner-occupied homes in the municipality and the value of owner-occupied homes in the housing market area (Model III). This indicates that the degree of urbanization to a large extent represents both the percentage and the value of owner-occupied homes. The opposite direction of the effect found for their value indicates that the percentage of owner-occupied homes is a more important aspect of the degree of urbanization than the mean value of owner-occupied homes is.

## 5 Discussion

This study has addressed the motives that lead people to move to a rented dwelling in the Netherlands and the relative importance of these motives after accounting for individual and household characteristics as well as temporal and spatial aspects. The main conclusion from the multivariate analyses is that, while controlling for personal and household characteristics, divorce or separation incurs the greatest probability of homeowners moving to a rented home. This motive leads to

significantly greater probabilities of moving to a rented home than all other homeowners' motives for moving, with the exception of singles moving for aging or health. Remarkably, the majority (between 65% and 78%) of those moving because of divorce or separation actually move to rented homes, while in the case of divorce or separation at least one of the partners move. Divorce is thus likely to lead to at least one move from an owner-occupied to a rented home. Among homeowners moving for aging or health reasons, the majority also move to a rented home (between 50% and 66%). While no gender differences were found in the multivariate analysis, limited statistical power may have led to this finding. There were some indications that the presence of children in the (new) household is a less important motive for move to a rented home—though a significant effect was not found—than the number of adults.

In some cases, Motives for moving relating to the labor career have been found to lead to (temporary) moves to rented homes. For the sake of their jobs, people often move considerable distances. Because they are unfamiliar with the local housing market in the place of destination, the housing tenure outcome was more likely to be a rented home. In this study, moving for work-related motives was found to lead to a move to a rented home in only 14–24% of the moves for this motive. This share is far less than moves for divorce or separation and for aging or health motives. Moves to rented homes for job-related reasons do not occur much more often than moves for motives related to housing or neighborhood characteristics.

The multivariate analysis attempted to show the effect of unfamiliarity with new housing market circumstances, taking moving distance as a proxy. Moving distance might not be important for the tenure outcome of moving homeowners. Alternatively, the reason why no effect of moving distance was found may lie partly in the cross-sectional nature of the data. Because such moves are rare, and because homeownership is often temporary, the chance of observing transitions to rented homes is slim. Especially because long-distance moves are much less common than short-distance moves, the small number of cases—and thus the limited statistical power—may still be a problem, despite the large samples of the Housing Demand Surveys.

A drawback of the data is that it does not include the causes for moving from an owner-occupied to a rented home. Therefore, the motives for moving were analyzed in this paper instead. A difficulty in analyzing motives for moving instead of causes for potentially moving to a rented home is that motives for moving are only measured for those who have already moved. It is therefore impossible to study the effects of life events such as divorce on moving to rent for all homeowners. A minor drawback of the Housing Demand Surveys is that this instrument was not designed to allow the analysis of results from different years together. The categories in which motives for moving were recorded differ across the surveys. For example, aging and health motives could not be differentiated from one another because several surveys recorded them in the same category. Both the motive and the effect of age squared lead to a greater probability of moving to a rented home. Despite its drawbacks, the Housing Demand Survey covers a large numbers of cases. This gives this instrument a major advantage over previous studies of tenure transitions from owner-occupied to rented homes: greater statistical power. Compared to other

datasets, the size of the Housing Demand Survey allows investigators to analyze the association between motives for moving and tenure outcomes in a much more detailed fashion.

The motives for relocating that create the context in which people decide on their tenure often represent conditions whereby people do not have an equal chance of improving their situation. One particularly striking finding of this paper is that throughout the study period, divorce has been the main motive for moving. This is especially notable considering that the divorce rate has increased and is still rising in the Netherlands. During this period, the number of divorces rose from 25,735 to 37,104, or from 7.5 to 10.5 per thousand couples (Statistics Netherlands 2005). This may lead to increasing polarization on the housing market in the future: a decrease in housing quality; a decline in the quantity of housing consumed; and an interruption of the build-up of equity from an increase in house prices.

The analyses presented in this paper provide evidence to underpin the expectation that divorce or separation leads to many more moves from owner-occupied to rented homes than other motives do. In previous research, moves for reasons of divorce or separation have been studied without relating these to the effect of other motives on moving from owner-occupied to rented homes (for example, Dieleman et al. 1995; Feijten 2005a). Another notion that has often been advanced in the literature on residential relocations, with or without empirical support, is that work-related moves lead to many moves out of homeownership. But as the results presented in this paper suggest, motives for moving that involve job changes lead significantly less often to moving from owner-occupied to rented homes than moving for motives of divorce or separation or for motives relating to aging or health do. In fact, moving for a job just barely leads to more moves to rented homes than motives for moving incurred by housing or neighborhood characteristics.

