

LABOUR MARKET EMANCIPATION RESULTS IN BOOMING DUTCH OWNER-OCCUPIED HOUSING MARKET

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Abstract

During the 1970s and 1980s, the proportion of dual-income households in the Netherlands increased rapidly. Dutch society lagged a little behind other Western societies in terms of the emancipation of women in the labour market, but women began to enter the labour market more often and continue working while raising children. Households with a stable dual-income became more common. Mortgage lenders reacted to this situation by introducing new mortgage products onto the market. From the year 1993 onwards, the 'dual-income' mortgage made it possible to take out a mortgage against the income of both partners. The owner-occupied market became accessible for many more households and the potential demand for housing in this sector of the market rose sharply. However, since there was no corresponding expansion in the supply of new housing, house prices also rose strongly during the 1990s. The rising trend in house prices created a huge increase in equity for households that already owned their home. The combination of this increase in equity, new forms of mortgages and relatively low interest rates led to a growth in the demand for owner-occupied dwellings in the middle and upper end of the housing market in the late 1990s and the first two years of this century. The owner-occupied market boomed. The average house price rose by 10% to 15% per year, the number of transactions climbed up from 70,000 in 1990 to 130,000 in 2002. The number of newly built dwellings in the owner-occupied sector grew to around 70,000 units per year in the late 1990s, with a shift to more expensive houses. However, the effect of the dual-income mortgage introduction on the housing demand fades away into the early years of this century. Additionally, the sharp rise in the house prices made owner-occupied dwellings less affordable and the sector less accessible for first-time buyers. The continuing growth in the potential demand for owner-occupied housing is now slowing and in some sectors and regions there has even been a drop in demand. The 'credit crunch' of 2008 has only served to reinforce this slow-down, which was already underway.

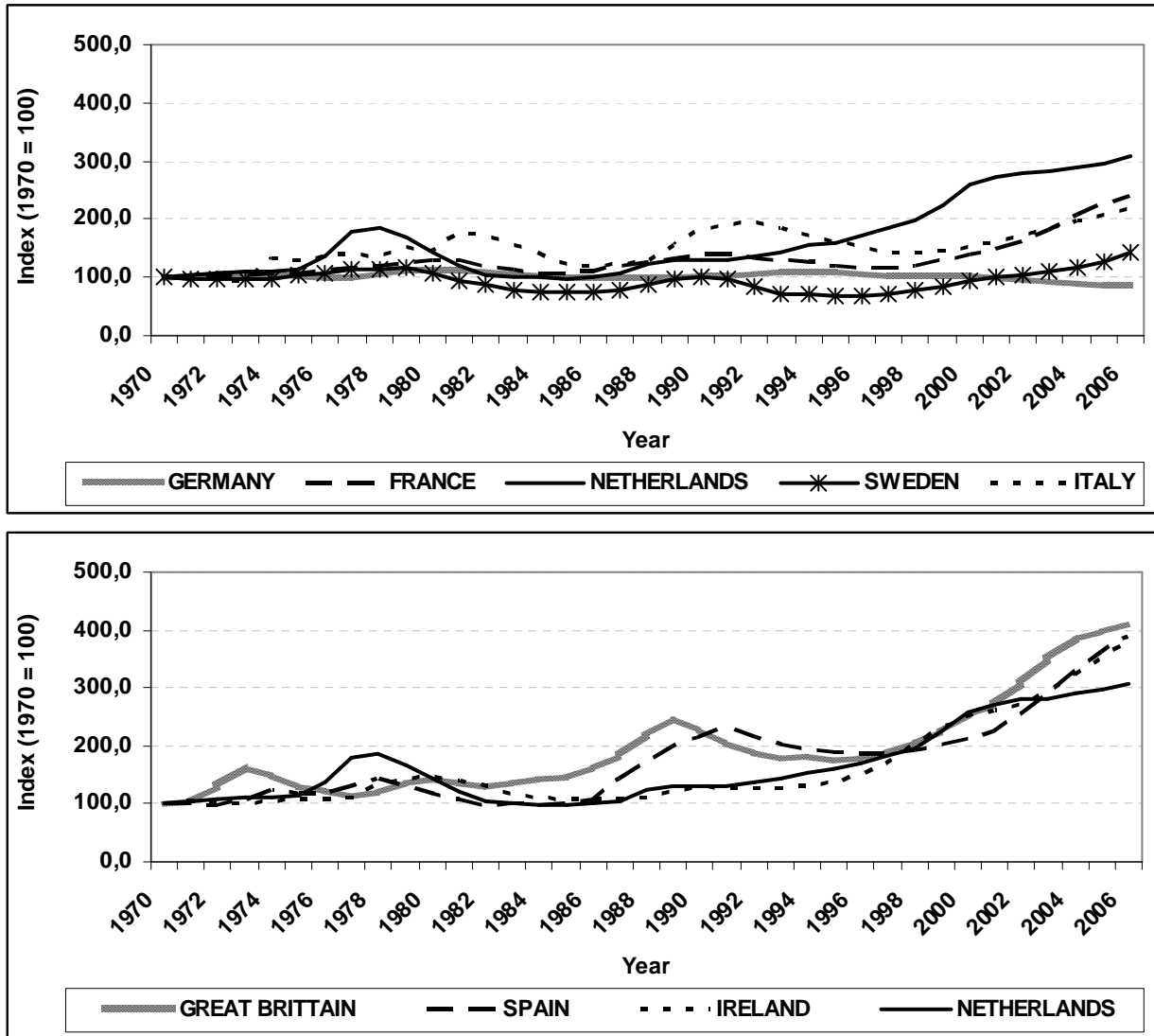
Keywords: house price, housing demand, owner-occupied sector, the Netherlands

1 Introduction

The Dutch housing market experienced a significant crisis in the early 1980s. After a very short-lived boom, with annual price rises of up to 30%, the demand for housing collapsed completely. This fall in demand, in combination with the high mortgage interest rate of that period, resulted in a price correction the like of which had not been witnessed since the Second World War. Due to the grim economic situation and unfavourable interest rate conversions in individual cases, there were tens of thousands of forced sales. Many of these resulted in negative equity (Boumeester, 2004).

However the housing market recovered within a few years, and from 1985 the demand for housing was rising strongly again. The average house price grew steadily, and sometimes rapid, from €63,000 in 1985 to €265,000 in 2007. House price rises during this period deviated clearly from most neighbouring European countries (see figure 1). The average price rise (after adjustment for inflation) was much greater in the Netherlands than in Germany, France, Sweden or Italy, particularly during the 1990s and at the beginning of this century. The overall rises seen were comparable with those in Great Britain, Ireland and Spain, although these increases did not occur in synchrony with those countries.

