

SOEPpapers
on Multidisciplinary Panel Data Research

Housing Decisions, Family Types and Gender

A look across LIS countries

Mariacristina Rossi and Eva Sierminska

SOEPpapers on Multidisciplinary Panel Data Research at DIW Berlin

This series presents research findings based either directly on data from the German Socio-Economic Panel study (SOEP) or using SOEP data as part of an internationally comparable data set (e.g. CNEF, ECHP, LIS, LWS, CHER/PACO). SOEP is a truly multidisciplinary household panel study covering a wide range of social and behavioral sciences: economics, sociology, psychology, survey methodology, econometrics and applied statistics, educational science, political science, public health, behavioral genetics, demography, geography, and sport science.

The decision to publish a submission in SOEPpapers is made by a board of editors chosen by the DIW Berlin to represent the wide range of disciplines covered by SOEP. There is no external referee process and papers are either accepted or rejected without revision. Papers appear in this series as works in progress and may also appear elsewhere. They often represent preliminary studies and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be requested from the author directly.

Any opinions expressed in this series are those of the author(s) and not those of DIW Berlin. Research disseminated by DIW Berlin may include views on public policy issues, but the institute itself takes no institutional policy positions.

The SOEPpapers are available at
<http://www.diw.de/soeppapers>

Editors:

Jan **Goebel** (Spatial Economics)
Martin **Kroh** (Political Science, Survey Methodology)
Carsten **Schröder** (Public Economics)
Jürgen **Schupp** (Sociology)

Conchita **D'Ambrosio** (Public Economics)
Denis **Gerstorff** (Psychology, DIW Research Director)
Elke **Holst** (Gender Studies, DIW Research Director)
Frauke **Kreuter** (Survey Methodology, DIW Research Fellow)
Frieder R. **Lang** (Psychology, DIW Research Fellow)
Jörg-Peter **Schräpler** (Survey Methodology, DIW Research Fellow)
Thomas **Siedler** (Empirical Economics)
C. Katharina **Spieß** (Education and Family Economics)
Gert G. **Wagner** (Social Sciences)

ISSN: 1864-6689 (online)

German Socio-Economic Panel (SOEP)
DIW Berlin
Mohrenstrasse 58
10117 Berlin, Germany

Contact: Uta Rahmann | soeppapers@diw.de



Housing Decisions, Family Types and Gender.

A look across LIS countries

Mariacristina Rossi, University of Turin, CeRP-CCA, LISER and Netspar

Eva Sierminska, LISER, DIW Berlin and IZA

Abstract

In this paper we shall examine homeownership trends over the past 3 to 4 decades and discuss differences related to the homeownership gap for women and men, with a focus on most recent trends. We shall compare differences in the US to those in countries with different institutional structures and shall pay particular attention to differences across family types. Our estimation techniques will allow us to discuss the role of determinants from a gender perspective. We find that single women are better off than single men without children and a reverse trend exists in families with children. The general negative effect for women remains for younger cohorts in the face of rising homeownership. The latest crisis did not change the general long-running trend of the homeownership gap except for the US and France. The findings of this paper could provide an international perspective on differential homeownership rates among women and men, across countries and over time. Given that the value of one's own home (home equity) is the largest financial reserve in a household's wealth portfolio, it is important to have a better understanding of the differences resulting from gender and family types.

JEL: D1, D3, R2, J1

Keywords: Housing, Wealth, Gender, homeownership, time trends

Mariacristina Rossi, University of Turin, Corso Unione Sovietica 218 bis, Torino, Italy and Collegio Carlo Alberto. Email: mariacristina.rossi@unito.it; Eva Sierminska, LISER, 11, Porte des Sciences, Campus, Belval, L-4366 Esch/Alzette. Email: eva.sierminska@liser.lu. We wish to thank Federico Pandolfo and Fabienne Weber for excellent research assistance and INGRID grant for funding.

1. Motivation

Homeownership decisions represent a crucial step in household asset management, and may even be the most important decision in life for a majority of households (Chambers, Schlagenhaut, & Young, 2003). Entering into homeownership is a crucial decision taken at the family level and is one of the most important commitments (both financially and in other respects) during the life cycle. If the home is not purchased outright, paying mortgage installments absorbs a major part of a family's monthly income.

Homeownership brings with it several consequences, which are not only social and economic, but also psychological. Changes in wealth are cited as the most important consequence of homeownership (Dietz & Haurin, 2003), and homeownership is considered to be a good predictor of total wealth. Several studies have proven that this is actually the case, and a strong correlation exists between homeownership and wealth levels in the US, as well as in EU countries (Bricker et al., 2012; Sierminska, 2012). For the majority of people, the capital tied up in their primary (and most of the time, only) residence constitutes their entire wealth. Housing is seen as a vehicle to accumulate assets as it fosters an orientation towards the future (Sherraden, 1991), which can, as a result, turn into a higher rate of wealth accumulation than in the case of renting.

For a family, getting on the homeownership ladder represents a crucial step in their savings decisions. By buying a house, households start the accumulation process and protect themselves against price fluctuations in renting. Owning a house can represent security against economic vulnerability. Homeownership is also an important way to accumulate wealth through forced saving, in the form of monthly mortgage payments and through a possible appreciation in value. Housing tenure implies that households accumulate housing equity which can function as a financial reserve. Money invested in housing is extended even further through tax benefits. Homeowners in the United States, for example, are allowed to deduct mortgage interest and property tax deductions on their primary and secondary residences.¹ Owning a home and paying off the mortgage allows an individual to save for retirement and to gain financially due to long-

¹ In many EU countries, like in the US, policies have been aiming at promoting home ownership at a large scale, including low and middle income classes.

term home price appreciation. The mere act of assuming mortgage debt may also induce a long-term commitment to the household by prompting a change in household spending behavior and thus “forcing” the household to save by paying down the mortgage. Households pre-commit to a scheme which is costly to break. Over recent decades, however, the effectiveness of using one’s house as a means of forced savings has weakened considerably, given the increased prominence of housing equity withdrawal and mortgage refinancing, particularly in the US (Li & Yang, 2010).

As an economic decision, buying a house presents the advantage of reducing the risk of increased costs associated with rental prices (Sinai & Souleles, 2005; Calcagno & Rossi, 2013). While the rental risk is neutralized, a consistent part of wealth is tied up in an illiquid asset, which could be an obstacle to smooth consumption over time if it becomes difficult to get access to immediate liquidity. Brunetti et al. (2015) with reference to Italian households, suggest that homeownership is another marker of financial fragility. Homeownership can represent a form of financial distress that is not related necessarily to (over) indebtedness. Also, for people who buy a house with a mortgage, the decrease in housing prices can be an additional risk, causing some families to go under water, with a negative net housing value (Horsewood & Neuteboom, 2006).

In addition to economic rationale, and possibly even more importantly in some countries, being a homeowner is considered a value per se, as owning a home is viewed as a sign of economic achievement.² Moreover, several governmental policies have been directed towards enhancing homeownership. To this end, in the US for example, the American Dream Down Payment Assistance Act was introduced in 2003 as a temporary program aimed at helping low-income households become homeowners. Owning a home is an aspiration of the middle class and the American dream has become an American obsession, as in Li and Yang, 2010.

Housing decisions are a difficult subject to examine as housing equity contains several components: housing is an investment, insurance and a commodity. Homeownership provides a household with a composite good: a flow of housing services, which have to be accommodated in any case as a household needs a place to reside, and also an investment in real estate. Given that a house is both an investment good and a consumption good it could be that homeowners have more investment risk than renters. In most cases, from a portfolio balance perspective,

² Values and goals can be strong determinants driving the purchase of a house (see Coolen et al., 2002).

investment in housing is greater than optimal. Given that real estate returns are not highly correlated with other investments such as equities, they may be a useful diversification tool in a household's portfolio.

Over the past decades, OECD countries have witnessed an increasing trend in homeownership. Homeownership is an important decision among households, but the decision to become homeowners differs strongly across the wealth distribution (Bertaut & Starr-McCluer, 2002). In the lower quartile of the wealth distribution in the US, there are very few homeowners. Homeownership increases as one moves towards the median of the distribution with real estate becoming a major asset for the middle class, while a more balanced portfolio is increasingly present as we move up the wealth distribution. Homeownership is also correlated positively with several other outcomes. It contributes to the economic health of communities as people who own are invested in their communities and work on enhancing their neighborhoods. In addition, homeowners are on average better performers (economically speaking) than non-homeowners, being possibly more inclined to accumulate wealth. Moreover, the educational and future prospects for children residing in owned houses show better results (Haurin et al., 2002). On the other hand, however, at the micro level, mobility could be lower with homeownership, hence it could reduce job search opportunities and thus increase unemployment (Oswald, 1996). Evidence indicates that homeowners are less likely to be unemployed, but have lower wages, most likely due to the need to hold a job and make their monthly payments.

