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Home-ownership and family formation

Clara H. Mulder

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Abstract In Western countries, home-ownership and family formation are closely connected. From most research on the transition to home-ownership, one gets the impression that the association between family formation and home-ownership is positive: family formation seems to speed up the process of acquiring a home in several countries. However, it has also been argued that there might be a *negative* association between home-ownership and family formation at the individual or household level, because the cost of home-ownership might compete with the cost of rearing children. And it has also been found that those countries in Europe with the highest levels of home-ownership are also those with the lowest fertility. The aim of this paper is to reconcile these seemingly contradicting findings on the association between home-ownership and family formation by developing a theoretical argument comprising both the micro level of individuals and households and the macro level of countries.

Keywords Home-ownership · Family formation

1 Introduction

Even though much of the literature on private home-ownership focuses on financial or investment aspects, the owner-occupied home is first and foremost a place where people live, mostly with families. For Frans Dieleman, to whom this article is devoted, home-ownership and tenure choice were major topics of research. In his work on home-ownership and tenure choice, the connection with family characteristics and events in the family life course was always a prominent issue. In many of his articles, he and his co-authors focused on tenure choice or the transition to or from home-ownership, mostly using data

C. H. Mulder (✉)
Department of Geography, Planning and International Development Studies, University of
Amsterdam, Nieuwe Prinsengracht 130, 1018VZ Amsterdam, Netherlands
e-mail: c.h.mulder@uva.nl

from one country: the United States, the Netherlands or Germany (Clark, Deurloo, & Dieleman, 1990, 1994, 2003; Deurloo, Clark, & Dieleman, 1994; Deurloo, Dieleman, & Clark, 1987; Dieleman, Clark, & Deurloo, 1994, 1995; Dieleman & Everaers, 1994). In other work, he addressed similar topics comparing two countries: the Netherlands and United States (Clark & Dieleman, 1996) or the United States and Germany (Clark, Deurloo, & Dieleman, 1997). In this article, I build on Frans Dieleman's work, that of others and my own previous work on the connection between home-ownership and family formation to develop some ideas on how this connection might be different on the micro level of individuals and households versus the macro level of countries. As in much of the previous literature, the term 'home-ownership' is used here for the ownership of homes occupied by the owner. In my previous work, Frans Dieleman provided me with a great deal of help and inspiration. I am very sorry he is no longer alive to be the inspiring and charming colleague he always was.

In Western countries, family formation and the home-ownership of households are closely connected. It has repeatedly been found, for example, that the transition to first-time home-ownership is frequently synchronized with marriage, is often made in anticipation of parenthood, and is rare among singles. From most research on the transition to home-ownership, one gets the impression that the association between family formation and home-ownership is positive. Home-ownership is strongly associated with marriage and, in some countries, family formation also seems to speed up the process of acquiring a home (Deurloo et al., 1994, for the United States; Mulder & Wagner, 1998, for West Germany). At the same time, it has also been found that home-ownership speeds up the transition to parenthood in West Germany and the Netherlands (Mulder & Wagner, 2001).

In the literature, however, it has also been argued that there might be a *negative* association between home-ownership and family formation at the individual or household level. Courceau and Lelièvre (1992) for example argue that the cost of home-ownership might compete with the cost of rearing children.

Yet another story about the association between home-ownership and family formation may be told if we concentrate on the macro level of countries, rather than the micro level of individuals and households. The countries in Europe with the highest levels of home-ownership (Italy, Greece and Spain, where the percentage of homeowners is over 75%) are also those with the latest timing of leaving the parental home, partnership formation and parenthood and with the lowest fertility. This finding suggests that a high level of home-ownership might lead to difficulties for young people to start their independent household careers and form partnerships and families (compare Pinnelli, 1995).

The aim of this paper is to reconcile the seemingly contradicting empirical findings on the association between home-ownership and family formation derived from existing studies by developing a theoretical argument comprising both the micro level of individuals and households and the macro level of countries. To that end, I shall sketch the theoretical background of the transition to home-ownership in the family life course, devoting special attention to the differences between countries. I shall also offer theoretical arguments for a connection between family formation and home-ownership on the macro level of countries. The theoretical arguments are accompanied by an overview of existing empirical evidence on this connection, again both on the micro and the macro level.