Figure 1 Average selling price (corrected for inflation) in a number of Western countries, for the period 1970-1997, index (1985 = 100)

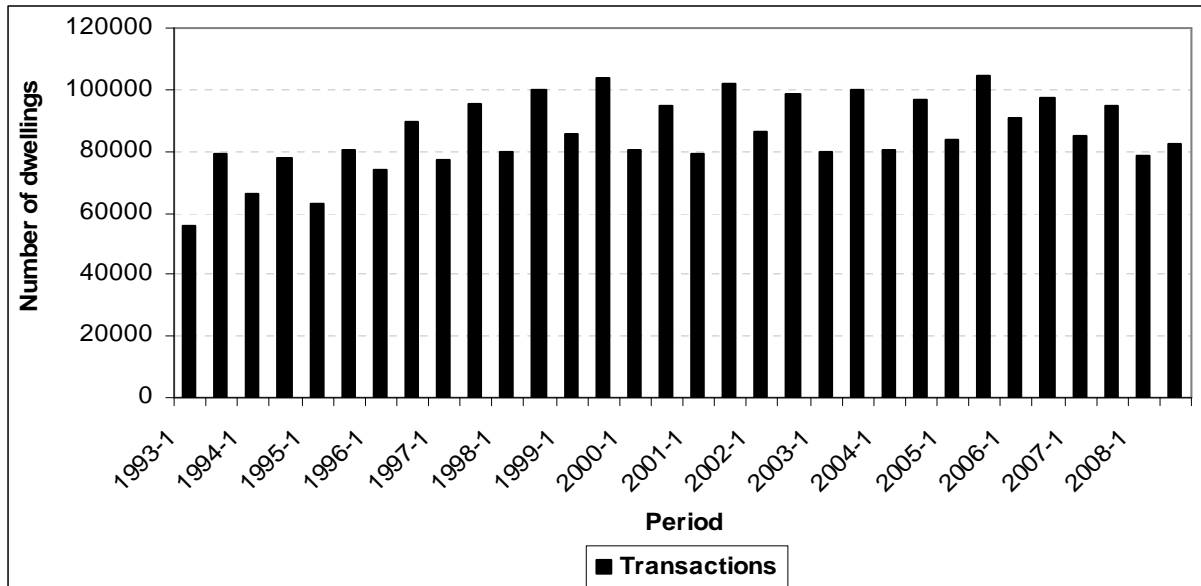


Source: Bank for International Settlements - Real House Price Data 1970-2006

The trends seen in the Dutch housing market certainly cannot, then, be explained entirely by trends in the Western-European or worldwide economy. The specific rises in house prices seen in the Netherlands has also had a number of causes linked to national contextual factors. In this paper, I will try to show that the emergence of the dual-income households has played an important role in this, and that this was a trend in which the Netherlands has lagged somewhat behind other European countries. Combined with the Dutch practice of financing the purchase of houses largely through borrowed capital and the rent policy and the treatment of housing in the government's tax policies, this has led to a great surge in demand and increased dynamism in the market. The number of transactions per year has grown considerably, as shown in figure 2. However, the same set of figures also shows that the total number of housing transactions since 2006 has moved in the opposite direction. Even before the 'credit crunch' in the United States,

and let alone in continental Europe, the first signs of a correction in the Dutch housing market could be detected. The housing market was becoming a victim of its own success.

Figure 2 Number of transactions on the Dutch owner-occupied housing market, six-monthly figures for the period 1993-2008



Source: Kadaster Netherlands, 2009

The next section elaborates the theoretical framework of housing choice and housing finance. Section 3 describes some general macro trends that have influenced the demand for housing. Section 4 presents some developments on the Dutch housing market during the last decade of the 20th century and the first few years of the current century. The effects on the potential demand and the actual number of house moves in the period 1990-2008 are described in section 5. Finally, section 6 presents the most important conclusions and some discussion of the research results.

2 Housing choice and housing finance

Three choices are made in the course of the decision to move into a particular dwelling or housing unit, and each choice is inextricably tied to the other two. These choices relate to the timing of a move, whether to buy or rent, and the level of housing services (Laakso and Loikkanen, 1992; Elsinga, 1995). The decision to live in an owner-occupied dwelling is thus a combination of the last two choices.

We assume that choosing an owner-occupied dwelling is generally related at least in part to people's household lifecycle, their socio-economic position, and their current position in the housing market. A great deal of research has demonstrated the relationship between the demographic and socio-economic characteristics of households and dwelling choice (Leslie and Richardson, 1961; Kendig, 1984; Clark & Onaka, 1985; Haurin, 1991; Clark et al., 1994; Boumeester, 1996; Clark and Dieleman, 1996; Mulder & Hooimeijer, 1995; Oskamp, 1997; Boumeester, 2004).

In his research into the Dutch housing market, Boumeester (2004) was able to establish connections between households' demographic and socio-economic characteristics and housing-market position of the household on the one hand, and their propensity to move and the actual number of moves to owner-occupied housing on the other hand. The age of the head of household and the composition of the household influence the timing of a move and the desired level of housing services. The income of the household and the actual position on the housing market (starter, tenant, or owner-occupier) largely determine whether they can move at the desired moment and to the preferred dwelling in the rental or owner-occupied sector.

However, there is more to the picture than this. The final moving behaviour also depends on the constraints imposed by the housing market (Dieleman & Everaers, 1994; Mulder & Hooimeijer, 1995; Meen, 1998; Boumeester, 2004). The availability and accessibility of the preferred dwelling are involved. The primary supply of owner-occupied dwellings also plays a role. This supply includes newly constructed dwellings in the owner-occupied sector and existing dwellings which become available when households leave the housing market. The secondary supply (dwellings which become available through the filtering of households) is also important, especially for first-time buyers who often select their first home from the existing housing stock. The supply of newly constructed housing has a crucial role to play as the starting point of house-moving chains, certainly in the Netherlands, where the supply of owner-occupied housing market is tight.

In the Netherlands people do not normally save up to buy a home (Elsinga, 1995). It is the availability of mortgages which largely determines accessibility to an owner-occupied dwelling. This accessibility is, in addition to the level of household income, strongly determined by mortgage interest rates, the types of mortgage on offer and the criteria applied with respect to the loan-to-income ratio, and the collateral value of the dwelling. The purchase of a home is also seen as an investment decision. Owning one's own home is perceived as a form of 'savings account' for old age, and as an attractive investment (Megbolugbe & Linneman, 1993; Boelhouwer, 1999). A potential purchaser will certainly take the circumstances on the housing market into account (interest rates and the development of house prices).

The owner-occupied housing market is far from a perfectly functioning market; the relationships between demand, supply and price can become seriously distorted. The imperfections inherent in the housing market include the heterogeneous character of the dwellings offered and those in demand, the attachment of dwellings to a particular location, and geographic variations in the housing supply. The completion time for the housing construction process also leads to problems in adjusting supply and demand. These imperfections can generate substantial price fluctuations, the effects of which are particularly noticeable in the short and medium-long term. In the long term, these fluctuations average out at around the equilibrium price (MacLennan, 1983; Abraham & Hendershott, 1996; Boelhouwer, 1999; Boelhouwer et al., 2005).

Lastly, the price mechanism on the owner-occupied housing market is also disturbed by what is referred to in the literature as 'speculative demand'. This has a particularly strong effect in the short term and in housing market areas with an uneven demand-supply ratio. The term 'speculative demand' suggests that the demand for owner-occupied housing is also influenced by the development of sale prices in the recent past. A price rise will lead households to speed up their move in order to gain maximum profit from the capital gains opportunities. Conversely, a price fall will lead households to postpone (temporarily) their purchase decision to avoid any loss of capital (Reichert, 1990; Abraham & Hendershott, 1996; Meen, 1998; Boelhouwer, 1999; Boumeester, 2004).

The demand for owner-occupied dwellings (in the Netherlands) is thus determined by the demographic and socio-economic characteristics of households, the financial opportunities and the housing market circumstances (demand-supply ratio and sales prices in the recent past). The continually growing demand for owner-occupied housing over the last 25 years can thus be explained by more general socio-cultural, demographic and socio-economic trends during that period. These trends are described in the next section.