At the macro level, homeownership is important as in most countries over 50% of wealth is tied up in housing. At the same time, investing in one's own home could be displacing more lucrative investments, particularly if housing equity becomes a larger and larger multiple of income, given the higher price levels when compared to the past. To become a homeowner, a consistent effort is required which could displace other investments or force households to reduce consumption at early stages of the life cycle. Thus, homeownership could also be costly in terms of foregone alternative investments, thus discouraging financial risk-taking by homeowners. Homeowners can also help boost the economy as they consume from their home's capital gains.³ It also constitutes a hedge against rental risk. As in the case of a stock portfolio, everyone should diversify their overall wealth portfolio and own both risky assets in the form of stocks, and less

³ Federal Reserve Chairman Alan Greenspan argued this helped to soften the 2001 recession in the wake of a drop in the value of other assets.

risky assets in the form of housing. All in all, it is reassuring from a policy standpoint to observe that a majority of households own their house, thus implying that in a case of income fluctuation they have an asset to rely upon and consequently could be at a lower risk of poverty. However, the cost of owning could be a burden to families as paying off the mortgage could be a major expense and given that it is an illiquid asset, it could be very costly for homeowners to adjust in response to an economic shock. For example, illiquidity can force households to reduce their standard of living in the case of employment loss or a health issue.

Our paper proposes to look into homeownership according to differences in household structures and the gender of the household's head. Given that homeownership represents the first pillar of wealth, housing wealth can be of paramount importance particularly as a buffer stock after retirement. With a smaller welfare state, households might resort to withdrawing from their real estate. For these reasons, it is important to understand the population's homeownership structure to detect whether there are any possibly vulnerable groups such as single female-headed households. Do these ownership patterns differ across countries?

In the past decade, women have been shown to be purchasing homes at a very high rate (McGinn, 2013). Homeownership provides women with financial security and reduces their fear of being homeless. Lower stigma encourages women in their 20s to buy condos and even second residence homes as purchasing a home is seen as a less risky investment than the stock market. As housing contains an investment component as well as a consumption component, women could be less inclined to invest in the housing market by being more distant from the financial market in general. This channel could make them more vulnerable and lead to a suboptimal ownership plan. At the same time, women could also be more inclined to invest in the housing market, because they are more risk-averse than men. On the other hand, the type of household to which a person belongs could potentially be one of the most relevant factors determining homeownership. Single households might have greater difficulty buying dwellings and thus be more likely in a suboptimal ownership pattern. We explore this in the paper.

In our results, a clear pattern emerges when it comes to household types and homeownership rates. Single women are better off than single men without children. In families with children, a reverse trend emerges. In terms of cohort differences, we find an increase in homeownership among younger cohorts, although the general negative effect for women remains even for the

younger cohort. In terms of time trends, the latest crisis did not change the general long-running trend of the homeownership gap except for the US and France.

2. Data and Methods

In our focus on homeownership rates, we use data from LIS Cross-National Data Center (www.lisdatacenter.org) from the 1970s, 80s, 90s and the first decade of the 21st century. The use of this data archive offers many advantages as it provides cross-nationally harmonized income and wealth microdata across many different countries and over time. The LIS Database that is used here contains harmonized microdata from a large number of mostly high-income countries. It contains information on market income, public transfers and taxes, household and personal characteristics, and labor market outcomes. In total, data for over 40 countries is available from the 1970s, but the time dimension is not available for all countries. Our criteria for selecting countries for the study were to have several years of data, information on homeownership and some basic demographic variables. We also wanted countries to represent several geographical areas, thus in the end we were able to include a set of countries for Northern Europe (Denmark, Finland, Ireland, the Netherlands, Sweden and the UK), Central Europe (Austria, Belgium, France, Germany, Luxembourg and Switzerland), Eastern Europe (Estonia, Poland and Russia), Southern Europe (Greece, Italy and Spain), and North America (Canada, the United States and Mexico) and Israel. A list of countries along with their respective years can be found in the Appendix, Table A.1.

An important aspect of the LIS Data is that it is collected at the household level. Thus, in couple households the gender of the households is classified as the one of the respondent to the survey. In most cases, this is the most financially knowledgeable person in the household.

Empirical Analysis

In our analysis, we first examine homeownership rates over time to capture the different trends that exist across countries and the raw gaps among women and men.

Next, we estimate a pooled probit across countries on homeownership to check whether the homeownership gaps are specific to women and men or perhaps family types. We distinguish several family types: single (one-person households); single with kids (single person with children under 18); married (two-person households); married with kids (two-person households with children); cohabiting (two-person households); cohabiting with children (two-person household with children) and other multi-person households. We also control for age, age squared, university

degree, whether the person is employed or unemployed, log of household disposable income, and tenure (years worked at current job). We also include several interactions with the female (0/1) indicator and the wave the data was coming from. The list of variables used in the analysis along with their labels can be found in the Appendix Table A.2. The list of countries chosen for the analysis along with the names of the original surveys can be found in Table A.4.

Descriptive statistics

As of 2010, the summary statistics (in Figure 1) show remarkable differences in homeownership rates across countries, with the highest rates in ex-Soviet countries (more than 80% in Estonia, Poland and Russia), possibly due to the transition policy of allowing households to become owners of the occupied residence. Among non-ex-communist countries, the highest rate is around 70% with the peak in Spain at 82%. It seems feasible for there to be a natural rate of non-ownership (or natural rate of absence of homeownership—NAHO). The statistics indicate that around 10-15% of households are not homeowners which in fact is compatible with the demographic structure of population, where young families still need to build up a buffer before becoming homeowners. Young households, in addition, require more mobility, for which homeownership can become an impediment.

3. Homeownership across time

Looking at the homeownership trend over time as summarized below in Figure 1, we can see variation across countries. We can observe striking evidence of increasing homeownership rates over time in about half of the countries (for example, in the Netherlands, Poland, Canada and the US) while it has remained stable or even diminished in others (for example, Finland, Ireland, Italy, Mexico and Israel).

The variation in changes during the first decade (1980 to 1990s) is not very pronounced: the change varies from less than -4 ppt to about 5 ppt. The Netherlands (8.9 ppt increase), Poland (8.3 ppt increase) and Sweden (11.8 ppt decline) are the only exceptions to this rule. In the second period from 2000 to 2010, which encompasses the great recession and financial crisis in the US and Europe and the mild recovery (stagnation), the change is more pronounced with a wider variation from an 8 ppt drop to a 4 ppt increase with the exception of Ireland (14 ppt drop) and Poland (14.9 ppt increase). Some countries—Finland, the UK, Mexico, and Israel—have witnessed

a feeble decline of below 5% in homeownership over the last 20 years (1990-2010). In other countries such as Ireland, Luxembourg and Greece, the decline is more pronounced (over 10%), which could be attributed to the recent increase in housing prices which makes it difficult for the young to get on the ownership ladder, or to an unusually high homeownership rate to begin with. A modest increase in homeownership took place in Germany, Italy and Canada (less than 5%) and virtually no change occurred in the United States. A substantial increase in homeownership rates took place in Poland. In the post-communist countries, the homeownership rate is over 80%, which is unusually high compared to the other countries. This is most likely due to the favorable privatization policies that took place after the fall of communism at which time cooperative housing was massively privatized. In Western Europe, the country that registered the highest increase of ownership rate is the Netherlands at 11%.