2 Family formation and the transition to home-ownership: theoretical background and micro-level findings

In developing a theoretical argument regarding the influence of family formation on the transition of households to home-ownership (sections “The benefits and costs of home-ownership”, “Resources needed for home-ownership” and “The role of housing-market circumstances in attaining home-ownership”), I shall expand upon previous work by Mulder and Wagner (1998). Our theoretical argumentation was built on the premise that becoming a homeowner is preferred when the balance between the benefits and costs of owning exceeds that of renting. Whether a preference for owning can be realized depends on the availability of resources. Both the benefits and costs relative to renting and the availability of resources are different for families than for other households. Furthermore, they differ between countries. Ideas on the link at the household level in the other direction, from home-ownership to family formation, are scarcer but can still be derived from the literature (see section “The link from home-ownership to family formation”). The findings for different countries seem to be contradictory, but an attempt is made to reconcile them (section “Towards a reconciliation of opposite findings on the micro level”).

2.1 The benefits and costs of home-ownership

In Western societies, becoming a homeowner is a rather important step in many people’s lives (Michelson, 1977; Lassarre, 1986; Saunders, 1990). This has to do with three major benefits of home-ownership. First, the quality of owner-occupied housing is on average better than that of rental accommodation (Megbolugbe & Linneman, 1993). Secondly, an owner-occupied home not only provides housing but also serves as an investment and helps in the accumulation of wealth (Megbolugbe & Linneman, 1993). For many, a home is their major form of savings (Kendig, 1984a). Thirdly, with home-ownership, people gain control over their housing situation. Not only are homeowners freer than renters in making changes to their homes, it has also been argued that owning a home gives people a greater sense of security than renting (compare Saunders, 1990; see Hiscock, Kearns, Macintyre, & Ellaway, 2001, for a critical discussion and some empirical evidence related to this idea).

A major reason why family formation, or plans to form a family, would lead to a transition to home-ownership is the fact that owner-occupied homes tend to be specifically suitable for families—more so than rented homes (Mulder & Wagner, 1998). This is because of their size, layout and location. Owner-occupied homes are generally larger, more frequently of the single-family type, and more frequently situated in attractive, safe and child-friendly neighborhoods. The benefits of home-ownership, therefore, are greater for families or prospective families than for singles and those couples who do not plan to have children.

The benefits of home-ownership come with financial and non-financial costs. The financial costs include the down payment, the out-of-pocket costs of mortgage interest and repayments and maintenance of the home, and the transaction costs of a real estate agent, notary transfer and transfer tax. Particularly in the first few years after buying a home, the cost of being a homeowner is often considerably higher than renting, even with comparable housing quality (Mulder & Wagner, 1998). Another important cost is the risk one takes by becoming a homeowner. Unlike

renting, home-ownership is accompanied by a long-term financial commitment. Changes in income or household situation may lead to difficulties fulfilling this commitment. Furthermore, one can never be certain the home will retain its value. It should be stressed, however, that making a commitment to home-ownership is not just a cost; it is desirable to many people for investment reasons (Helderman, Mulder, & Van Ham, 2004) and because of the stability to which it leads (Feijten, 2005). A non-financial transaction cost is associated with the fact that, if they plan to move, homeowners not only have to find new housing but also have to put time and effort into selling their current home (Helderman, Mulder, & Van Ham, 2004). More generally, the financial and non-financial responsibilities associated with home-ownership might cause psychological stress.

Compared with singles and couples without children, families with children have a smaller probability of moving: they will more frequently have reached stability in their work and household situations. So, their probability of being confronted again with the transaction costs of another move soon after the initial move into home-ownership is also smaller. The downsides of making a long-term financial commitment to home-ownership are therefore less severe for families and couples, particularly those who consider their financial and family situation to be stable and secure enough (Clark et al., 1994; Mulder & Wagner, 2001).

2.1.1 Differences between countries in benefits and costs

There are various reasons why home-ownership might be more desirable in some countries than in others. A crucial difference in this respect is the extent to which rental housing forms a high-quality alternative to owner-occupied housing. This difference is related to the composition of the housing stock (see below under ‘the role of housing supply’). There may also be differences in the relative costs of owning versus renting. Many of these are related to differences in financial practices of banks and government policy.

Mortgage banks in different countries differ in the amount of down payment they usually require. For example, mortgage banks in the Netherlands frequently agree to mortgages of the house price or slightly higher, whereas the amount of down payment required to obtain a mortgage in Germany is 20–30% (Mulder & Wagner, 1998; Tomann, 1996). There are also differences in practices with regard to the fixation of mortgage interest rates. Whereas annually fluctuating rates are common in the United Kingdom, it is much more common in the Netherlands to agree on rates that are fixed for 5, 10 or 20 years. This difference leads to a difference in the risk associated with changes in interest rates (see Neuteboom, 2003, for a comparison of the costs and risks of mortgages in European countries).