An important policy perspective for this study is that whereas the rental sector is decreasing in the Netherlands, there are demographic indications that the demand for dwellings in this sector is likely remain stable at the very least (see also Mulder and Helderman 2002; Helderman 2007).

**Acknowledgements** The Netherlands Organisation for Scientific Research supported this research (NWO—Aspasia grant no. 015.000.013). The author is grateful to Claartje Mulder at the Amsterdam Institute for Metropolitan and International Development Studies (AMIDSt) at the University of Amsterdam and Maarten van Ham at the University of St. Andrews for their valuable comments on earlier drafts of this paper. This paper was prepared while the author was a member of AMIDSt, University of Amsterdam.

## References

- Allison, P. (2002). *Missing data*. London: Sage.
- ABF Real Estate Monitor (2002). *ABF real estate monitor*. Delft: ABF Research.
- Brown, L. A., & Moore, E. G. (1970). The intra-urban migration process: A perspective. *Geografiska Annaler*, 52B, 368–381.
- Clark, W. A. V., Deurloo, M. C., & Dieleman, F. M. (1994). Tenure changes in the context of micro-level family and macro-level economic shifts. *Urban Studies*, 31(1), 137–154.

- Clark, W. A. V., Deurloo, M. C., & Dieleman, F. M. (2000). Housing consumption and residential crowding in U.S. *Housing Markets*. *Journal of Urban Affairs*, 22(1), 49–63.
- Clark, W. A. V., Deurloo, M. C., & Dieleman, F. M. (2003). Housing careers in the United States, 1968–93: Modelling the sequencing of housing states. *Urban Studies*, 40(1), 146–160.
- Clark, W. A. V., & Dieleman, F. M. (1996). *Households and housing; choice and outcomes in the housing market*. New Jersey: CUPR Press.
- Cohen, J., & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioural sciences*. Hillsdale, New Jersey: Erlbaum.
- Davies Withers, S. (1998). Linking household transitions and housing transitions: A longitudinal analysis of renters. *Environment and Planning A*, 30, 615–630.
- Deurloo, M. C., Clark, W. A. V., & Dieleman, F. M. (1994). The move to housing ownership in temporal and regional contexts. *Environment and Planning A*, 26, 1659–1670.
- Deurloo, M. C., Dieleman, F. M., & Clark, W. A. V. (1987). Tenure choice in the Dutch housing market. *Environment and Planning A*, 19, 763–781.
- Dieleman, F. M. (2001). Modelling residential mobility; a review of recent trends in research. *Journal of Housing and the Built Environment*, 16, 249–265.
- Dieleman, F. M., Clark, W. A. V., & Deurloo, M. C. (1995). Falling out of the home owner market. *Housing Studies*, 10(1), 3–15.
- Elsinga, M., & Hoekstra, J. (2005). Homeownership and housing satisfaction. *Journal of Housing and the Built Environment*, 20, 401–424.
- Feijten, P. (2005a). Union dissolution, unemployment and moving out of homeownership. *European Sociological Review*, 21(1), 59–72.
- Feijten, P. (2005b). *Life events and the housing career: A retrospective analysis of timed effects*. Delft: Eburon.
- Feijten, P., Mulder, C. H., & Baizan, P. (2003). Age differentiation in the effect of household situation on first-time homeownership. *Journal of Housing and the Built Environment*, 18(3), 233–255.
- Filius, F. (1993). *Huishoudensopheffing en woningverlating in een vergrijzende samenleving*. [Household dissolution and departure from the housing market in an ageing society]. Utrecht: Royal Netherlands Geographical Society.
- Goetgeluk, R. W. (1997). *Bomen over wonen: woningmarktonderzoek met beslissingsbomen*. [Trading off Housing Preferences. Housing market research with Decision Plan Nets]. Utrecht: Utrecht University.
- Hachen, D. S. (1988). The competing risks model. A method for analysing processes with multiple types of events. *Sociological Methods & Research*, 17(1), 21–54.
- Haffner, M. E. A. (2004). *Appel voor de dorst? Vermogen van ouderen op de woningmarkt*. [Housing wealth among older people]. Utrecht: DGW/Nethur.
- Helderman, A. C. (2007). *Continuities in homeownership and residential relocations*. Utrecht/Amsterdam: KNAG/Faculteit der Maatschappij- en Gedragswetenschappen – Universiteit van Amsterdam.
- Helderman, A. C., & Mulder, C. H. (2007). Intergenerational transmission of homeownership: The role of gifts and continuities in housing market characteristics. *Urban Studies*, 44(2), 231–247.
- Helderman, A. C., Mulder, C. H., & Van Ham, M. (2004). The changing effect of home ownership on residential mobility in the Netherlands, 1980–98. *Housing Studies*, 19(4), 601–616.
- Helderman, A. C., Van Ham, M., & Mulder, C. H. (2006). Migration and home ownership. *Tijdschrift voor Economische en Sociale Geografie*, 97(2), 107–121.
- Holmans, A. E. (1990). Housing demand and need generated by divorce. In P. Symon (Ed.), *Housing and divorce*. Glasgow: Centre for Housing Research, University of Glasgow.
- Hooimeijer, P., & Oskamp, A. (1996). A simulation model of residential mobility and housing choice. *Netherlands Journal of Housing and the Built Environment*, 11(3), 313–336.
- Kullberg, J., & Ras, M. (2004). *Met zorg gekozen? Woonvoorkeuren en woningmarktgedrag van ouderen en mensen met lichamelijke beperkingen*. [Chosen with care? Housing preferences and housing market behaviour of the elderly and the disabled.]. The Hague: Netherlands Ministry of Housing, Spatial Planning and the Environment.
- McCarthy, P., & Simpson, B. (1991). *Issues in post-divorce housing*. Aldershot: Avebury.
- Megbolugbe, I. F., & Linneman, P. D. (1993). Home ownership. *Urban Studies*, 30(4/5), 659–682.
- Morrow-Jones, H. A. (1988). The housing life-cycle and the transition from renting to owning a home in the United States: A multi-state analysis. *Environment and Planning A*, 20, 1165–1184.