Figure 1. Homeownership rates and changes over time

waves	1980s	1990s	2000s	pre-crisis	post-crisis/ 2010	change 1990- 2000	change 2000- 2010	change 1990- 2010
	1	2	3	4	5			
Northern Europe								
Denmark		58.5	63.0			4.5		
Finland	75.5	73.0	69.7	70.9	71.8	-3.3	2.1	-1.2
Ireland		83.4	85.9	77.4	71.9	2.4	-14.0	-11.6
Netherlands		51.2	60.1	62.2	62.7	8.9	2.6	11.5
Sweden	42.5	55.1	43.3			-11.8		
UK	60.3	70.6	72.6	72.2	68.3	2.0	-4.2	-2.3
Central Europe								
Austria	45.9	54.1	54.3			0.2		
Belgium	65.3	68.8	74.1			5.3		
France	55.3	58.4	58.2			-0.2		
Germany	44.8	42.1	42.9	44.3	46.8	0.8	3.9	4.7
Luxembourg	67.1	72.9	70.2	70.2	62.7	-2.7	-7.5	-10.2
Switzerland		39.6	38.8			-0.8		

Eastern Europe								
Estonia		86.8	87.8	82.3		-4.6		
Poland	58.4	66.8	80.9	81.7	8.3	14.9	23.2	
Russia		92.2	91.8	92.5		0.3		
Southern Europe								
Italy	65.8	68.2	69.5	68.1	2.4	-0.1	2.3	
Spain		84.5	82.5	82.0		-2.5		
Greece	83.6	79.9	74.0	72.2	-3.7	-7.7	-11.4	
North America & Israel								
Canada	67.4	67.2	71.6	71.5	70.8	4.4	-0.9	3.6
Mexico		79.5	75.8	74.3	73.7	-3.6	-2.1	-5.8
US	67.4	67.8	71.3	70.4	68.2	3.5	-3.1	0.4
Israel		76.0	73.4	71.2	71.1	-2.6	-2.3	-4.8

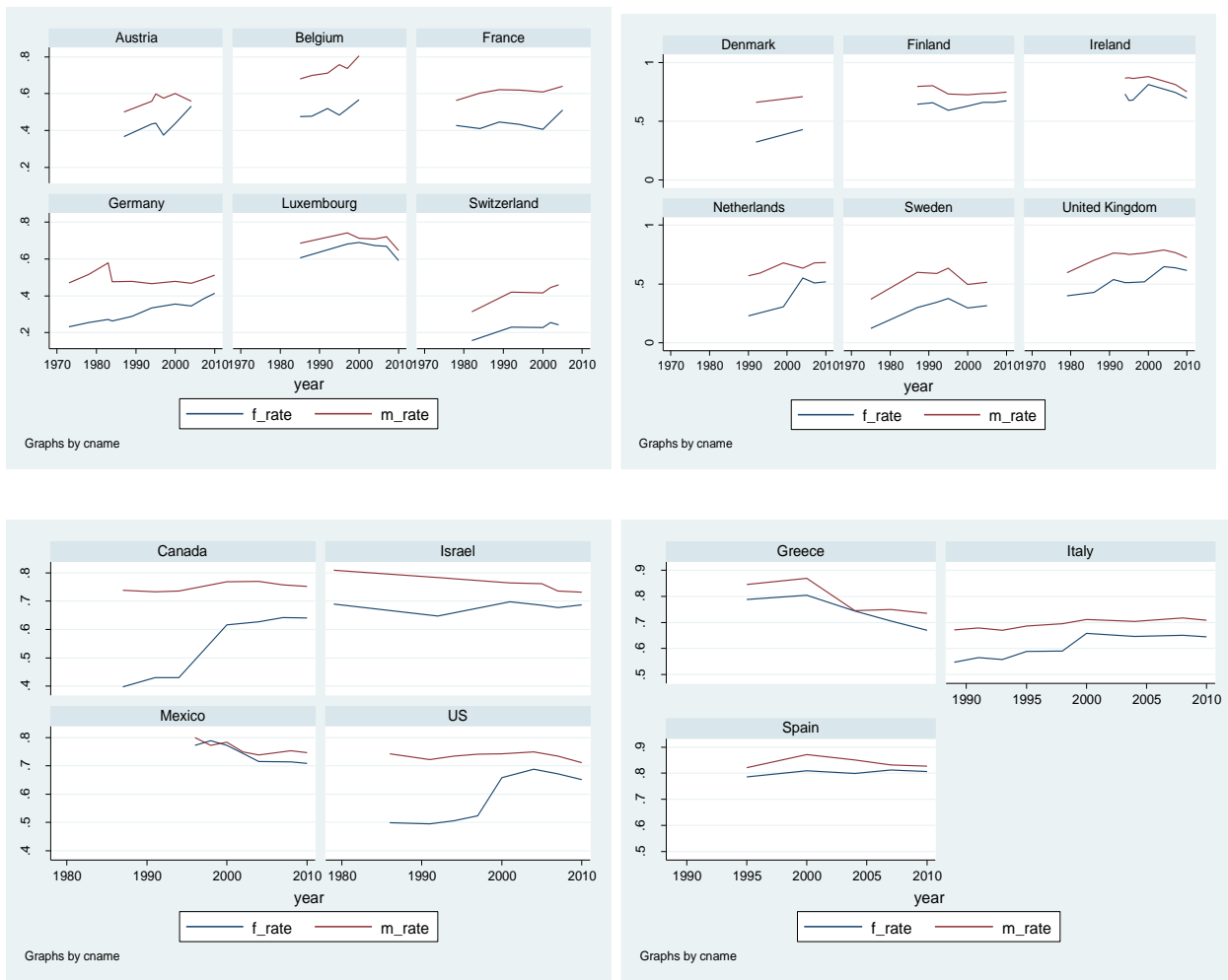
Source: LIS data; own calculations

4. Gender Dimension, Family Structure and Homeownership

Next, we re-examine the changing homeownership rates with respect to gender. Looking at the gender dimension, stable evidence emerges. In the countries under consideration, women have a lower homeownership rate than men, but the gap in homeownership is not stable over time and varies a lot across countries. What is striking is that the difference in homeownership persists in many countries. The general homeownership trend when deconstructed is not always easily spotted in the homeownership pattern of both genders.

Looking at the trend, women's homeownership rates have increased over the past decades (Figure 2) and the gender gap has narrowed in most countries. It is very small in countries such as Austria, Germany, Luxembourg, Finland, Italy and Spain, even though more recently, there has been a decline in homeownership due to the Great Recession. The gap has increased in a handful of countries such as Belgium, the Netherlands and Switzerland.

Figure 2. Homeownership rates by country for women and men



Source: LIS data; own calculations

Household structure has changed rapidly over the last century and thus, the observed gender differences may in fact be driven by differences in family types. Single households have become more common and families change more rapidly than in the past due to the increasing rate of divorce. These more detailed trends by family type can be found in the Appendix, Table A.3.

We first analyze the trend of homeownership across different types of households, broken down by gender. Our goal is to first detect if there is a common characteristic among similar family types across countries. As stated in previous literature, demographics will exert a powerful influence on future housing demand (Belsky, 2009). The focus in this section is on six household

types (as described in the data section): single and married with or without kids, headed by a female or a male.

Within a married couple, it is difficult to distinguish the role of gender. In fact, the household head's gender is typically male and thus we have few observations for female-headed households. The pattern of homeownership within married couple shows an increasing trend whether with children or without. What is more interesting is to look at single households and their homeownership rates. More people become homeowners over time, in spite of some exceptions. As an example, Finland seems to have stabilized at around 80%, and, in general, in the last decade, the increasing trend has reached a halt.

Single households have by definition one adult member who has to decide about her/his ownership patterns. Thus, this category represents the most meaningful category to examine when we want to analyze gender differences. A general emerging pattern is that single women are better off than men and are more likely to be homeowners. This reveals that, in fact, among singles, men are the more vulnerable category in most countries. The exceptions seem to be Switzerland, Sweden, Italy and Canada where the homeownership gap is very small or non-existent. Single men are much more likely to be homeowners in Denmark and the Netherlands compared to women and this is unusual compared to other countries.

Once children are involved, the trend switches, and in most countries, there is a significant homeownership gap in favor of male-headed single households with children. Thus, another finding resulting from the descriptive evidence is that having children seems to act as a homeownership enhancer.

5. Estimation Results

Whole sample.

Next, we estimate probit regressions on the pooled sample of waves for several countries. We have chosen the countries for which it was possible to collect basic information on the determinants for owning a house. The goal of this analysis is to determine whether using the multivariate analysis confirms that single women are still more homeownership oriented or if the effect vanishes once income levels are controlled for.

Our results in Table 1 show that the effect of being a female *tout court* is in most cases, negative and significant. In eight countries, being female has a negative effect on homeownership. The most negative effect of being a woman is seen in Luxembourg and Austria, which have a lower probability of 39 and 36%, respectively. The highest positive percentage of homeownership for women, controlling for other factors, is in Denmark, where women have a 25% increased chance of being homeowners. Conversely, in the Netherlands as well as in Germany, France, Spain and Greece, the female indicator is not significant. We cannot thus conclude that women have a diverse preference structure for housing than men, as it widely varies across countries. Family type, on the other hand, has a clearer impact on ownership. Single status, in all countries, is a deterrent to homeownership as being single is associated with a lower probability of owning a house. This evidence could be attributed to the absence of economies of scale, which makes getting on the property ladder easier if the purchase is made as a couple. Single women though have higher possibilities than men to be homeowners, except in Denmark. The descriptive evidence of single women being more likely to be owners than men thus does not vanish when other controls are allowed. With the exception of Denmark where single women are worse off than single men, in all other countries single women are better off than men. Despite the positive sign of being a single woman, this cannot offset the negative impact of being single, except for the UK where the single effect vanishes for women.

In a few northern and continental countries (Finland, Denmark, the Netherlands, Germany and France), income acts as a deterrent to homeownership for females. Thus, this segment of the population does not seem to be more vulnerable with respect to a lack of housing assets.