3 Socio-cultural and demographic trends

The set of socio-cultural changes that have occurred in recent decades is often referred to as the 'modernisation' process. Modernisation refers to a number of social transformations, which have collectively led to, and are most clearly manifested in, the strong tendency towards individualisation. The values, norms and traditional integration frameworks which had long been taken for granted, such as family, social class, church and local community have declined in significance (De Feijter, 1991; Klaassen, 1993). There has been a corresponding increase in the individual's freedom of action and choice. Individuals are increasingly expected to determine their own path in life and create a social position for themselves through other means. This has meant that the position of the individual in the labour market has become a particularly important distinguishing feature.

This has formed the structural basis of the process of individualisation and emancipation, as that process has been witnessed in the Netherlands since the mid-1960s. Individualisation primarily involves the social aspects of social development: changing social contacts and networks. A society which is increasingly individualised has brought about the possibility of emancipation, and emancipation has, in turn, strengthened the process of individualisation (Boelhouwer et al., 1993). The growing prosperity of the period since the 1960s and 1970s has been an important prerequisite for this process of individualisation – this has also allowed individuals greater economic independence.

Within the generalised norms of society, people are developing less homogeneously in terms of their thinking, behaviour, lifestyle and forms of association. Individualisation is therefore associated with a greater degree of pluralism within society (Klaassen, 1993). The process of individualisation has not meant that individuals are less dependent on others, but that their dependence is more dispersed. Social and economic ties are connecting people with more individuals and organisations, and those connections are becoming less exclusive (Bloeme et al., 1988). To frame this in terms of preferences and life cycles, for certain sections of the population, both preferences and established patterns of behaviour have undergone a significant transformation in recent decades and new careers opportunities (or the possibility of combining careers) have opened up.

Female Emancipation

In this paper, I will propose female emancipation as a basis on which to explain developments in the Dutch housing market during the second half of the 1990s. Female emancipation has occurred largely in parallel to the emancipation of young people: due to dramatic changes in the labour market, increasingly highly trained personnel are required, meaning that young people remain in

education for longer. As a result, the average age at which people start to work has also risen. For those who have completed higher education in particular, careers are beginning later and at a higher level. But the emancipation of women has also had its own unique characteristics. Since the second half of the 1970s, the modernisation process has brought about radical changes in the values and norms surrounding marriage, the family, family planning and the roles of men and women.

Unmarried cohabitation and living alone have in particular become more widely accepted during recent decades. Marriage is no longer the automatic choice for everyone; neither is having children, which is in any case tending to happen later in life. This is opening up more and more opportunities for women to plan their own careers in the various spheres of life. There is a wider variety of careers to choose from, which has in turn contributed to the further modernisation of society.

Table 1 Number of persons with a university education and percentage of net labour participation, for males and females in the Netherlands, 1981-2006

	University education		Labour participation	
	male	female	male	female
1981	6700	2500	73	30
1982	7600	3200	71	30
1983	8700	3700	68	30
1984	8800	3900	68	30
1985	9400	4400	67	30
1986	9900	4900	69	33
1987	11800	6200	70	35
1988	17200	10100	70	36
1989	14200	8800	70	37
1990	10300	7200	71	39
1991	11000	8100	72	41
1992	11600	9100	72	41
1993	12400	10200	71	42
1994	13400	11300	70	42
1995	13400	11900	72	44
1996	14100	14200	72	45
1997	13100	12300	74	47
1998	11100	11000	75	49
1999	10400	10100	76	51
2000	10000	10300	77	52
2001	10000	10400	77	53
2002	10300	11000	76	54
2003	10500	11600	74	54
2004	11000	12800	73	54
2005	12100	14100	72	54
2006	13800	15500	73	56

Source: Statistics Netherlands, Statline 2009

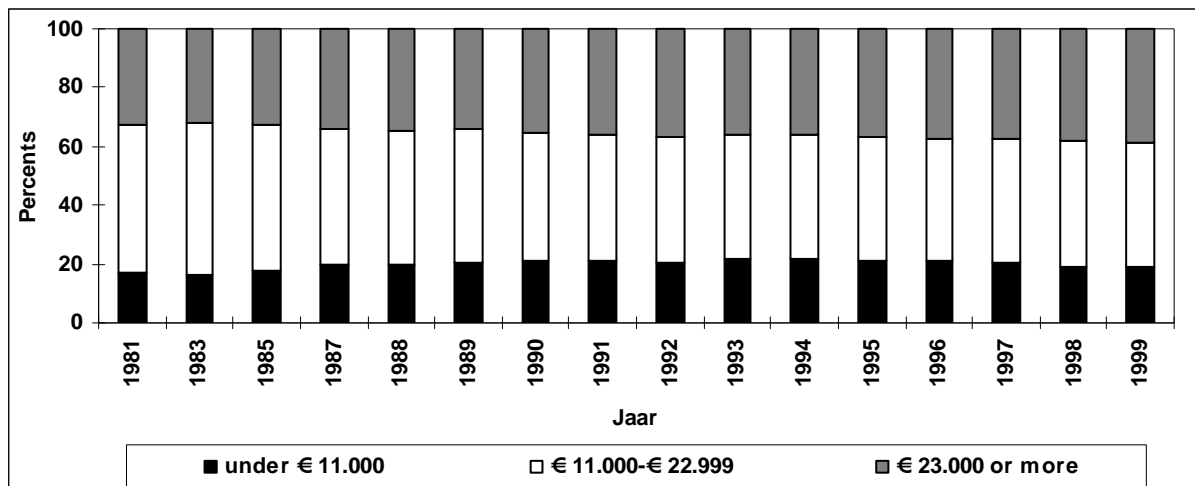
In the quest for greater social and economic independence, education and work have begun to play a more prominent role in the lives of women. Since 1980, the number of women with a higher vocational education and, particularly, with an academic education has increased much

more sharply than the number of men. The proportion of women among university graduates increased from 14% in 1970 to 50% in 1995; this proportion subsequently stabilised until the end of the 1990s (Statistics Netherlands, 2009).

Labour-market participation has also increased significantly over the last twenty years. This has been reflected in the strong expansion of the female workforce and a rise in the participation rate of women in the Netherlands. For example, the rate of labour-market participation among women increased from 30% in 1980 to 54% in 2002 (Statistics Netherlands, 2009). This has meant that Dutch women have largely caught up with women in neighbouring countries (notably Sweden, Denmark, Belgium, Great Britain and Germany). Since 2002, the female labour-market participation rate has remained stable in the Netherlands.

Female emancipation, combined with significant growth in the economy, has led to a sharp increase in the number of dual-income households in the Netherlands. The employment rate of women with a partner and without children increased from 43% in 1981 to 51% in 1990 and then to 55% in 1997. When there are children in the household, these percentages are lower (17%, 31% and 45% respectively), but these figures show the trend towards dual-income households even more clearly in relative terms (Statistics Netherlands, 2009). Female partners in households with adult children living at home are, relatively, the least active in the labour market (37% in 1997). But even among this group, labour-market participation showed a clear increase during the 1990s. Although in 1995 the man was still the sole breadwinner in a small majority (53%) of families with children, it seems that it is increasingly common for women to combine a career and household work.