Private home-ownership tends to be viewed as positive by national governments (Forrest, 1983). Governments differ, however, in the extent to which they actually stimulate home-ownership or maintain taxation principles that work out favorably for homeowners. As shown by Haffner and Oxley (1999) and Haffner (2002), there are major differences between European countries in the tax treatment of owner-occupied housing. The Netherlands forms an example of a country where the tax treatment of owner-occupiers is more favorable in comparison with landlords. Even though the tax deductibility of the interest paid on personal loans has been abolished in the Netherlands, mortgage interest has been exempted from this change and is still fully tax deductible for a maximum of 30 years (Haffner, 2002).

Mortgage banks have responded to this tax advantage by creating new mortgages designed to make optimal use of the tax relief for homeowners (Mulder, 2004). At the same time, there are also differences between countries in subsidies for renters (including housing allowances) and landlords. As Haffner and Oxley (1999) have shown, the differences among countries in subsidies for owners and renters are subtle and complex; it is not easy to compare countries with respect to the ultimate effect of the various subsidies and tax benefits on the relative costs of owning and renting. Furthermore, the transaction costs may differ substantially according to local rates for real estate agents and notaries and whether transfer tax is levied.

In response to the actual benefits and costs of owning versus renting, people in different countries may differ in the extent to which they view home-ownership as a desirable goal. Elsewhere I have argued that there is no such thing as a universal preference for home-ownership, but rather that tenure preferences are shaped to a large extent by financial and housing market circumstances (Mulder, 2004). Two pieces of empirical evidence, both for the Netherlands, support this argument. Elsinga (1995) studied motives for home ownership and found that financial advantages (notably tax advantages) were crucial to choosing to buy a home—much more so than the idea that owning is intrinsically more preferable than renting. Another indication for an important role of financial and housing market considerations in preferences for home-ownership is the finding by Dieleman and Everaers (1994) that, over the 1980s, tenure preferences changed in accordance with booms and busts on the market for owner-occupied housing. Still, it is possible that differences in preferences for home-ownership also exist owing to long-standing traditions and beliefs. From analyses of tenure choice and housing demand in the USA and West Germany, Börsch-Supan (1985) found some evidence suggesting that there is an ‘American dream’ of home-ownership, which is not shared, or not as strongly, by West Germans. According to Kemeny (1981), the great importance attached to home-ownership is typical of the Anglo-Saxon tradition. This is not to say it is exclusive to Anglo-Saxon countries—in fact it might be just as strong in Southern Europe or in certain Northern or Western European countries (such as Belgium or Iceland).

In some countries, there might be specific circumstances making home-ownership particularly attractive to families rather than non-family households. Germany, for example, has subsidies for homeowners that are higher for those with children than for those without them (Mulder & Wagner, 1998). But otherwise, the affordability and accessibility of home-ownership, and the degree to which these change over the life course, will be major determinants of the shape of the connection between family formation and home-ownership.

2.2 Resources needed for home-ownership

Obviously, to become a homeowner, it is necessary to have a sufficiently high and stable income. Besides income, a certain amount of wealth is nearly always needed as well, to cover the costs of the down payment and the decoration and furnishing of the home. This might be a person’s or couple’s own wealth, or wealth coming from the parents or other third parties. In the empirical literature it is usually found that wealth and income are associated with the propensity to own (Mulder & Wagner, 1998; Werczberger, 1997).

The financial costs of home-ownership are easier to bear for couples than for singles, because they can pool resources. This is particularly true for couples who earn two incomes and who do not (yet) have to bear the cost of children.

2.2.1 Differences between countries in the need for and availability of resources

How much income and wealth is needed to become a homeowner depends on the out-of-pocket and transaction costs of home-ownership, the ease at which mortgages are obtained (and the amount of down payment needed), and the availability of government subsidies or tax benefits. All these factors differ between countries (see section “The role of housing-market circumstances in attaining home-ownership”). An indicator of the ease with which mortgages are obtained, and thereby of the accessibility of owner-occupied housing, is the total amount of outstanding mortgage loans as a share of the Gross Domestic Product. Where this share is large, mortgage loans form an important instrument in housing finance. The range of this indicator is large (Table 1), from 4.2% in Austria to 53.5% in Sweden. Remarkably, the mortgage loans/GDP ratios are low both in countries with a low percentage of homeowners (Austria) and in countries where home-ownership is widespread (Italy, Spain). There are also differences in the availability of resources: GDP per capita, but also youth unemployment, differ markedly between Western countries (see Table 1).