The presence of children for single women reduces the likelihood of being homeowners only in Denmark, Canada and the US. In most other countries, being a single mother has no effect on owning your own home and is positive (Austria and Luxembourg). Most likely, this is due to favorable child custody laws and child allowances that are more generous to women.

Worthy of note is the inclusion of the work tenure variable, as well as income, to control for labor history and stability. Tenure, rather than income, seems to be more effective in shaping homeownership, and always impacts the ownership decision positively, albeit differentially for women. Tenure at work suggests stability, but it also may be that the causality runs in the other direction, as homeownership may induce people to stay in the same residence and thus at the same job. Conversely, income does differ in its impact across countries. While income has a

positive effect in half of the cases, the highest impact in absolute value is when the effect is negative, peaking at -9% for Austria while the highest positive value is for Denmark at only 6%.

Age subgroups

Our unique data set allows us to observe whether the experiences of different cohorts have changed across the decades. It could very well be the case that the experiences of those born in the 50s differ from those born in the 70s. This can be observed to some extent in the Appendix, Figure A.3. In many countries, women born in the 70s seem to have very different homeownership experiences compared to women born earlier in the century—particularly for the youngest group (26–35 years old). This is the case in many Western European countries, Canada and the United States, but not so much in Southern European countries and Eastern Europe. Table 2 illustrates the results of the pooled regression for the younger cohort aged 25–45 for singles only. The results indicate that the negative effect for women remains even for the younger cohort. The negative effect is also significant in 7 out of 14 countries for single mothers.

Time trend

Our results also control for a possible time trend effect, which may potentially be different in its impact on the gender dimension across the countries. In the estimation, we include decade wave dummies and their interaction with the female (0/1) indicator to control for whether the decade effect had a differential impact on men and women. As indicated in Gabriel & Rosenthal (2013), in the 1990s the drivers of changes in homeownership rates principally included changes in socioeconomic and demographic attributes, while in the 2000-2010 period, market conditions played a much larger role. To check the role of market conditions—whether for example, the last recession had a more specific impact on the homeownership of women and men, we look at the decade dummies that are included in Table 2. Our omitted category is the 1980s. The interaction between the yearly indicators and the female indicator shows that there were no significant changes over time in most countries. There are a few countries which are exceptions. Looking at the older cohorts, those aged above 45, it is interesting to observe that looking at the time dummy after 2008, when the crisis hit, we do not find any difference in the sign of that decade compared to the previous ones. The crisis did not change the general long-running trend. The only exception is in the US where the positive trend stopped and in France which has a negative association after 2008. The interaction with the female indicator variable is almost always not significant with the

exception of France after the crisis: the positive sign of the interaction suggests that the crisis mostly affected men as the negative effect is almost offset for women. Conversely, in the US the gap between women and men has increased over the last decade, as the crisis did not reverse the trend. Looking now at the new demographic inflows, we notice more dynamics going on in the gender gap. In Finland women have substantially lowered their probability of becoming homeowners over time whereas in the UK women are those driving the increasing trend in homeownership over time. The crisis seems to have shaped differently neither the on-going time trend, nor the gender gap.

6. Discussion

The benefits linked to homeownership are certainly high from a welfare point of view and dilution of risk. For a certain population of owners, particularly those in old age, homeownership is a tool against the risk of poverty. Housing equity is part of total wealth and thus guarantees that people can rely upon some wealth in case of surprises and have access to borrowing by putting their housing up as collateral.

Looking at housing as a saving mechanism, subscribing to a mortgage (endowment mortgage) constitutes an “easy” way to accumulate wealth. Everybody needs a place to live, and so by satisfying this necessity, households can accumulate wealth. This is a quite unique feature of housing unlike any other essential good, like health-related expenditures, and it is also a chance for investment and savings. Homeownership gives households a means of saving while paying off their mortgages, hence increasing their home equity. By doing this, and by having a strong commitment to the mortgage, households are effectively forced to save more than they would otherwise. As a result, their accumulated housing wealth can also play an additional role and be used as collateral when it comes to borrowing, and in the face of borrowing constraints. From an intertemporal perspective, household future consumption is determined not only by wealth and investment opportunities, but also by future net income if a household is borrowing constrained.

7. Concluding Remarks

The status of homeowner belongs to a vast majority of the population, with the exception of Germany and Austria, where the median household does not have the status of homeowner. Apart from ex-communist countries where the homeownership rate has been inflated by converting previously rented flats to owned flats, the percentage of homeowners rarely exceeds 80%, thus suggesting that a 20% floor of non-owners might be the physiological rate of renting. This could be due to poverty and also to natural demographic factors. For example, at a young age, renting can be optimal so as to exploit mobility and opportunities for better jobs, which might necessitate moving.

With respect to the family and gender dimensions, we can see that family type rather than gender gives a different shape to the decision of homeownership. In particular, single households are less likely to be homeowners, thus exposing them to the risk of having zero housing equity and not having equity to rely upon in case of need. The risk is, however, reduced for single women, who are more inclined to own their home compared to single men.

From a policy standpoint, the incentive of homeownership seems particularly important within these household types.

References

- Belsky, E. (2009), Demographics, markets, and future of housing demand, *Journal of Housing Research*, 18(2), 99-119.
- Bertaut, C. C. and M. Starr-Mc Cluer (2002), Household portfolios in the United States, in *Household Portfolios* edited by Guiso, L., M.Haliassor and T. Jappelli, The MIT Press.
- Bricker, J., A. B. Kennickell and K. B. Moore (2012), Changes in U. S. family finances from 2007 to 2010: Evidence from the survey of consumer finances, *Federal Reserve Bulletin*, 98(2).
- Brunetti, M., E. Giarda and C. Torricelli (2015), Is financial fragility a matter of illiquidity? An appraisal for Italian households, *Review of Income and Wealth*, on-line March, 2015. DOI: 10.1111/roiw.12189
- Calcagno R. and M. Rossi, (2011) Portfolio Choice and Precautionary Savings, *Economics Bulletin*, 31(2), 1353-1361
- Chambers, M. S., D. E. Schlangenhaus and E. R. Young (2003), Are husbands really that cheap? Exploring life insurance holdings, manuscript, Florida State University.
- Coolen, H., P. Boelhouwer and K. van Driel (2002), Values and goals as determinants of intended tenure choice, *Journal of Housing and the Built Environment*, 17(3), 215-236.
- Dietz, R. D. and D. R. Haurin (2003), The social and private micro-level consequences of homeownership, *Journal of Urban Economics*, 54(3), 401-450.
- Gabriel, S. A. and S. S. Rosenthal (2013), Urbanization, agglomeration economies, and access to mortgage credit, *Regional Science and Urban Economics*, 43, 42-50.
- Haurin, D. R., T. L. Parcel and R. J. Haurin (2002), Does homeownership affect child outcomes?, *Real Estate Economics*, 30(4), 635-666.
- Horsewood, N. and P. Neuteboom (2006), The social limits to growth: Security and insecurity aspects of home ownership, IOS Press, *Housing and Urban Policy Studies*, 31.
- Li, W. and F. Yang (2010), American dream or American obsession? The economic benefits and costs of homeownership, *Business Review*, Q3, 20-30.
- Luxembourg Income Study (LIS) Database, <http://www.lisdatacenter.org> (multiple countries; 1971-2010). Luxembourg: LIS.
- McGinn, D., (2013), How single women – and what they want – are shaping the new housing market, *The Globe and Mail*.
- Oswald, A. J. (1996), A conjecture on the explanation for high unemployment in the industrialized nations: Part I, *Warwick Economics Research Paper Series (TWERPS)*, 475.

Sherraden, M. (1991), *Assets and the poor: A new American welfare policy*, M. E. Sharpe, Inc., New York.

Sierminska, E. (2012), *Wealth in the crisis, Social situation observatory: Income distribution and living conditions, Research note 09/2012*, European Commission.

Sinai, T. and N. S. Souleles (2005), *Owner-occupied housing as a hedge against rent risk, The Quarterly Journal of Economics*, 120(2), 763-789.

Table 1. Homeownership estimates.