Figure 3 Household income distribution in the Netherlands, 1981-1999



Source: Statistics Netherlands, 2009

The average household income remained reasonably stable in real terms during the 1980s and 1990s, partly as a result of the policy of wage restraint, the growing number of households receiving social benefits (the unemployed and pensioners) and the reduction in the average size of families. However, this steady average conceals the emergence of a certain degree of polarisation in the distribution of wealth. On the one hand, the number of households with lower incomes grew due to the increasing number of benefit recipients and single-person households. On the other hand, partly as a result of the increasing numbers of dual-income households, the

number of households with higher incomes also increased clearly (see figure 3). This trend towards a more polarised distribution of incomes was also exacerbated by the shift in employment opportunities already mentioned, which led to increasing numbers of low-paid and highly paid jobs while the number of middle-income jobs decreased (Priemus et al., 1994). This growth in the number of households with higher incomes was reflected among couples both with and without children (Boumeester, 2004). On the basis of the career/life cycle theory, a clear preference for (more expensive) owner-occupied housing can be expected among this group of households.

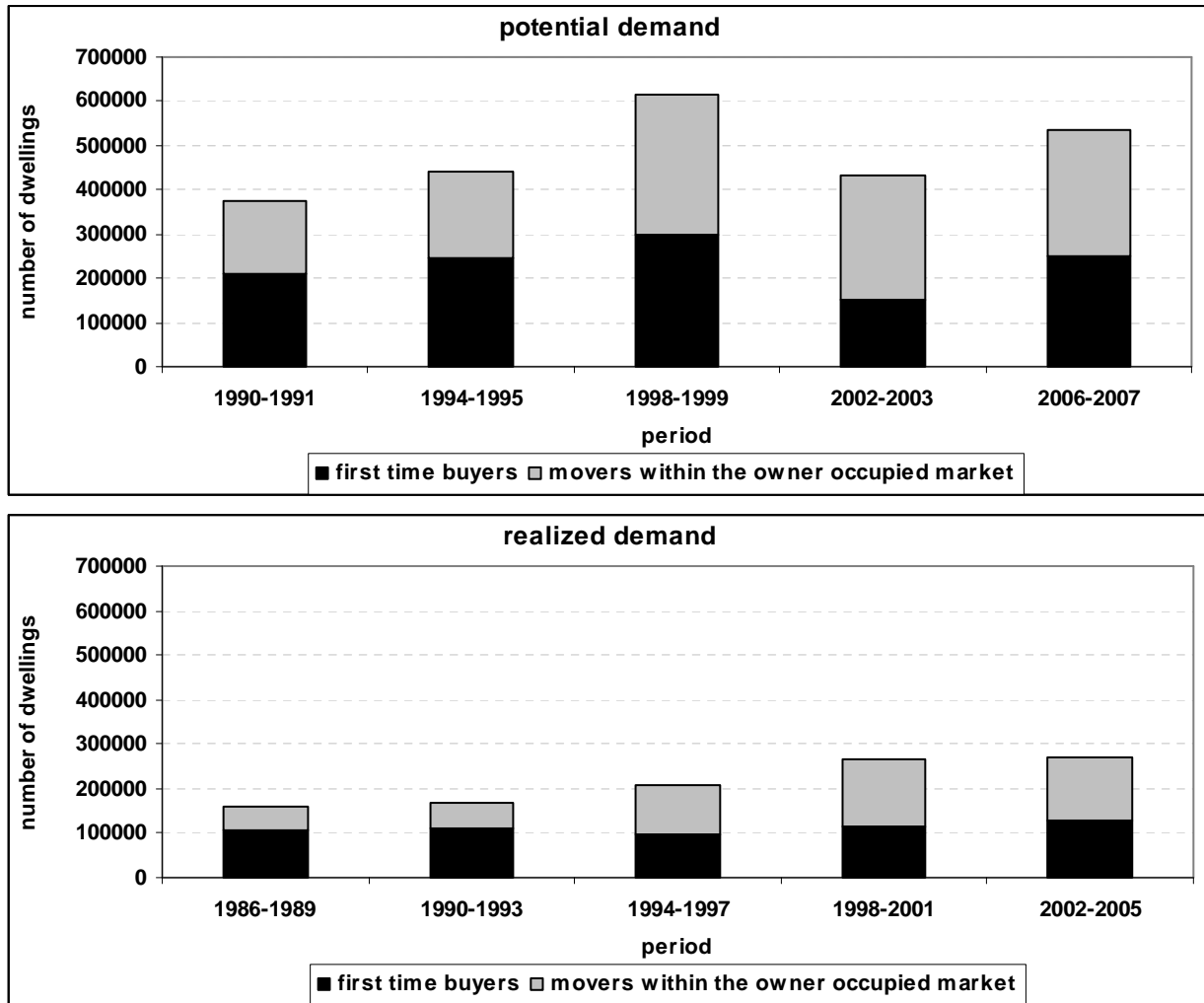
The 1980s and early 1990s, then, saw an increase in the number of dual-income households with a stable high income in the Netherlands. The income stability of these households (which was based on the fact that women continue to work even when there are children in the household), meant that financial institutions began to view them differently. Mortgage lenders reacted by introducing new mortgage products onto the market. Since 1993, the 'dual-income' mortgage has made it possible to take out a mortgage against the income of both partners. Section 4 will examine the impact of this on the development of the Dutch housing market.

4 Developments in the housing market

As mentioned already, many innovations were introduced into the mortgage market during the 1990s, driven by the structural changes in earning patterns that had occurred since 1985 and by the constant rise in prices on the Dutch housing market. The introduction of the dual-income mortgage in the early 1990s meant that the owner-occupied sector became more financially accessible to a greater number of households than previously. In the Netherlands, the purchase of housing tends to be financed principally through borrowed capital. This new form of mortgage meant that the amount which dual-income households could borrow rose dramatically.

As a result of the government's rent and fiscal policies (rent regulation and housing allowance in the rental sector and the deduction of mortgage interest from personal income tax against the marginal tax rate), it has become more financially attractive in terms of monthly housing costs for households on above-average incomes to buy rather than rent. The potential demand for owner-occupied housing then increased sharply during the 1990s. This occurred firstly among potential first-time buyers in particular. At the end of the 1990s, the number of those aspiring to move house within the owner-occupied sector underwent a spectacular increase. The number of transactions taking place on the housing market rose not just as a result of the influx of people into the owner-occupier sector, but equally because of the number of moves occurring within the sector (also see figure 4). However, the actual number of moves remained far below the potential demand.