The role of inter-generational transfers in home-ownership (gifts from parents to children) may very well differ according to tax systems for inheritance and gifts. As Mulder and Wagner (1998) have shown, the German tax system is considerably friendlier to children inheriting or receiving gifts from parents, particularly if these gifts are given to facilitate the child’s home-ownership, than the Netherlands system. In accordance with this difference, the association between parents’ and their children’s home-ownership was found to be stronger in West Germany than in the Netherlands.

2.3 The role of housing-market circumstances in attaining home-ownership

A crucial factor in whether people are able to, or feel obliged to, become homeowners is the supply of owner-occupied housing compared with that of rental housing. This applies not only to the total supply but also to that in different sectors of the market (cheaper and more expensive dwellings; smaller and larger dwellings; single-family homes and apartments). Another important factor is the accessibility of the various housing sectors. The social rental sector, for example, is generally only accessible to low-income households.

2.3.1 Differences between countries in housing-market circumstances

There are remarkable differences between Western countries in the proportion of home-owning households, ranging from a substantial minority to a vast majority (see Table 1). Despite the positive association between income and wealth and home-ownership on an individual level, it is not necessarily the richest countries where home-ownership is most widespread (Stephens, 2003). According to Werczberger (1997), for the 12 countries that were members of the European Union in the early

Table 1 Family formation, housing and economic indicators for 27 countries (notes: see Appendix 1)

	Family formation			Housing			Economy				
	Mean age at marriage, women	Mean age of mother at first childbirth	TFR	% Females aged 18–34 living in the parental home a	% home-owners b	Mean house price (€ 1000s) c	Average house price (€ m ²)	Outstanding mortgage loans / GDP d	Loan to value ratio	GDP per capita	% unemployment under age 25
Austria	27.2	26.4	1.36		53.7		1400 aa	4.2	60 ee	128.2 o	9.4 r
Belgium	26.3	27.6 e	1.66		72.9	89		20.1	83 ee	116 o	19.8 r
Bulgaria	27.7 p	24.9	1.3		84 ii					29 o	24.4 r
Croatia	28.2 p	27.7	1.4 g		83 kk					44 o	26.5 mn
Denmark	29.5	27.7	1.77	12.5	65.0	154		75 y	80 ee	122 o	8.4 r
Estonia	27.3	27	1.34		92.9 hh					46 o	21.3 r
France	28.0	27.9	1.88 f	22.4	62.7	116		22.0	60 ee	113 o	22 r
Germany	27.0	28.2	1.38 g	20.4	43.4			28.9	65 ee	110 o	15.1 r
Greece	26.6	27.3 g	1.29 g	29.5	83.6	100 bb		6 z	55 ee	77 o	26.9 r
Hungary	27.9 p	27.3	1.32		71 hh			1.6 h		59 o	14.8 r
Iceland	30.3 o	29.3 o	1.93		78		2844 cc		70 ee	117 o	8.3 x
Ireland	28.2 n	30.6 o	1.98		80.0			27 y	80 gg	134 o	8.3 r
Italy	27.4	29.6 s	1.24 g	55.3	75.5			5.5	40 ff	110 m	23.6 r
Latvia	26.5	27.2	1.24		70 ll					39 o	19.2 r
Lithuania	25.6	26.6	1.39		94.4 nn					42 o	20.8 r
Luxembourg	27.1	28.4	1.76		70.8	173		25.6		211 o	18.1 r
Netherlands	27.8	28.6	1.72	15.9	54.4	223		43.3	87 ee	127 o	8 r
Norway	27.3 i	26.9	1.85		77 w			0.6 h		148 o	11.4 r
Poland	26.5 p	27.4	1.34		40 hh			26 z	90 ee	79 o	39.5 r
Portugal	25.3	26.5	1.55	47.1	65.0					51 o	32.7
Slovakia	26.8 p	26.6	1.3		53 hh					75 o	14.4 r
Slovenia	29.6 p	28.2	1.26		67 jj					75 o	14.4 r
Spain	27.8	29.1	1.24 f	46.2	85.3	78 dd	631 mm	15.0	70–80 gg	96 o	22.1 r
Sweden	30.1	27.9	1.54		59.9			53.5	85 ee	114 o	16.3 r
Switzerland	27.9	28.7	1.50		34.6 t					445.39 u	12.1 v
United Kingdom	27.2	29.1	1.64	12.6	70.6	83		51.9	70 ee	118 o	12.6
United States	24.8 j	24.9	2.06		67.5 k	1791		43.6	76 ee	155.7	11.6 q

1990s plus Switzerland, the correlation between GDP per capita and the home-ownership rate was negative (-0.65) and statistically significant in 1990. It should be noted that, for the countries in Table 1, the correlation between these same indicators in 2000 is also negative, but weak and insignificant.