	Finland	Denmark	Netherlands	UK	Germany	France	Austria	Luxembourg	Belgium	Italy	Spain	Greece	US	Canada
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
female (d)	-0.059* (-1.72)	0.250*** (8.45)	-0.090 (-1.45)	0.103*** (-3.69)	0.051 (1.35)	-0.008 (-0.20)	0.359*** (-8.61)	-0.392*** (-5.08)	-0.246** (-2.23)	0.138*** (-3.34)	-0.012 (-0.38)	-0.055 (-1.09)	0.066*** (-4.36)	0.167*** (-6.24)
single (d)	0.446*** (-29.15)	0.097*** (-9.51)	-0.171*** (-5.95)	0.093*** (-10.49)	0.370*** (-36.37)	0.294*** (-24.58)	0.428*** (-33.38)	-0.314*** (-12.09)	0.251*** (-6.95)	0.250*** (-20.46)	0.110*** (-9.53)	0.292*** (-14.38)	0.215*** (-56.46)	0.237*** (-33.87)
single*female	0.103*** (10.16)	0.062*** (-4.15)	0.137*** (4.49)	0.093*** (7.96)	0.101*** (4.38)	0.126*** (6.64)	0.151*** (7.67)	0.174*** (7.06)	0.119*** (3.02)	0.073*** (4.78)	0.055*** (5.30)	0.080*** (4.79)	0.075*** (18.17)	0.031*** (3.88)
single+kids	0.328*** (-11.94)	-0.038** (-2.31)	-0.086** (-2.20)	0.094*** (-6.21)	0.163*** (-7.00)	0.198*** (-8.94)	0.325*** (-10.99)	-0.159*** (-3.20)	-0.129** (-2.39)	0.155*** (-6.68)	-0.049** (-2.16)	0.139*** (-2.81)	0.031*** (-5.15)	0.114*** (-10.08)
(single+kids)*female	0.026 (1.30)	0.180*** (-9.22)	-0.002 (-0.03)	-0.021 (-1.16)	-0.051 (-1.56)	0.007 (0.25)	0.125*** (3.98)	0.078* (1.73)	0.022 (0.36)	0.021 (0.86)	0.026 (1.33)	0.024 (0.62)	0.059*** (-8.01)	-0.022* (-1.82)
married (d)	0.154*** (-12.03)	0.220*** (22.75)	0.087*** (3.76)	0.140*** (20.50)	0.164*** (-14.01)	-0.026** (-2.25)	0.307*** (-24.51)	-0.060** (-2.44)	0.019 (0.68)	0.089*** (-8.84)	0.030*** (4.02)	0.108*** (-7.46)	0.122*** (43.02)	0.051*** (10.23)
married*female	0.078*** (6.40)	0.277*** (-20.06)	0.175*** (7.16)	0.018 (1.19)	0.125*** (5.35)	0.155*** (6.77)	0.181*** (8.17)	0.085** (2.48)	0.065 (0.71)	0.079*** (4.55)	0.032** (2.49)	0.071*** (3.71)	0.053*** (10.42)	0.058*** (6.56)
married+kids	0.086*** (-8.45)	0.278*** (30.99)	0.168*** (7.42)	0.136*** (19.59)	-0.008 (-0.65)	0.027** (2.53)	0.135*** (-11.15)	-0.013 (-0.60)	0.110*** (4.21)	0.064*** (-7.57)	0.046*** (6.82)	0.096*** (-8.80)	0.170*** (64.10)	0.136*** (30.30)
(married+kids)*female	0.077*** (6.37)	0.068*** (-4.38)	0.207*** (9.62)	-0.020 (-1.23)	0.158*** (7.10)	0.172*** (8.56)	0.219*** (12.30)	0.112*** (3.84)	0.030 (0.40)	0.092*** (6.43)	0.040*** (3.89)	0.077*** (4.96)	0.072*** (17.36)	0.026*** (2.76)
cohabiting	0.316*** (-17.53)	0.025** (2.23)	0.013 (0.49)	0.053*** (5.53)	0.301*** (-23.54)	0.253*** (-16.62)	0.408*** (-23.84)	-0.198*** (-5.90)	0.182*** (-4.09)	0.248*** (-7.39)	0.049*** (-2.83)	0.364*** (-6.32)	0.079*** (-9.48)	0.082*** (-8.13)
cohab*female	0.081*** (6.51)	0.100*** (5.36)	0.171*** (6.62)	-0.001 (-0.07)	0.185*** (6.61)	0.134*** (4.50)	0.192*** (4.01)	0.144*** (4.30)	0.148*** (3.31)	-0.003 (-0.06)	0.051*** (2.78)	0.063 (1.24)	0.056*** (5.64)	0.061*** (5.10)

cohabiting+kids	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.226***	0.145***	0.111***	0.018	0.247***	0.159***	0.331***	-0.189***	-0.083*	0.242***	0.066***	-0.153*	0.026***	0.026***
	(-12.71)	(13.74)	(4.94)	(1.60)	(-13.00)	(-11.00)	(-15.63)	(-5.58)	(-1.96)	(-5.70)	(-3.43)	(-1.88)	(-3.17)	(3.26)
(coahb+kids)*female	0.090***	0.072***	0.142***	0.061***	0.156***	0.169***	0.251***	0.167***	0.080	-0.020	0.072***	0.098*	0.041***	0.048***
	(7.43)	(3.56)	(4.53)	(-2.61)	(4.61)	(6.73)	(7.52)	(5.81)	(1.17)	(-0.31)	(4.41)	(1.83)	(3.93)	(3.67)
age	0.020***	0.013***	0.020***	0.012***	0.020***	0.043***	0.031***	0.005**	0.032***	0.029***	0.015***	0.022***	0.027***	0.020***
	(21.01)	(14.54)	(12.37)	(15.03)	(15.66)	(33.34)	(20.36)	(2.11)	(13.19)	(22.15)	(12.88)	(12.87)	(64.96)	(27.13)
age2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.000***	0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	(-12.82)	(-6.21)	(-10.25)	(-6.24)	(-8.02)	(-23.24)	(-15.47)	(0.83)	(-9.12)	(-15.98)	(-8.21)	(-7.92)	(-36.47)	(-15.41)
university degree	0.047***	0.071***	0.146***	0.131***	0.064***	0.090***	0.007	0.037***	0.055***	0.107***	0.033***	-0.000	0.107***	0.055***
	(14.82)	(22.81)	(29.76)	(32.93)	(13.17)	(17.52)	(0.73)	(4.45)	(6.26)	(17.92)	(8.24)	(-0.05)	(72.98)	(21.50)
unemployed	0.105***	0.061***	-0.068***	0.090***	0.147***	0.182***	0.260***	-0.376***	0.108***	0.183***	0.090***	0.130***	0.042***	0.041***
	(-9.10)	(5.96)	(-2.77)	(-9.25)	(-12.09)	(-13.33)	(-11.60)	(-11.13)	(-3.76)	(-12.34)	(-7.18)	(-5.98)	(-8.03)	(-5.68)
unemployed*female	-0.003	0.047***	0.016	0.046***	0.024	0.022	0.096***	0.067*	-0.001	0.077***	-0.002	0.072***	-0.017**	0.011
	(-0.20)	(2.90)	(0.46)	(3.18)	(1.14)	(1.05)	(2.97)	(1.77)	(-0.02)	(3.51)	(-0.15)	(4.15)	(-2.29)	(0.94)
employed (d)	0.103***	0.276***	0.158***	0.252***	0.085***	0.030***	0.001	-0.108***	0.108***	0.019***	0.011*	-0.016*	0.101***	0.093***
	(17.18)	(73.67)	(19.12)	(56.09)	(12.75)	(3.88)	(0.09)	(-8.28)	(7.01)	(-2.59)	(1.88)	(-1.89)	(47.89)	(23.65)
log income	0.020***	0.060***	-0.002	0.000	0.005**	0.039***	0.093***	-0.087***	0.019***	0.018***	-0.000	0.006*	-0.001	0.011***
	(11.95)	(31.38)	(-0.67)	(0.13)	(2.22)	(16.55)	(-29.89)	(-14.71)	(-4.05)	(-7.79)	(-0.08)	(1.91)	(-1.58)	(-7.91)
log income*female	0.008***	0.026***	-0.014**	0.004	0.020***	0.016***	0.019***	0.035***	0.017*	0.003	-0.003	-0.001	0.000	0.007***
	(-2.62)	(-9.73)	(-2.57)	(1.36)	(-5.65)	(-3.59)	(4.25)	(3.81)	(1.68)	(0.65)	(-0.75)	(-0.19)	(0.27)	(3.08)
tenure	0.004***		0.004***	0.005***	0.005***		0.007***	0.013***	0.002*	0.001*				0.003***
	(7.63)		(4.81)	(20.00)	(16.35)		(3.98)	(18.23)	(1.81)	(1.95)				(14.62)
tenure*female	-0.001*		0.001	0.005***	0.003***		-0.007**	0.002	0.000	0.002***				0.002***
	(-1.82)		(0.33)	(9.39)	(-5.05)		(-2.26)	(1.43)	(0.20)	(4.90)				(6.82)
N	63134	142238	38145	125282	83014	67267	40820	16241	12330	62984	42857	22016	450388	140225

Marginal effects; t statistics in parentheses.