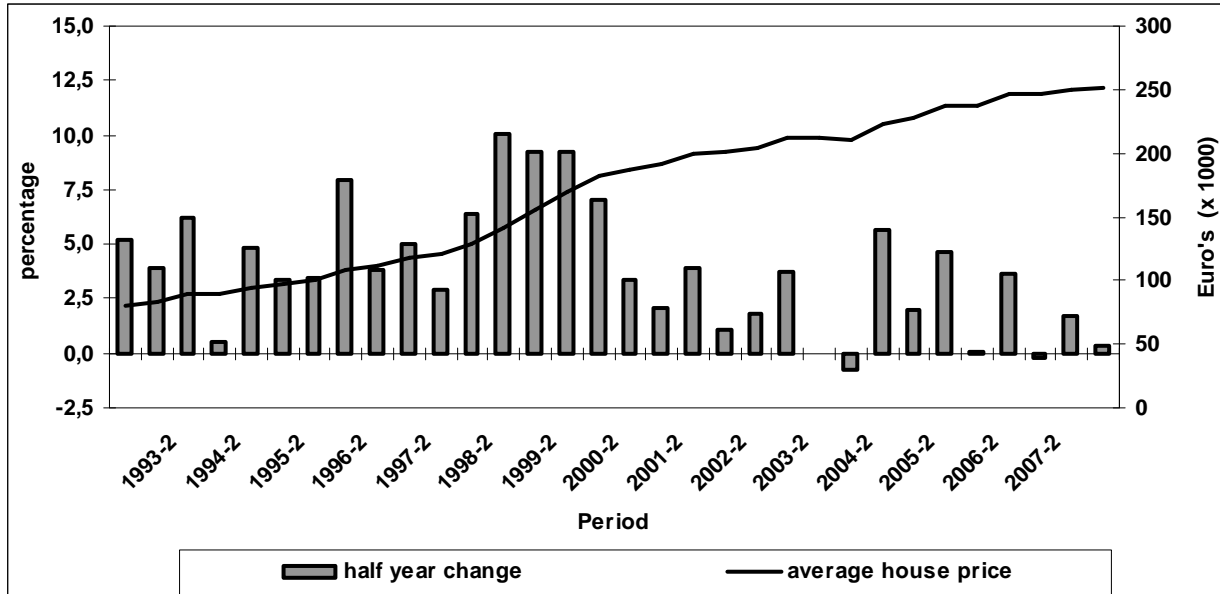
Figure 4 Potential demand and realised demand for owner-occupied dwellings (annual figures) in the Netherland, 1986-2007



Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006.

Not everyone who wants to move house actually makes firm plans to do so, and not all those who make plans to move actually carry those plans through. Households may make financial miscalculations, the desired property may not become available or the competition may be too fierce. Additionally, the supply of housing (including newly built dwellings) has proved very inelastic in the face of the growing demand for owner-occupancy (Boelhouwer et al., 2005; Haffner and De Vries, 2009). The pressure of this huge demand has resulted in a continuously rising average selling price, with annual price rises of between 10% and 20% in the period 1998-2000 (see figure 5). This meant that those households already owning a dwelling were able to benefit from the expansion of the mortgage market, but they were also more likely to have surplus value on their house as a result of the rise in house prices. This enabled those households to ‘move up a step’ on the housing ladder, leading to extra demand at the top end of the housing market too.

Figure 5 Average (corrected) house price, absolute value and the half-yearly percentage change on the Dutch housing market, for the period 1993-2008



Source: Kadaster Netherlands, 2009.

This did not affect the affordability of owner-occupier properties immediately. Incomes for many households rose, and at the same time the average mortgage interest rate fell significantly in the period 1990-1995. In 1990, mortgage interest rates still stood at nearly 10%; by 2005 they reached a record low (for the last 40 years at least) of 3.8%, meaning that a larger mortgage did not necessarily lead to higher monthly mortgage payment. The booming housing market quickly resulted in an exploding mortgage market. The number of newly registered mortgages (including second mortgages) increased from around 200,000 per year in 1990 to at least 655,000 in 1999 – a threefold increase in nine years. Initially, the amount of the average mortgage varied between €80,000 and €90,000, but after 1996 this amount also shot upwards to €120,000 (Statistics Netherlands, 2009).

After 1998, the average purchase price on the housing market began to rise more rapidly than the average borrowing capacity (a function of household income levels, interest rates and loan-to-income ratio). There were two possible explanations for this. Firstly, it could mean that more private capital was used to finance housing purchases, or that more risks were being taken when determining the level of the mortgages (by means of higher loan-to-income and loan-to-value ratios, shorter fixed interest rate periods and through other forms of mortgages such as investment or interest-only mortgages). On the other hand, it could also be an indication that sales activities were focusing increasingly on the top end of the housing market. After all, unless there was additional private capital to invest, the average owner-occupier dwelling in the late 1990s was only affordable for those on double the average income. The access of first-time buyers to the housing market became even more restricted. At around the start of the new century, demand at the lower end of the housing market dropped – people began to buy homes of their own later in life or rent for longer (Van der Heijden et.al., 2005). This did not lead to an immediate fall in prices, but it did lead to changes in the way in which owner-occupiers searched for and selected properties. Unlike in the 1990s, owner-occupiers who were planning to move house preferred to

sell their own properties first, before they chose another. This led to an increase in the average selling time for houses (the period between the house being put on the market and actually being sold) in the first few years of the new century, and a larger amount of housing stock was on the market. From 2002 onwards, the supply of housing exceeded the longer-term average of around 70,000 homes on an annual basis (NVM, 2009). The insufficient number of new entrants into the bottom end of the housing market led eventually to decreased demand for more expensive, better-quality dwellings at the top end. In 2007, the average house price reached a plateau (adjusted for package composition), as shown in Figure 5.

The trends in the Dutch housing market outlined so far can be corroborated by analysing the size and composition of the potential and realised demand for properties during this period in greater detail, according to specific groups of housing consumers and housing markets sectors. In section 5, we present the results of a descriptive analysis based on the data available from successive Housing Demand Surveys.

5 Potential and realised demand for owner-occupied dwellings

If the introduction of the dual-income mortgage in 1993 did indeed play an important role in driving the developments in the Dutch housing market described above, we can formulate the following expectations concerning the differentiation of the demand for housing:

- The potential demand for properties in the mid-1990s came mainly from first-time buyers – often younger households, two-person households and households on around average incomes and with averagely expensive housing needs.
- At the end of the 1990s, the potential demand for properties came increasingly from those moving house within the owner-occupied sector – generally middle-aged households, families and households on higher incomes, leading to a rise in demand for more expensive homes.
- The first signs of the fall in demand at the start of the twenty-first century were discernable among potential first-time buyers, which manifested itself in the form of reduced potential demand for low and medium-cost housing.
- The actual demand for owner-occupied housing increased in the second half of the 1990s among both first-time buyers and movers within the owner-occupied sector; moves made among the first group led to moves among the second group via chains of property sales.
- At the beginning of the new century, a larger proportion of the realised demand for owner-occupied housing was accounted for by moves within the sector; this was reflected in greater demand among middle-aged households, families and higher-income households, which led to demand for more expensive, better-quality housing.