Many couples presumably prefer to secure suitable housing before they have their first child rather than having to move after their child is born. On that assumption, one would expect favorable economic and housing-market circumstances and a greater accessibility and affordability of home-ownership to be associated with a greater propensity of couples to become homeowners before having their first child rather than afterwards. The timing of home-ownership with respect to family formation will also depend on how much the affordability of home-ownership increases with age. In any country, home-ownership will be more easily afforded after some years of saving. But the amount of savings needed differs with the percentage of down payment required to obtain a mortgage loan. It also matters whether homeowners enjoy tax benefits and how these benefits are organized. In Germany, for example, the *Bausparen* system encourages saving for the own home, whereas in the Netherlands, full tax deductibility of mortgage interest and mortgage guarantees for cheaper owner-occupied dwellings encourage borrowing.

2.4 The link from home-ownership to family formation

2.4.1 Positive association: arguments and evidence

The arguments above demonstrate that family formation, or plans to form a family, might increase the benefits of home-ownership and decrease the cost. Family formation may therefore lead to home-ownership. But possibly, home-ownership might also facilitate family formation. Access to suitable housing might lead couples to have their children earlier or, the other way around, couples might delay child-bearing until they have found suitable housing (Castiglioni & Dalla Zuanna, 1994; Krishnan & Krotki, 1993; Mulder & Wagner, 2001; Pinnelli, 1995).

It has repeatedly been found that couple formation, and particularly marriage, is positively associated with the transition to home-ownership (Clark et al., 1994; and Deurloo et al., 1994, for the United States; Clark & Dieleman, 1996, for the United States and the Netherlands; Kendig, 1984b, for Australia; Montgomery, 1992, for France; Feijten & Mulder, 2002, for the Netherlands; Mulder & Wagner, 1998, for West Germany and the Netherlands). In some of these studies, the results suggest that the transition to home-ownership is particularly likely for stable couples—those that have existed for a while (Kendig, 1984b; Feijten & Mulder, 2002). For some countries, it has also been found that transitions from couple to family speed up the process of attaining home-ownership (Deurloo et al., 1994, for the United States; Mulder & Wagner, 1998, for West Germany but not for the Netherlands). At the same time, it has been found that home-ownership speeds up the transition to parenthood in West Germany and the Netherlands (Mulder & Wagner, 2001). Most of this research focuses on the immediate connection between family formation and home-ownership: the extent to which transitions to marriage and parenthood are associated with transitions to home-ownership. But the connection is also visible when a long-term perspective is employed. Among a series of birth cohorts in West Germany and the Netherlands, the proportion of people who have made the

transition to marriage by age 30 and 35 was consistently greater for those who have become homeowners by those ages than for those who have not (Table 2). This is also true of the transition to parenthood (Table 3). These differences between owners and non-owners are substantial, frequently amounting to 10% points or more.

A difference in the timing of first-time home-ownership was found between West Germany and the Netherlands. Whereas Germans were particularly likely to become homeowners after the birth of a first child or around the birth of a second child, the transition to home-ownership frequently took place among married couples without children in the Netherlands (Mulder & Wagner, 1998). This difference was in line with differences in housing markets, financial systems and government policy.

2.4.2 Negative association: arguments and evidence

Yet another possibility is that home-ownership might *decrease* the probability of having a child. As argued by Courgeau and Lelièvre (1992), the cost of home-ownership might compete with the cost of rearing children. This cost competition might lead to postponement of childbearing or even lower fertility among those who attach a great importance to acquiring a home. For Britain, it has indeed been found that home-ownership seems to be associated with low rather than high fertility: homeowners had fewer children than renters and had them later (Hakim, 2003; Murphy & Sullivan, 1985). Also for Britain, research has suggested that some couples postpone marriage because they are not able to buy a home (Ineichen, 1979, 1981).

Intriguingly, these findings for Britain are opposed to those for West Germany and the Netherlands (see above). To reconcile these contradictory findings, we have to look for differences between those countries in which the association between home-ownership and family formation is positive and those in which it is negative.