Decade dummies are included

(d) for discrete change of dummy variable from 0 to 1

* p<0.1, ** p<0.05, *** p<0.01

Table 2. Homeownership Estimates. 25-45 years old

	Finland	Denmark	Netherlands	UK	Germany	France	Austria	Luxembourg	Belgium	Italy	Spain	Greece	US	Canada
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
female (d)	0.346*** (3.38)			-0.107 (-1.23)	0.049 (0.66)	-0.029 (-0.38)	-0.382*** (-3.27)	0.112 (0.44)		-0.138 (-0.62)		0.098 (0.41)	-0.106** (-2.39)	-0.236*** (-3.13)
single+kids	0.092** (2.49)	0.029 (1.64)	0.030 (0.55)	-0.079*** (-3.40)	0.051* (1.80)	0.058** (2.23)	0.068 (1.24)	0.118 (1.19)	0.153* (1.64)	0.065 (1.04)	0.024 (0.31)	-0.026 (-0.21)	0.176*** (20.27)	0.123*** (7.23)
(single+kids)*female	-0.124*** (-3.08)	-0.082*** (-4.57)	-0.123** (-2.34)	-0.091*** (-3.58)	-0.020 (-0.77)	-0.070*** (-2.61)	-0.054 (-0.99)	-0.111 (-1.13)	-0.083 (-0.83)	-0.091 (-1.43)	-0.030 (-0.37)	0.184 (1.45)	-0.141*** (-14.44)	-0.085*** (-4.36)
age	0.085*** (4.70)	0.036*** (4.91)	0.089*** (4.62)	0.037*** (3.57)	0.054*** (5.32)	0.075*** (5.77)	0.039** (2.12)	0.056* (1.92)	0.021 (0.52)	0.014 (0.64)	0.138*** (5.41)	0.046 (1.23)	0.055*** (11.20)	0.044*** (4.66)
age2	-0.088*** (-3.56)	-0.038*** (-3.67)	-0.105*** (-3.90)	-0.034** (-2.38)	-0.062*** (-4.44)	-0.077*** (-4.33)	-0.034 (-1.33)	-0.071* (-1.73)	0.000 (0.00)	-0.007 (-0.21)	-0.166*** (-4.73)	-0.045 (-0.84)	-0.051*** (-7.46)	-0.043*** (-3.27)
university degree	0.107*** (6.59)	0.043*** (6.31)	0.111*** (6.83)	0.165*** (17.42)	0.041*** (4.35)	0.081*** (6.58)	0.030 (1.42)	0.002 (0.07)	0.067* (1.93)	0.193*** (8.37)	0.021 (0.98)	-0.016 (-0.50)	0.098*** (23.88)	0.036*** (4.16)
unemployed	-0.098** (-2.47)	0.140*** (6.25)	0.188*** (2.75)	-0.038 (-1.48)	-0.026 (-0.95)	-0.009 (-0.24)	-0.157*** (-2.92)	-0.205** (-2.08)	0.107 (0.95)	-0.031 (-0.40)	-0.093 (-1.34)	-0.244** (-2.52)	0.066*** (4.09)	0.091*** (3.72)
unemployed*female	-0.016 (-0.29)	-0.021 (-0.77)	-0.025 (-0.32)	0.088** (2.55)	-0.068*** (-2.64)	-0.015 (-0.44)	0.118 (1.33)	-0.029 (-0.22)	-0.126 (-1.23)	-0.212*** (-3.35)	-0.025 (-0.36)	0.161 (1.46)	-0.054*** (-3.06)	-0.046 (-1.54)
employed (d)	0.250*** (11.39)	0.269*** (42.98)	0.325*** (17.23)	0.375*** (40.09)	0.052*** (3.56)	0.111*** (5.89)	0.027 (1.06)	0.083 (1.42)	0.197*** (3.72)	-0.137*** (-3.54)	0.014 (0.35)	-0.087 (-1.42)	0.176*** (33.18)	0.186*** (17.20)
log income	0.043*** (4.31)	0.003 (0.96)	-0.014 (-0.94)	-0.003 (-0.50)	0.026*** (4.46)	0.014** (2.01)	-0.059*** (-5.48)	-0.090*** (-3.90)	-0.021 (-0.73)	-0.028 (-1.37)	0.005 (0.30)	-0.017 (-0.79)	-0.005 (-1.57)	-0.010 (-1.63)
log income*female	-0.040*** (-3.05)	-0.033*** (-6.47)	-0.013 (-0.64)	0.003 (0.40)	-0.008 (-0.99)	-0.000 (-0.02)	0.045*** (3.29)	-0.002 (-0.06)	0.039 (1.08)	0.021 (0.80)	-0.017 (-0.87)	-0.013 (-0.43)	0.008** (2.02)	0.014* (1.70)
tenure (work)	0.011*** (3.00)		0.013*** (3.11)	0.020*** (14.36)	0.005*** (5.21)		-0.001 (-0.19)	0.029*** (7.72)	0.011 (1.57)	0.009*** (4.20)				0.009*** (6.59)
tenure*female	-0.007 (-1.41)		0.001 (0.17)	0.002 (1.21)	-0.001 (-0.79)		-0.006 (-0.76)	-0.005 (-0.95)	-0.000 (-0.05)	-0.003 (-0.99)				0.007*** (4.02)

y1990 (d)	-0.058*		-0.184***	0.155***	-0.025	0.021	0.083***		0.118***	-0.202***	0.099	0.018	-0.045*	
	(-1.71)		(-5.55)	(3.48)	(-1.11)	(0.85)	(2.75)		(2.65)	(-3.24)	(1.18)	(1.62)	(-1.79)	
y2000 (d)	-0.100***	0.003	-0.085***	0.114**	-0.041***	-0.019	-0.052	-0.110**	-0.025	0.037	-0.014	0.035	0.055***	0.010
	(-2.76)	(0.20)	(-2.61)	(2.38)	(-2.97)	(-0.92)	(-1.30)	(-2.08)	(-0.32)	(0.73)	(-0.34)	(0.57)	(4.85)	(0.38)
y2007 (d)	-0.071*		-0.053*	0.032	-0.012			-0.255***		0.025		0.006	0.050***	0.043
	(-1.82)		(-1.65)	(0.66)	(-0.65)			(-4.94)		(0.44)		(0.10)	(3.80)	(1.44)
y2010 (d)	-0.023	-0.109***		-0.031	-0.030*	-0.020		-0.125**		-0.012	0.026		0.032**	0.038
	(-0.57)	(-6.88)		(-0.65)	(-1.71)	(-0.93)		(-2.07)		(-0.21)	(0.66)		(2.37)	(1.26)
y1990*female (d)	-0.024	0.229***	0.024	0.081	-0.037	-0.025	-0.038	0.032	-0.341	-0.056	0.270***	-0.118	-0.017	0.019
	(-0.52)	(4.01)	(0.15)	(1.36)	(-1.28)	(-0.83)	(-0.99)	(0.39)	(-1.44)	(-0.98)	(2.75)	(-1.16)	(-1.21)	(0.55)
y2000*female (d)	-0.092*	0.283***	0.077	0.117*	-0.014	0.004	0.030	0.037	-0.259	-0.021	0.120	-0.002	0.006	-0.020
	(-1.89)	(4.77)	(0.42)	(1.88)	(-0.73)	(0.14)	(0.55)	(0.57)	(-1.27)	(-0.32)	(0.78)	(-0.03)	(0.42)	(-0.57)
y2007*female (d)	-0.126**		0.044	0.140**	-0.036			0.003		-0.032	0.120	0.022	-0.026	-0.027
	(-2.46)		(0.24)	(2.23)	(-1.62)			(0.05)		(-0.45)	(0.77)	(0.26)	(-1.63)	(-0.70)
y2010*female (d)	-0.124**	0.248***	0.053	0.148**	-0.033	-0.010				-0.017	0.118		-0.019	-0.004
	(-2.34)	(4.17)	(0.29)	(2.36)	(-1.43)	(-0.34)				(-0.24)	(0.74)		(-1.15)	(-0.11)
N	5182	22573	4115	17301	8129	7120	4110	1995	1038	3323	2524	1195	62580	17301

Marginal effects; t statistics in parentheses.