In order to test the above predictions, we used the data from successive national Housing Demand Surveys in the Netherlands (HDS 1989/1990, 1993/1994, 1997/1998 and 2002, HRN 2006). In these surveys, the respondents are asked whether they plan to move within the next two years and if so, what kind of housing and living environment they would prefer. On the basis of this information, the potential demand for owner-occupied properties in the subsequent period can be tracked, in terms of both the size and composition of the demand. In addition, these

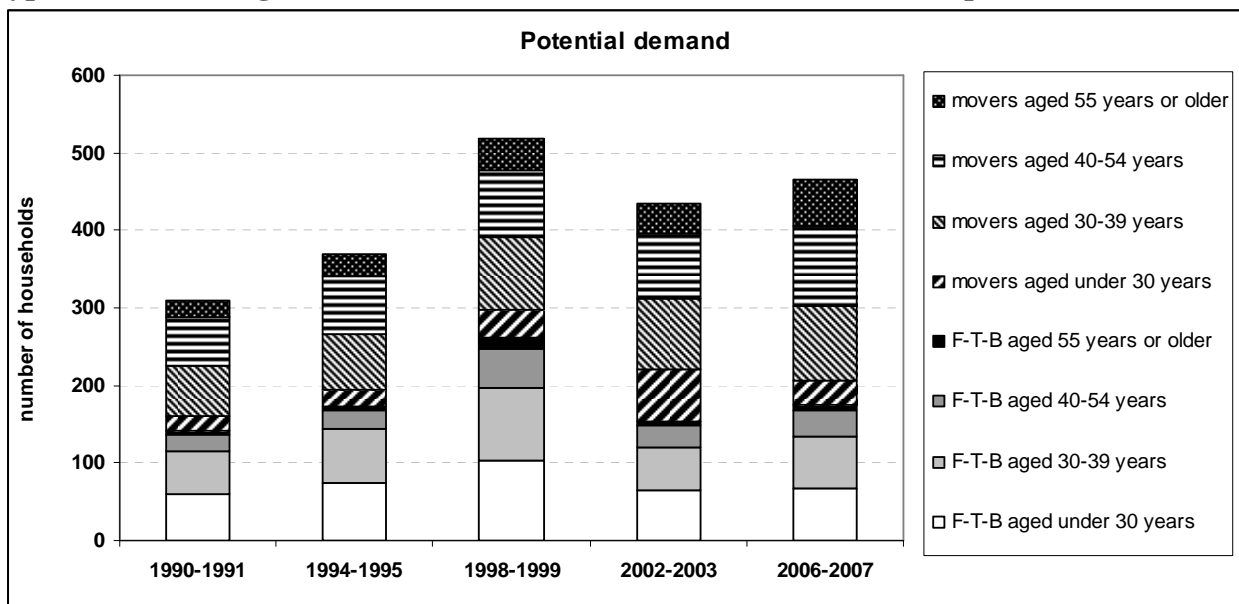
surveys also show whether the households have recently (within the four years preceding the survey) moved to their current property. For households that have recently moved, information concerning the previous property is recorded, as well as information relating to their current property. Trends in the realised demand for property can be inferred from this information, in terms of both its magnitude and type.

Secondly, we subdivided the potential and realised demand for properties in the owner-occupied sector into first-time buyers and existing homeowners. Within each of these groups of housing transactions (or potential transactions), the households were further categorised according to age, household composition, income level and the price of the desired property or the property recently left.

Potential demand for owner-occupied dwellings

The results of our descriptive analysis of the potential demand for owner-occupied properties in approximately the past 20 years are shown in Tables A.1 to A.4 in Appendix 1. Between 1989 and 1993 the potential demand increased from about 300,000 households that were considering moving house to 370,000 households. In the subsequent period this potential demand surged dramatically to over 500,000 that were households considering moving in 1997. More than half of this growth can be accounted for by first-time buyers who were considering moving (these numbered over 80,000). During the first few years of the new century, the potential demand among movers within the owner-occupied sector grew steadily. However, a major correction took place during that period among first-time buyers and potential demand among this group fell back to the level of the early 1990s (see also figure 6).

Figure 6 Volume of the potential demand (average annual number of households) by type of move and age of the head of the household, in the five different periods



Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

The moderate increase in demand for housing during the period 1994-1995 was due to younger first-time buyers in particular. These were mainly households under the age of 40, sometimes cohabiting single persons but mainly couples who had previously lived in rented accommodation. Because of their age, these households tended to be in the initial phase of their careers, and the increase in potential demand was greater in relative terms among households on incomes in the first and second quartiles of income distribution (see also table A. 3). This also seems to have translated into increased demand for medium-priced housing and cheaper housing, especially among first-time buyers. On the basis of these findings, we can conclude that our first prediction can be fully substantiated. Furthermore, potential demand for property among older home-owners increased in both absolute and relative terms in this period. However, this trend can be identified throughout almost the entire period studied (see table A.1) and is not therefore a direct result of the expansion of the mortgage market.

Figure 6 shows that in the late 1990s the huge increase in demand for owner-occupied properties among households considering moving was spread between various groups of housing consumers. Demand continued to grow among younger first-time buyers in relative terms, but also among younger property-owners moving up the property ladder and again among home-owners aged over 55 years. However, it is remarkable that there was relatively strong growth in the demand from middle-aged and older households who wanted to move to the owner-occupied sector. Buying a home is seen as a profitable investment which should be taken advantage of and this would seem to be evidence of property speculation on the basis of rising house prices. In absolute terms, the bulk of the demand for owner-occupied property came from couples with children, but the number of single people and couples also increased significantly in this period (see table A.2).

Compared to the early 1990s, the proportion of first-time buyers on lower incomes (first or second quartile) increased significantly among potential buyers, from 7% in 1989 to 22% in 1997. Since the average sale price rose steadily during that period, the increase in demand among this group can only be explained by growth in their borrowing capacity. Nevertheless, at the end of the 1990s approximately 40% of potential buyers belonged to the highest income quartile. A shift can also be seen in the desired price category, away from cheaper properties to more medium-priced properties, and there was also an increase in the demand for more expensive homes.

The second of our predictions is thus partially substantiated by these findings. The expected shift in the desired price and greater demand among couples with children is clearly reflected in the results of our analysis. The proportion of potential movers within the owner-occupied sector also increased, but less than had been assumed. It is true that there were relatively more middle-aged and older households among those with moving plans, but, contrary to expectations, these were mainly new entrants into the owner-occupied sector.

We then turn to our third prediction concerning trends in the potential demand for owner-occupied housing in the Netherlands – the decline in demand that took place at the beginning of the twenty-first century. First-time buyers clearly appear to account for this decline. This group fell from 260,000 households in 1997 to just over 150,000 households in 2001, representing a decrease of 40%. The decline took place across all age groups, household types and income quartiles. In the same period, the potential demand among those moving within the owner-

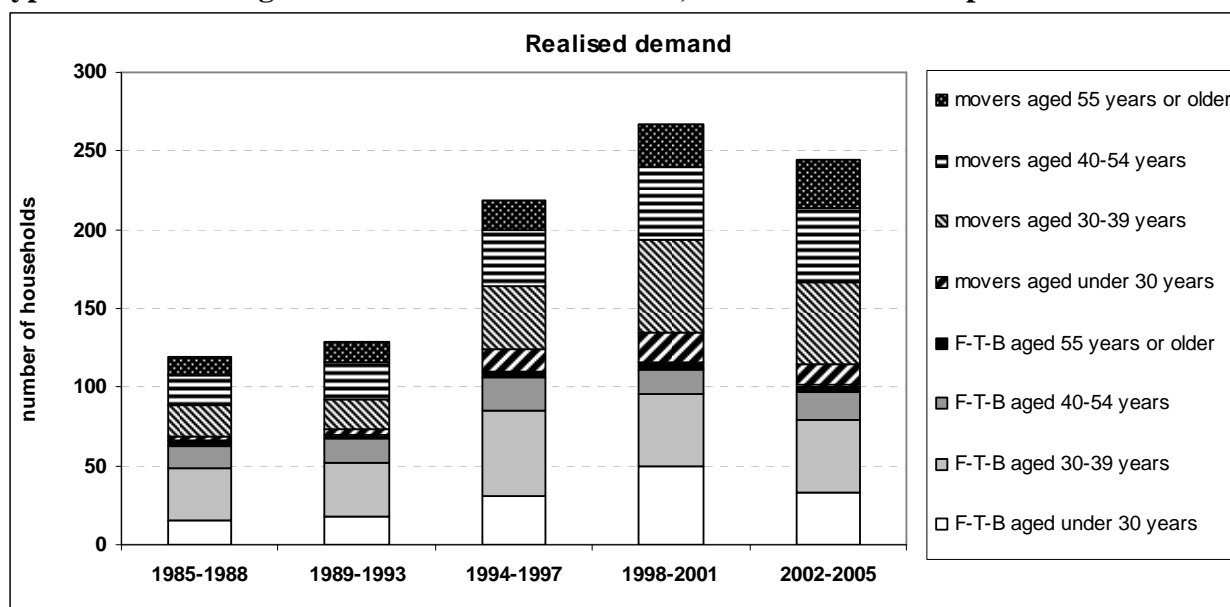
occupied sector continued to grow slightly. The fall-off in demand in the years 2002-2003 was thus concentrated in the medium price range (also see table A.4).