Table 2 Percentage having made the transition to marriage by age 30 and 35 according to home-ownership behavior, West-German and Dutch birth cohorts

	Age	1920 ^a		1930 ^a		1940 ^a		1950 ^a		1960 ^{a, b}	
		W-G	NL	W-G	NL	W-G	NL	W-G	NL	W-G	NL
All respondents	30	75.7	72.5	85.1	79	87	87.8	79	83.9	56.8	63.8
	35	88.6	84.7	93.8	89.9	92.6	94.1	82.7	88.5	–	–
No transition to home-ownership	30	72.9	73.6	80.8	76.1	82.2	82.5	72.4	76.6	50.2	51.9
	35	85.8	85.3	90.1	88.2	88.2	89.4	76.1	81.9	–	–
Transition to home-ownership	30	93.3	–	96.4	98.2	96.3	99	91.9	94	74.3	80.9
	35	97.4	–	99.6	98	97.6	99.3	93.2	94.2	–	–

^a The Netherlands: cohorts 1900–24, 1925–34, 1935–44, 1945–54, 1955–64

^b For those who had not reached age 30 at interview: age at interview

– fewer than 30 home-owners, – age 35 not reached at date of interview

Sources: West Germany: German Life History Study (Mayer and Brückner 1989; Brückner 1993; Brückner and Mayer 1995). The Netherlands: SSCW survey (ESR/STP 1992) and Netherlands Family Survey 1993 (Ultee and Ganzeboom 1993).

Table 3 Percentage having made the transition to parenthood by age 30 and 35 according to home-ownership behavior, West-German and Dutch birth cohorts

	Age	1920 ^a		1930 ^a		1940 ^a		1950 ^a		1960 ^{a,b}	
		W-G	NL	W-G	NL	W-G	NL	W-G	NL	W-G	NL
All respondents	30	66.2	57.2	70.4	60.6	76.4	73.6	62.1	64.3	42.3	45.2
	35	81.3	77.4	86	80.4	85.4	86.4	67.7	77.5	–	–
No transition to home-ownership	30	63.7	57.6	65.1	56.5	71.2	69	55.3	61.9	36.1	39.2
	35	78.7	79.4	83.5	77.8	81.1	83.6	60	71.4	–	–
Transition to home-ownership	30	82	-	84.3	83.9	86.6	83.4	75.4	67.8	58.8	53.9
	35	89.2	-	90	88	90.5	89.2	80.1	83.3	–	–

^a The Netherlands: cohorts 1900–1924, 1925–1934, 1935–1944, 1945–1954, 1955–1964.

^b For those who had not reached age 30 at interview: age at interview.

- Fewer than 30 home-owners, – age 35 not reached at date of interview.

Sources: see Table 2

2.5 Towards a reconciliation of opposite findings on the micro level

At first sight, it seems difficult to understand that the greater suitability of owner-occupied homes for families, which seems to be common to Western countries, leads to a positive association between home-ownership and family formation in some countries but a negative association in others. The key to the negative association in certain countries can be found in a combination of the greater benefits of home-ownership than in other countries and the high costs of home-ownership.

The benefits are great if the necessity to be a homeowner before forming a family is strong. It will be particularly strong in countries where rental housing is hardly an alternative, for example if rental dwellings are expensive or in short supply. The perceived necessity to be homeowner before forming a family might also be explained by the strong norms prevailing in particular countries or regions. A British respondent cited by Forrest, Kennett and Leather (1999, p. 97) said that “There was very much that culture if you get married you buy a house and if you can’t afford to buy a house then you should wait until you can.” The existence of such a ‘culture’ seems more likely in countries where home-ownership is widespread than in countries where this is not the case (Mulder & Wagner, 2001).

In such a situation of strong necessity, one would expect people to become homeowners before having children. One would also expect difficulties in acquiring a home to lead to postponement of parenthood. Postponement is in itself likely to lead to a smaller number of children for some, for example because of fecundity problems or dissolution of the partnership before the couple is ready to have a child. Furthermore, couples who feel obliged to buy a home might devote such a large share of their resources to home-ownership that the cost of children becomes difficult to bear and they decide to have fewer children.

3 Macro-level connections between family formation and home-ownership

From the above discussion, some clues emerge about which connection to expect between family formation and home-ownership on the level of countries. The key factor seems to be access to housing. The best guarantees of access seem to be in

countries where there is either a sufficiently large affordable rental sector, so that young people are able to make a smooth entrance to the housing market in that sector and possibly move on to become homeowners, or where home-ownership is more widespread but easily affordable. In contrast, widespread home-ownership in combination with low affordability or accessibility of home-ownership might lead couples and prospective couples to feel severely restricted in their opportunities to form marital or non-marital partnerships, have children and even to leave the parental home.

A simple way to evaluate connections is by looking at correlations between country-level indicators (Table 4). Even though the connection between home-ownership and family formation is positive in many countries, no statistically significant associations on the country level are found between the percentage of homeowners and family formation indicators. This might have to do with the small number of observed countries, though the correlations are not only insignificant but also low. The only correlation that is higher and anywhere near being significant is that between the percentage of homeowners and the share of young people still living in the parental home ($r = 0.50$, $p = 0.17$). This finding is consistent with the idea that high levels of home-ownership might lead to difficulties in leaving the parental home.