(d) for discrete change of dummy variable from 0 to 1

* p<0.1, ** p<0.05, *** p<0.01

Table 3. Homeownership estimates. 45-65 years old

	Finland	Denmark	Netherlands	UK	Germany	France	Austria	Luxembourg	Belgium	Italy	Spain	Greece	US	Canada
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
female (d)	0.154** (2.03)	0.066* (1.66)	-0.007 (-0.08)	-0.012 (-0.25)	0.083* (1.71)	0.051 (0.82)	-0.259*** (-3.53)	-0.213 (-1.64)	-0.169 (-1.13)	-0.041 (-0.47)	0.060 (0.68)	0.080 (0.65)	0.019 (0.61)	-0.201*** (-4.06)
single+kid~)	0.143*** (6.63)	0.060*** (4.52)	0.084*** (2.71)	0.003 (0.22)	0.191*** (8.40)	0.099*** (4.67)	0.118*** (3.74)	0.186*** (4.35)	0.136*** (2.80)	0.099*** (4.39)	0.054** (2.25)	0.137*** (3.53)	0.200*** (31.01)	0.149*** (12.63)
single+kid~)	-0.158*** (-5.64)	-0.082*** (-6.19)	-0.125*** (-3.91)	-0.139*** (-8.76)	-0.084*** (-4.44)	-0.096*** (-4.36)	-0.032 (-0.94)	-0.177*** (-3.50)	-0.142** (-2.51)	-0.054** (-2.06)	-0.036 (-1.23)	-0.082 (-1.53)	-0.161*** (-21.57)	-0.077*** (-5.45)
age	0.033*** (12.51)	0.005*** (4.19)	0.019*** (6.04)	0.010*** (6.99)	0.021*** (9.78)	0.047*** (20.18)	0.035*** (13.40)	-0.001 (-0.20)	0.033*** (5.82)	0.028*** (9.33)	0.025*** (8.86)	0.023*** (5.69)	0.027*** (32.87)	0.016*** (9.99)
age2	-0.020*** (-7.32)	0.005*** (3.81)	-0.010*** (-3.31)	-0.001 (-0.85)	-0.012*** (-5.43)	-0.034*** (-14.39)	-0.027*** (-10.82)	0.009* (1.85)	-0.023*** (-4.11)	-0.020*** (-7.10)	-0.018*** (-6.34)	-0.013*** (-3.34)	-0.013*** (-15.66)	-0.005*** (-3.15)
university~)	0.114*** (11.36)	0.077*** (16.06)	0.170*** (15.73)	0.128*** (21.72)	0.026*** (3.53)	0.127*** (11.91)	0.042** (2.40)	0.025 (1.36)	0.056** (2.48)	0.172*** (12.44)	0.013 (1.17)	-0.001 (-0.04)	0.120*** (41.01)	0.067*** (11.74)
unemployed~)	-0.145*** (-5.97)	0.151*** (9.51)	-0.023 (-0.51)	-0.080*** (-4.53)	-0.115*** (-6.20)	-0.126*** (-5.28)	-0.183*** (-4.28)	-0.363*** (-5.92)	-0.087 (-1.23)	-0.098** (-2.10)	-0.099*** (-2.61)	-0.101 (-1.56)	0.018 (1.58)	-0.018 (-1.02)
unemplf (d)	0.033 (1.03)	-0.024 (-1.08)	-0.013 (-0.22)	0.055** (2.26)	-0.026 (-0.87)	0.006 (0.18)	0.071 (1.16)	0.074 (0.82)	-0.092 (-1.12)	-0.072 (-1.21)	-0.046 (-1.12)	0.033 (0.56)	-0.059*** (-4.04)	-0.004 (-0.15)
employed (d)	0.156*** (11.91)	0.303*** (60.79)	0.215*** (15.03)	0.319*** (46.82)	0.038*** (3.63)	0.037*** (3.06)	-0.011 (-0.76)	-0.038 (-1.35)	0.087*** (2.83)	-0.076*** (-4.49)	0.001 (0.08)	-0.050** (-2.30)	0.141*** (38.20)	0.133*** (17.74)
logy	0.029*** (4.35)	0.032*** (11.75)	-0.005 (-0.56)	0.004 (1.14)	0.020*** (4.40)	0.029*** (4.82)	-0.079*** (-10.34)	-0.099*** (-6.64)	-0.034** (-2.02)	-0.025*** (-2.84)	-0.001 (-0.09)	-0.002 (-0.13)	-0.001 (-0.32)	-0.012*** (-2.81)
loy*female	-0.018** (-2.10)	-0.015*** (-4.04)	-0.006 (-0.56)	0.006 (1.18)	-0.014** (-2.49)	-0.012 (-1.60)	0.029*** (3.21)	0.052*** (2.85)	0.033 (1.58)	0.001 (0.08)	-0.004 (-0.41)	-0.003 (-0.23)	0.001 (0.45)	0.012** (2.22)
tenure	0.004** (2.53)		0.010*** (3.93)	0.008*** (13.10)	0.004*** (6.01)		0.004 (0.89)	0.013*** (7.96)	0.008** (2.24)	0.003*** (2.99)				0.005*** (7.24)
tenure*fem~e	-0.000 (-0.06)		-0.002 (-0.74)	0.003*** (3.77)	-0.002*** (-2.79)		-0.007 (-1.19)	-0.001 (-0.29)	-0.002 (-0.53)	0.000 (0.25)				0.003*** (4.10)
y1990 (d)	-0.025 (-1.01)			0.232*** (9.64)	-0.028 (-1.18)	0.002 (0.10)	0.113*** (5.28)		-0.053 (-1.16)	0.018 (0.63)	-0.062* (-1.91)	0.093** (2.51)	0.018** (2.07)	-0.046** (-2.45)

y2000 (d)	-0.087*** (-3.50)	-0.044*** (-3.49)	0.131*** (5.05)	0.253*** (10.79)	0.012 (0.84)	-0.002 (-0.13)	-0.028 (-0.96)	-0.039 (-0.96)		0.040 (1.33)	-0.007 (-0.34)	0.050 (1.57)	0.040*** (4.59)	-0.008 (-0.41)
y2007 (d)	-0.109*** (-4.06)		0.129*** (5.26)	0.213*** (8.75)	0.032* (1.81)			-0.186*** (-4.17)		0.062* (1.90)		-0.036 (-1.08)	0.031*** (3.29)	-0.002 (-0.12)
y2010 (d)	-0.069** (-2.58)	-0.131*** (-10.34)	0.169*** (6.93)	0.213*** (8.75)	0.019 (1.16)	-0.060*** (-3.51)		-0.044 (-1.00)		0.026 (0.78)	0.012 (0.59)		0.014 (1.44)	-0.012 (-0.59)
y1990f (d)	0.002 (0.08)	-0.045*** (-2.65)	-0.027 (-0.90)	-0.011 (-0.36)	0.010 (0.34)	0.006 (0.23)	-0.015 (-0.60)	-0.031 (-0.54)		-0.018 (-0.53)	0.040 (1.23)	-0.100* (-1.72)	-0.009 (-0.89)	0.025 (1.06)
y2000f (d)	-0.007 (-0.24)	0.019** (2.15)	-0.030 (-1.00)	0.009 (0.28)	0.006 (0.33)	0.029 (1.38)	-0.016 (-0.46)	-0.018 (-0.41)	-0.047 (-0.84)	0.025 (0.69)	-0.000 (-0.02)	-0.041 (-0.99)	0.001 (0.09)	0.005 (0.21)
y2007f (d)	-0.012 (-0.36)			0.029 (0.91)	0.004 (0.18)					0.010 (0.25)	0.002 (0.06)	0.016 (0.41)	-0.024** (-2.05)	0.006 (0.22)
y2010f (d)	-0.054 (-1.56)		-0.016 (-0.56)	0.011 (0.34)	0.012 (0.56)	0.047** (2.12)		-0.059 (-1.29)		0.041 (1.03)			-0.022* (-1.83)	0.025 (0.95)
N	13594	55833	10279	43665	22037	18023	12613	4501	2961	13404	8803	4445	137851	38933