Finally, we found that the potential demand for owner-occupied properties recovered somewhat in the last part of the period studied (2006-2007). Demand increased slightly, but it seems that this increased originated principally from middle-aged or older households on higher incomes.

Realised demand for owner-occupied dwellings

The results of our descriptive analysis of the realised demand for owner-occupied properties in the period 1985-2005 can be found in Tables A.5 to A.8 in Appendix 1 below. In around 1990, the realised demand reached an acceptable level of approximately 130,000 households. In the period after 1993, the number of moves grew significantly to 220,000 households annually in the mid-1990s. This growth seems to have come about in contrast to the increase in potential demand, both among first-time buyers (over 40,000) and among movers within the owner-occupied sector (over 50,000). In the years around the turn of the century, realised demand rose even further, but this time only among movers within the owner-occupied sector. In the final period, 2002-2005, the first signs of a decline in market activity were visible in the number of moves that actually took place. The number of moves per year decreased slightly among movers within the owner-occupied sector and especially among first-time buyers (also see figure 7).

Figure 7 Volume of the realised demand (average annual number of households) by type of move and age of the head of the household, in the five different periods



Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

In fact, the above findings substantiate our fourth prediction: an influx of new entrants into the owner-occupied sector led directly to greater movement within the owner-occupied sector as a whole. In other words, movement within the sector is only possible if there are sufficient new entrants, because it is these new entrants that enable people to sell their existing properties.

The increased dynamism of the Dutch housing market in the period 1994-1997 was also reflected within all age groups (see table A.5 in appendix 1). Proportionately, the growth in activity occurred in each age group more strongly among movers within the owner-occupied sector than among first-time buyers. Couples with children remained the largest group of movers in the owner-occupied sector in the mid-1990s, but from 1994 there was a clear increase in the proportion of couples and single persons (who increasingly began to share housing). It seems, then, that this was a very mixed group, although the same cannot be said of the income of the households concerned. The proportion of households in the first or second income quartiles remained limited at less than 25%. The actual annual number of households in these income quartiles that moved remained short of the number of households on lower incomes who had similar moving plans – 50,000 and 80,000 households respectively (see table A.7).

In the period around the turn of the century, the realised demand for properties continued to rise from 220,000 to 265,000 moves per year on average. This increase came almost entirely from households moving within the owner-occupied sector. The number of first-time buyers in the age groups of 30-39 and 40-54 years, mainly couples with children, tailed off increasingly during this period. Existing home-owners moving within the sector accounted for 60% of the moves.

During the final part of the period studied, there was a fall-off in demand, as mentioned. This reduction in transactions was apparent among first-time buyers, but also among movers within the owner-occupied sector. The tendency affected younger households on lower incomes in particular. Only one-fifth of the 250,000 households that moved within the owner-occupied sector annually belonged to the first or second income quartiles, while during the same period around 160,000 households with similar incomes indicated that they wished to buy a home. As a result of the dramatic price increases of the late 1990s, it appears that the owner-occupied sector became much less financially accessible to first-time buyers. The total number of properties for sale in the cheapest sector also seems to have decreased during this period. This had an effect on the rate of moves among existing homeowners to medium-priced and more expensive properties, dampening the dynamism of the owner-occupied property market and ultimately leading to reduced demand at the top-end of the market. It also led to sales problems for newly built housing. This happened even before the credit crisis, although it was significantly accelerated and exacerbated by the crisis.

6 Final remarks

In this paper I have showed that the circumstances on the Dutch owner-occupied housing market in the 1990s differs strongly from other Western-European countries, expressed by a rather different development of the average selling price. The results of the descriptive analysis based on the data available from successive Housing Demand Surveys make clear that the potential demand for owner-occupied properties grew enormously between 1990 and the year 1999. The number of actual moves to owner-occupied dwellings also rose sharply with some delay in the period 1994-2001.

The five formulated expectations concerning the differentiation of the potential and the realised demand for housing in that period are to a large extent substantiated by the findings of the analysis. This meant that the period of ongoing growth of the demand for owner-occupied housing in the Netherlands did start with an extra (potential) influx of first time buyers in the first half of the 1990s. That influx led to extra dynamism within the owner-occupied housing market.

These (potential) first-time buyers are often younger households, two-person households and households on around average incomes and with averagely expensive housing needs. These households are typically the households who benefits most of the introduction of the dual-income mortgage: the owner-occupied sector became more financially accessible for them than previously.

The results of the analysis also substantiated that the first signs of the fall in demand at the start of the twenty-first century were discernable among potential first-time buyers. The growing demand and inelastic supply of newly built houses led to a rise of the average purchase price more rapidly than the average borrowing capacity. The access of first-time buyers to the housing market became more restricted, even with a double income.

The introduction of the dual-income mortgage seems to have played an important role in the process of the booming Dutch owner-occupied housing market during the 1990s and the early years of this century. That introduction only took place because the two-earning households with a stable dual-income also became a more common phenomenon in the Netherlands. From 1980 onwards, the rate of labour-market participation among women increased dramatically to 54% in 2002. This caught up with women in neighbouring countries can be seen as an emancipation process of the Dutch women on the labour-market.

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Appendix 1

Table A.1 Volume of potential demand (average annual number of households) and the distribution of the total population, by age of the head of the household, in the five different periods

Potential demand	Age head of household				
	aged under 30 years	aged 30-39 years	aged 40-54 years	aged 55 years or older	Total (x 1000)
1990-1991					
first-time-buyers	60	56	21	4	141
movers within O/O sector	19	65	62	22	167
total population 1989	16%	22%	27%	35%	5,849
1994-1995					
first-time-buyers	74	71	23	5	173
movers within O/O sector	22	72	74	28	196
total population 1993	14%	22%	29%	35%	6,145
1998-1999					
first-time-buyers	104	94	50	13	259
movers within O/O sector	36	94	86	41	256
total population 1997	14%	22%	29%	35%	6,499
2002-2003					
first-time-buyers	65	56	28	4	153
movers within O/O sector	69	91	83	38	280
total population 2001	11%	22%	30%	37%	6,736
2006-2007					
first-time-buyers	68	67	34	7	175
movers within O/O sector	31	96	102	60	287
total population 2005	10%	20%	31%	39%	6,925

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.2 Volume of the potential demand (average annual number of households) and the distribution of the total population, by household composition, in the five different periods