A marginally significant negative correlation (at the 10% level) is found between the ratio of outstanding mortgage loans to GDP and the percentage of women aged 18–34 living in the parental home. Since a low mortgage loans/GDP ratio indicates difficult access to mortgages, this finding forms another indication that difficult access to owner-occupied housing affects leaving the parental home. A marginally significant positive correlation is found between the loan-to-value ratio and the TFR. This might indicate that difficult access to owner-occupied housing is indeed also associated with lower fertility.

Although no significant correlations are found between the percentage of homeowners and family formation indicators, it is striking that the three countries with the lowest Total Fertility Rates (1.24 children per woman for Italy and Spain, 1.29 for Greece; see Table 1) also have the biggest share of homeowners (Spain, Greece and Italy, with 85.3%, 83.6% and 75.5% of homeowners, respectively). They are also among the countries with the highest share of young people still living in the parental home (on this list, Greece is fourth after Italy, Portugal and Spain). Among countries with high TFRs (over 1.70) for which housing market indicators are available (Denmark, Iceland, Ireland, Luxembourg, the Netherlands and the United States), the proportion of homeowners varies substantially—hence the weak correlation between the TFR and this proportion. It should be noted that Iceland and Ireland have combinations of a particularly high TFR (1.93 and 1.98, respectively) and a high level of home-ownership (78 and 80%).

Italy, Spain and Greece are also among the five countries with the lowest mortgage loans/GDP ratio. The fourth and fifth are Austria and Poland. The latter two countries, however, have a much lower proportion of homeowners than Italy, Spain and Greece, so rental accommodation is a much more feasible alternative in Austria and Poland. A similar picture arises from loan-to-value ratios, except for Spain. It should be noted that estimates of loan-to-value ratios differ depending on the source and the definition (all mortgages versus recent mortgages or first-time buyers only; total debt versus outstanding debt, etcetera).

Table 4 Pearson correlations between family formation, housing and economic indicators of Table 1

	Age at marriage	Age at first child	TFR	% in parental home	% home owners	House price	Mortgage/ GDP	LTV	GDP per capita	% unemployment age 15–24
Age at first child	0.16									
TFR	0.09	0.18								
% in parental home	-0.46	0.09	-0.68**							
% homeowners	-0.26	-0.21	0.18	0.50						
House price	-0.19	-0.18	0.52	-0.30	-0.44					
Mortgage/ GDP	0.12	-0.01	0.39	-0.62*	0.17	0.04				
Loan to value ratio	0.04	-0.14	0.44*	-0.30	-0.05	0.34	0.32			
GDP per capita	-0.08	0.06	0.10	-0.59*	-0.04	0.37	0.14	-0.08		
% Unemployment under age 25	-0.30	-0.14	-0.56***	0.62*	-0.16	-0.56	-0.33	-0.49*	-0.28	0.95***

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

It is tempting to speculate that the findings for Italy, Spain and Greece—a combination of a high share of homeowners, low mortgage access and low fertility—are a sign of a connection between difficult access to housing and difficulties in family formation among young adults. These countries also share a tradition in which inheritance and family help play an important role in housing provision. In a study of leaving the parental home in Spain, for example, Holdsworth and Irazoqui Solda (2002) found that a substantial percentage of those leaving home moved into family-owned property rather than into self-owned or self-rented accommodation (20% among men, 19% among women). The picture for these countries seems to be as follows. Owner-occupied housing is the norm for couples and families. Young people are expected to settle into home-ownership upon marriage and to have children only after they have managed to settle down in their own homes. To achieve this is, however, difficult and expensive. There is only a small and often expensive rented housing-market sector. As a result, young people remain in the parental home for a long time. This prolonged stay in the parental home leads to late marriage and late parenthood. Once couples have attained home-ownership, they tend to have small families (frequently with only one child) to cope with the high costs of housing and childrearing.