- Mulder, C. H., & Helderma, A. C. (2002). Dertig procent huur blijvend nodig (*Thirty percent rental homes will remain needed*). *Rooilijn*, 35(3), 108–114.
- Mulder, C. H., & Manting, D. (1994). Strategies of nest-leavers: ‘Settling down’ versus flexibility. *European Sociological Review*, 10, 155–172.
- Mulder, C. H., & Hooimeijer, P. (1995). Moving into owner-occupation: Compositional and contextual effects on the propensity to become a homeowner. *Netherlands Journal of Housing and the Built Environment*, 10(1), 5–25.
- Mulder, C. H., & Wagner, M. (1998). First-time home ownership in the family life course: a West German-Dutch comparison. *Urban Studies*, 35, 687–713.
- Saunders, P. (1990). *A nation of home owners*. London: Unwin Hyman.
- Sjaastad, L. A. (1962). The costs and returns on human migration. *The Journal of Political Economy*, 70, 80–93.
- Speare, A., Jr., Goldstein, S., & Frey, W. H. (1975). *Residential mobility, migration, and metropolitan change*. Cambridge: Ballinger.
- Statistics Netherlands. (2005). *Mean mortgage interest rate*. (Tables published through Statline: <http://statline.cbs.nl/>). The Hague: Statistics Netherlands.
- Symon, P. (1990). Marital breakdown, gender and home ownership: The owner-occupied home in separation, divorce. In P. Symon (Ed.), *Housing and divorce*. Glasgow: Centre for Housing Research, University of Glasgow.
- Van Leuvensteijn, M., & Koning, P. (2004). *The effect of home-ownership on labor mobility in The Netherlands*. Utrecht: Utrecht School of Economics, Tjalling C. Koopmans Research Institute.
- Van Noortwijk, L., Hooimeijer, P., & Dieleman, F. (1992). Divorce and the disruption of the housing career. In P. Korcelli & J. Van Weesep (Eds.), *Housing and urban policy in transition*. Papers from the Polish-Dutch Geography Seminar Warsaw-Szymbark 15–18 October 1990. Warsaw: Institute of Geography and Spatial Organization, Polish Academy of Sciences.
- Van Ommeren, J. N. (1996). Commuting and relocation of jobs and residences, a search perspective. Thesis, Amsterdam, 176 pp.
- Van Ommeren, J. N., Rietveld, P., & Nijkamp, P. (2000). Job mobility, residential mobility and commuting: A theoretical analysis using search theory. *The Annals of Regional Science*, 34, 213–232.
- Vanderhart, P. G. (1994). An empirical analysis of the housing decisions of older homeowners. *Journal of the American Real Estate and Urban Economics Association*, 22(2), 205–233.
- Wasoff, F., & Dobash, R. E. (1990). Moving the family: Changing housing circumstances after divorce. In P. Symon (Ed.), *Housing and divorce*. Glasgow: Centre for Housing Research, University of Glasgow.