Potential demand	Household composition				
	single	couple	couple with child(ren)	others	total (x 1000)
1990-1991					
first-time-buyers	32	56	49	5	141
movers within O/O sector	16	43	104	5	167
total population 1989	28%	28%	37%	7%	5,849
1994-1995					
first-time-buyers	46	71	50	7	173
movers within O/O sector	24	58	110	5	196
total population 1993	29%	31%	34%	6%	6,145
1998-1999					
first-time-buyers	87	69	78	26	259
movers within O/O sector	29	73	139	15	256
total population 1997	32%	31%	31%	6%	6,499
2002-2003					
first-time-buyers	58	40	40	15	153
movers within O/O sector	38	76	151	15	280
total population 2001	32%	29%	31%	8%	6,736
2006-2007					
first-time-buyers	78	47	37	14	175
movers within O/O sector	53	96	127	13	287
total population 2005	33%	30%	30%	7%	6,925

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.3 Volume of the potential demand (average annual number of households) and the distribution of the total population, by household income, in the five different periods

Potential demand	Household income				
	first quartile	second quartile	third quartile	fourth quartile	total (x 1000)
1990-1991					
first-time-buyers	8	12	49	73	141
movers within O/O sector	7	11	43	107	167
total population 1989	25%	25%	25%	25%	5,849
1994-1995					
first-time-buyers	12	36	56	69	173
movers within O/O sector	11	21	59	106	196
total population 1993	25%	25%	25%	25%	6,145
1998-1999					
first-time-buyers	37	74	78	71	259
movers within O/O sector	19	36	72	129	256
total population 1997	25%	25%	25%	25%	6,499
2002-2003					
first-time-buyers	24	52	44	33	153
movers within O/O sector	30	56	77	117	280
total population 2001	25%	25%	25%	25%	6,736
2006-2007					
first-time-buyers	30	63	54	28	175
movers within O/O sector	11	38	94	146	287
total population 2005	25%	25%	25%	25%	6,925

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.4 Volume of the potential demand (average annual number of households) by desired house price and the distribution of the total existing stock owner-occupied dwellings by current house price (in prices of 2005), in the five different periods

Potential demand	Desirable house price			
	under €200,000	€200,000 – €350,000	€350,000 or more	total (x 1000)
1990-1991				
first-time-buyers	62	64	15	141
movers within O/O sector	35	81	51	167
total stock O/O sector 1989	41%	38%	21%	2,584
1994-1995				
first-time-buyers	79	82	12	173
movers within O/O sector	35	108	54	196
total stock O/O sector 1993	35%	44%	21%	2,882
1998-1999				
first-time-buyers	80	152	28	259
movers within O/O sector	44	144	68	256
total stock O/O sector 1997	26%	52%	22%	3,250
2002-2003				
first-time-buyers	76	67	10	153
movers within O/O sector	70	136	75	280
total stock O/O sector 2001	29%	48%	23%	3,607
2006-2007				
first-time-buyers	80	81	15	175
movers within O/O sector	46	140	101	287
total stock O/O sector 2005	24%	47%	29%	3,815

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.5 Volume of the realised demand (average annual number of households) and the distribution of the total population, by age of the head of the household, in the five different periods

Realised demand	Age head of household				
	aged under 30 years	aged 30-39 years	aged 40-54 years	aged 55 years or older	Total (x 1000)
1986-1989					
first-time-buyers	15	34	14	3	66
movers within O/O sector	3	19	20	11	52
total population 1989	16%	22%	27%	35%	5,849
1990-1993					
first-time-buyers	18	34	15	3	70
movers within O/O sector	3	19	24	13	59
total population 1993	14%	22%	29%	35%	6,145
1994-1997					
first-time-buyers	31	54	21	4	111
movers within O/O sector	14	40	36	19	109
total population 1997	14%	22%	29%	35%	6,499
1998-2001					
first-time-buyers	50	46	15	5	115
movers within O/O sector	19	59	46	27	150
total population 2001	11%	22%	30%	37%	6,736
2002-2005					
first-time-buyers	33	46	18	4	100
movers within O/O sector	14	51	48	31	143
total population 2005	10%	20%	31%	39%	6,925

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.6 Volume of the realised demand (average annual number of households) and the distribution of the total population, by household composition, in the five different periods

Realised demand	Type of household				
	single	couple	couple with child(ren)	others	total (x 1000)
1986-1989					
first-time-buyers	7	22	36	2	66
movers within O/O sector	5	14	31	2	52
total population 1989	28%	28%	37%	7%	5,849
1990-1993					
first-time-buyers	9	29	31	2	70
movers within O/O sector	7	19	31	2	59
total population 1993	29%	31%	34%	6%	6,145
1994-1997					
first-time-buyers	20	44	44	3	111
movers within O/O sector	13	41	53	3	109
total population 1997	32%	31%	31%	6%	6,499
1998-2001					
first-time-buyers	32	51	28	5	115
movers within O/O sector	23	53	69	6	150
total population 2001	32%	29%	31%	8%	6,736
2002-2005					
first-time-buyers	26	42	29	3	100
movers within O/O sector	25	49	63	7	143
total population 2005	33%	30%	30%	7%	6,925

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.7 Volume of the realised demand (average annual number of households) and the distribution of the total population, by household income, in the five different periods

Realised demand	Household income				
	first quartile	second quartile	third quartile	fourth quartile	total (x 1000)
1986-1989					
first-time-buyers	1	3	22	39	66
movers within O/O sector	3	5	13	32	52
total population 1989	25%	25%	25%	25%	5,849
1990-1993					
first-time-buyers	2	8	22	38	70
movers within O/O sector	6	6	15	31	59
total population 1993	25%	25%	25%	25%	6,145
1994-1997					
first-time-buyers	6	18	35	51	111
movers within O/O sector	9	14	32	54	109
total population 1997	25%	25%	25%	25%	6,499
1998-2001					
first-time-buyers	6	25	37	47	115
movers within O/O sector	9	21	45	75	150
total population 2001	25%	25%	25%	25%	6,736
2002-2005					
first-time-buyers	4	19	39	39	100
movers within O/O sector	5	21	46	72	143
total population 2005	25%	25%	25%	25%	6,925

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).

Table A.8 Volume of the realised demand (average annual number of households) and the distribution of the total existing stock owner-occupied dwellings by current house price (in prices of 2005), in the five different periods

Realised demand	Current house price			
	under €200,000	€200,000 – €350,000	€350,000 or more	total (x 1000)
1986-1989				
first-time-buyers	30	29	7	66
movers within O/O sector	11	21	20	52
total stock O/O sector 1989	41%	38%	21%	2,584
1990-1993				
first-time-buyers	28	33	10	70
movers within O/O sector	10	25	24	59
total stock O/O sector 1993	35%	44%	21%	2,882
1994-1997				
first-time-buyers	40	59	12	111
movers within O/O sector	19	54	37	109
total stock O/O sector 1997	26%	52%	22%	3,250
1998-2001				
first-time-buyers	56	49	10	115
movers within O/O sector	33	73	45	150
total stock O/O sector 2001	29%	48%	23%	3,607
2002-2005				
first-time-buyers	45	46	10	100
movers within O/O sector	28	69	46	143
total stock O/O sector 2005	24%	47%	29%	3,815

Sources: HDS 1989/1990, 1993/1994, 1997/1998 and 2002 and HRN 2006 (OTB/TU Delft calculations).