The picture drawn above seems to point to a connection between high levels of home-ownership and difficult access to it on the one hand, and postponement of family formation and low fertility on the other. It should be stressed, however, that this relationship is not necessary causal. Young people in Italy, Spain and Greece also face difficult economic circumstances, as indicated by high youth unemployment and a moderate GDP per capita (see Table 1). As these difficult economic circumstances could in themselves lead young people to postpone marriage and family formation (compare Oppenheimer, 1988), they offer an alternative explanation of late marriage and low fertility. Alternatively, difficult economic circumstances and difficult access to housing caused by a high level of home-ownership might reinforce each other's impact on young people's family formation behavior.¹ Finally, it is also possible that the association is pure coincidence. Because of the small number of countries for which a combination of a high proportion of homeowners and an indicator of low affordability was found, there is no way of testing statistically whether this combination is significantly associated with high fertility. Furthermore, Spain, Italy and Greece are similar in more respects than housing-market or economic indicators. They are all Southern-European welfare regimes (Esping-Andersen, 1999) with low levels of state support for young people and a strong focus on support from the family. In Italy, for example, only five percent of children aged 0–2 are enrolled in public-funded daycare compared with 20% in Belgium and France and 31% in Sweden (Bosveld, 1996).

¹ In fact, the statistically significant correlation between youth unemployment and the percentage of owner-occupied homes (Table 4) provides modest support for the so-called Oswald thesis. In a never published paper, Oswald (1999) argued that home-ownership impedes labor mobility and hence that high levels of home-ownership are associated with high unemployment. On the level of countries, he indeed found a positive association between the proportion of home-owners and unemployment; Van Leuvensteijn and Koning (2004) cite more evidence for such an association on the level of countries. They also found that, within one country, homeowners were by no means less likely to change jobs or more likely to be unemployed. This contradiction between macro and micro findings once again illustrates that an association between two phenomena on the macro level of countries may well go together with an opposite association on the micro level of individuals or households.

4 Conclusions and discussion

In this paper I have explored the connections between home-ownership and family formation on the micro and macro level by developing a theoretical argument and reviewing the empirical evidence. It has become clear that the connection between home-ownership and family formation is by no means straightforward.

The benefits of home-ownership are greater for couples and families than for non-family households and the costs are borne more easily by couples. Therefore, a positive connection between home-ownership and family formation on the level of households can in principle be expected. Such a positive connection was found for several countries. However, in the UK, where many feel the necessity to become homeowners before they form families, a negative connection was found, probably because the cost of home-ownership competes with the cost of rearing children.

On the macro level of countries, it is theoretically plausible that the combination of a high proportion of homeowners and a low affordability of home-ownership would make it difficult for young people to form families. Indeed, the three countries for which a combination of a high percentage of homeowners was found in combination with a low mortgage loans/GDP ratio (Spain, Italy and Greece) were also the three countries with the lowest fertility. It should be stressed, however, that this evidence at the macro level of countries is rather weak, because it is based on a very limited number of countries that are also similar in other respects.

Still, there is enough evidence supporting the idea that there is a close and complex connection between home-ownership and family formation. That observation, combined with the findings for Spain, Italy and Greece, is intriguing. It seems to suggest a promising direction for further research—to pursue the development of ideas on the connection between home-ownership and family formation. In this further research we will sorely miss further contributions from Frans Dieleman.

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Appendix 1 Sources for Table 1. 2000. Source: Eurostat. Except:

a.	1994, Aassve, Billari, Mazzuco, & Ongaro (2002)
b.	Includes co-operative ownership
c.	2002, European Union (2003)
d.	1996, Chiuri and Jappelli (2000)
e.	1997
f.	Provisional figure
g.	Estimated figure
h.	Struyk, Merrill, Kosareva, & Tkachenko (2000)
i.	Statistics Norway
j.	1995, Median age
k.	2000, 4th quarter, US Census Bureau
l.	2002, Federal Housing Finance Board
m.	2000
n.	1996
o.	2002
p.	2001
q.	2005; age 15–24
r.	2004
s.	1994, Tomassini and Wolf (2000)
t.	2000, Bundesamt für Statistik (2005a)
u.	2004, Bundesamt für Statistik (2005b)
v.	2005, SECO (2005)
w.	2001, UN-HABITAT (2003)
x.	2003, NOSOSCO (2005); age 15–24
y.	1999, Neuteboom (2004)
z.	1990, Stephens (2000)
aa.	2002, Scanlon and Whitehead (2004b)
bb.	2001, Scanlon and Whitehead (2004b)
cc.	2003, Scanlon and Whitehead (2004b)
dd.	1997, Scanlon and Whitehead (2004b)
ee.	Scanlon and Whitehead (2004a)
ff.	1996, Henley and Morley (2000)
gg.	1994, Henley and Morley (2000)
hh.	1990, Henley and Morley (2000)
ii.	1995, Henley and Morley (2000)
jj.	1996, Henley and Morley (2000)
kk.	2001, Bezovan (2004)
ll.	2000, Tsenkova and Turner (2004)
mm.	1994, Balchin (1996)
nn.	1997, Bejakoviæ and McAuley (1999); age 15–24

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