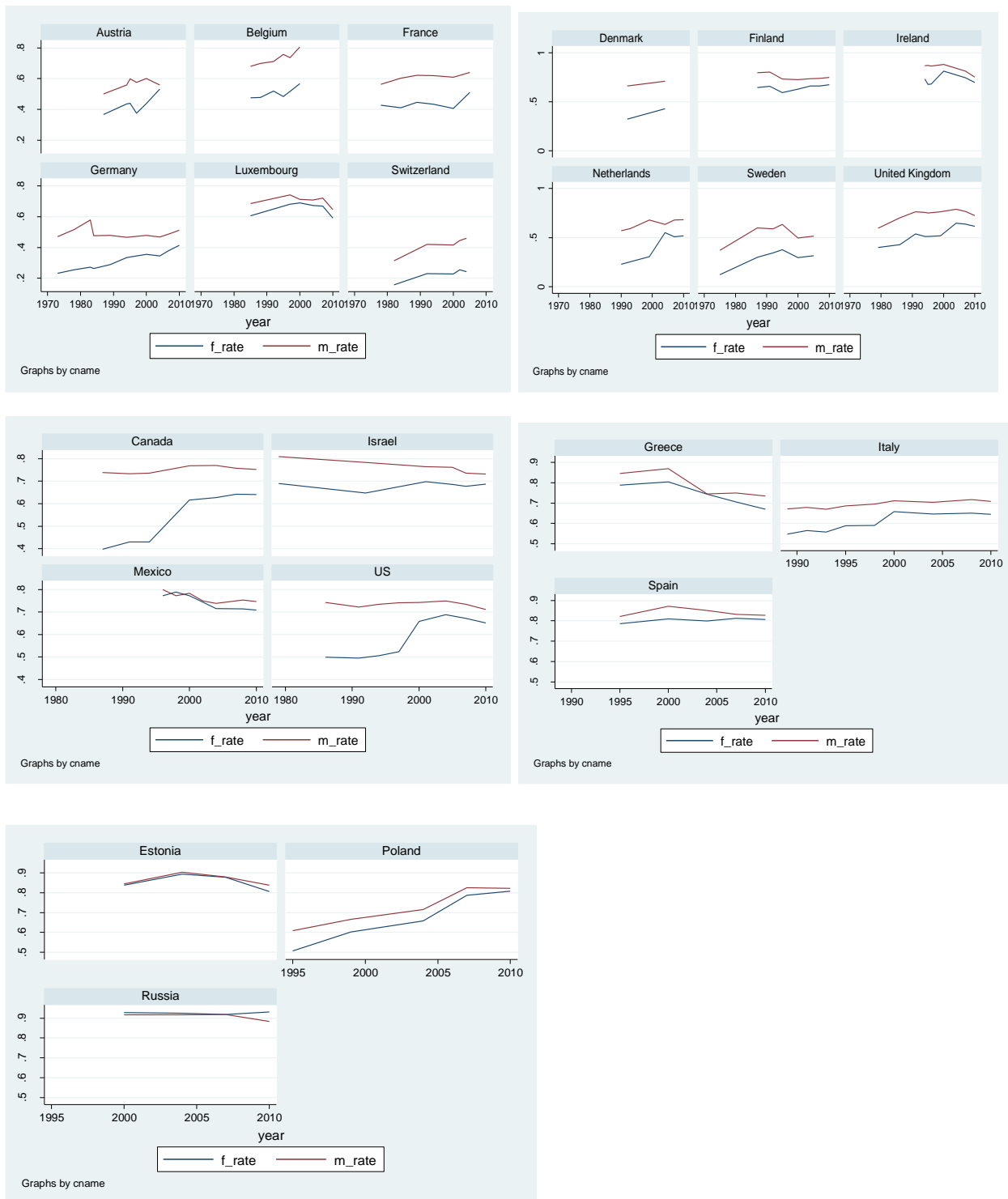
Marginal effects; t statistics in parentheses.

(d) for discrete change of dummy variable from 0 to 1

* p<0.1, ** p<0.05, *** p<0.01

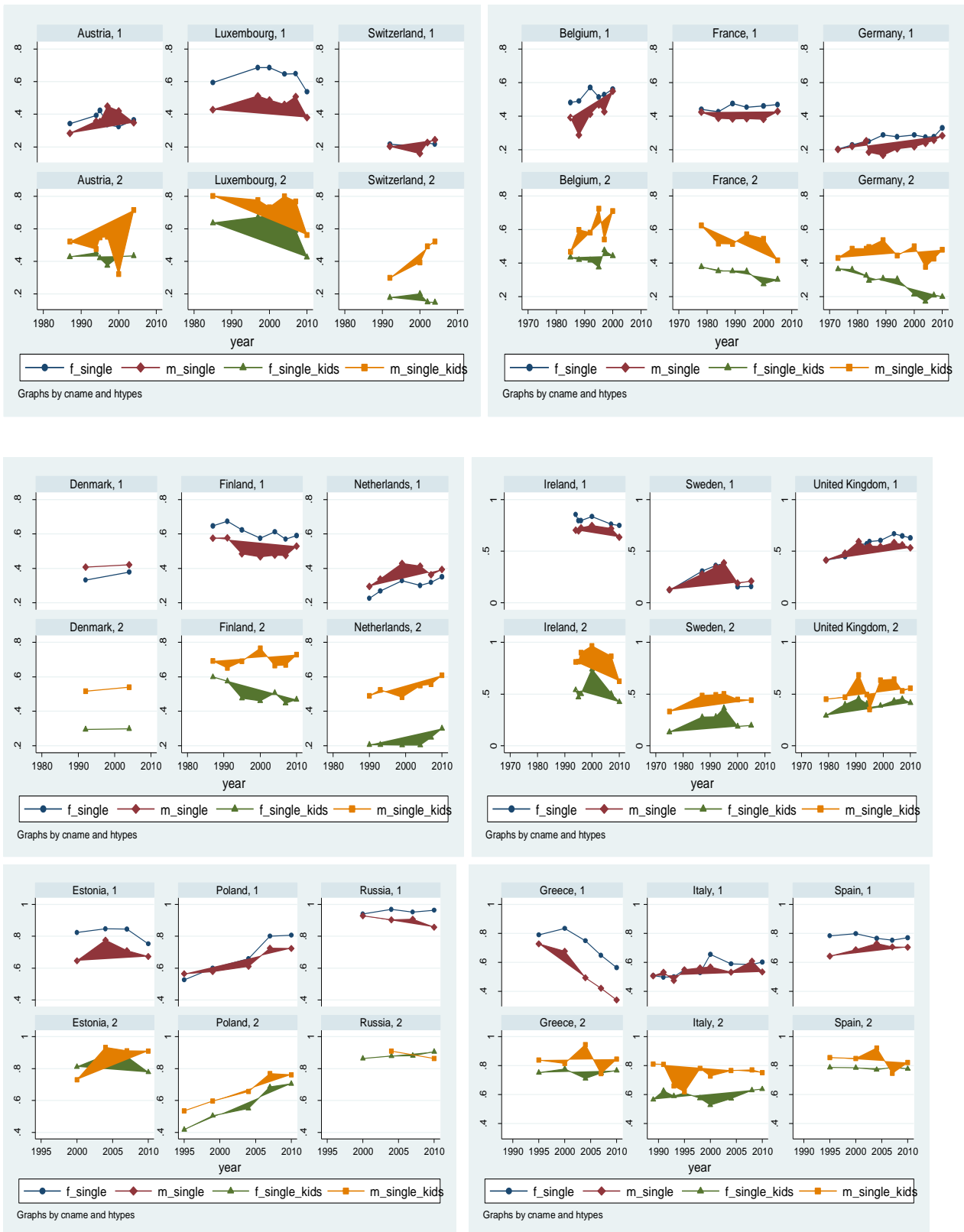
Appendix Figures

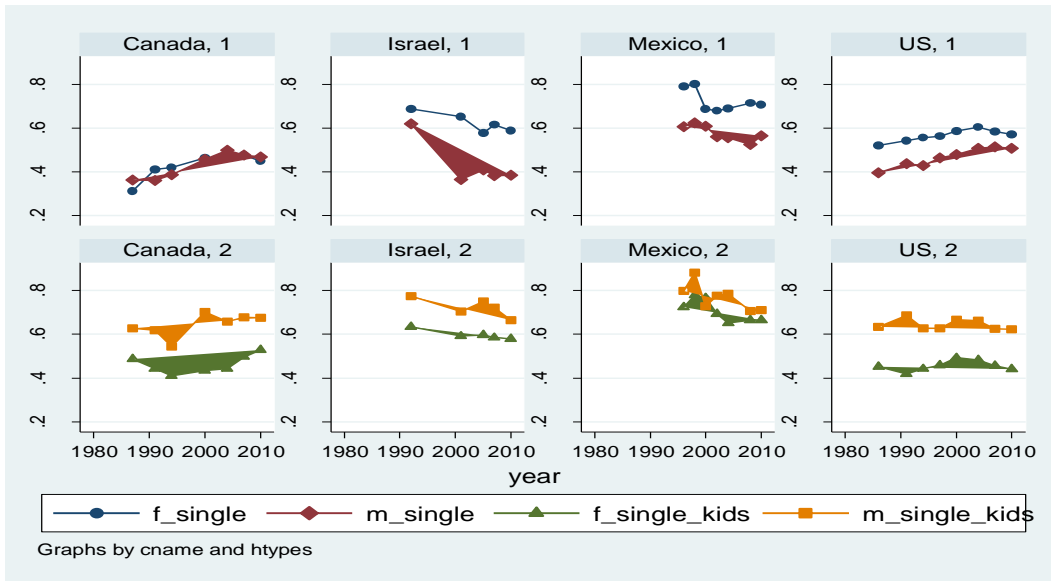
Figure A.1 Home ownership by gender of the household head



Source: LIS data; own calculations

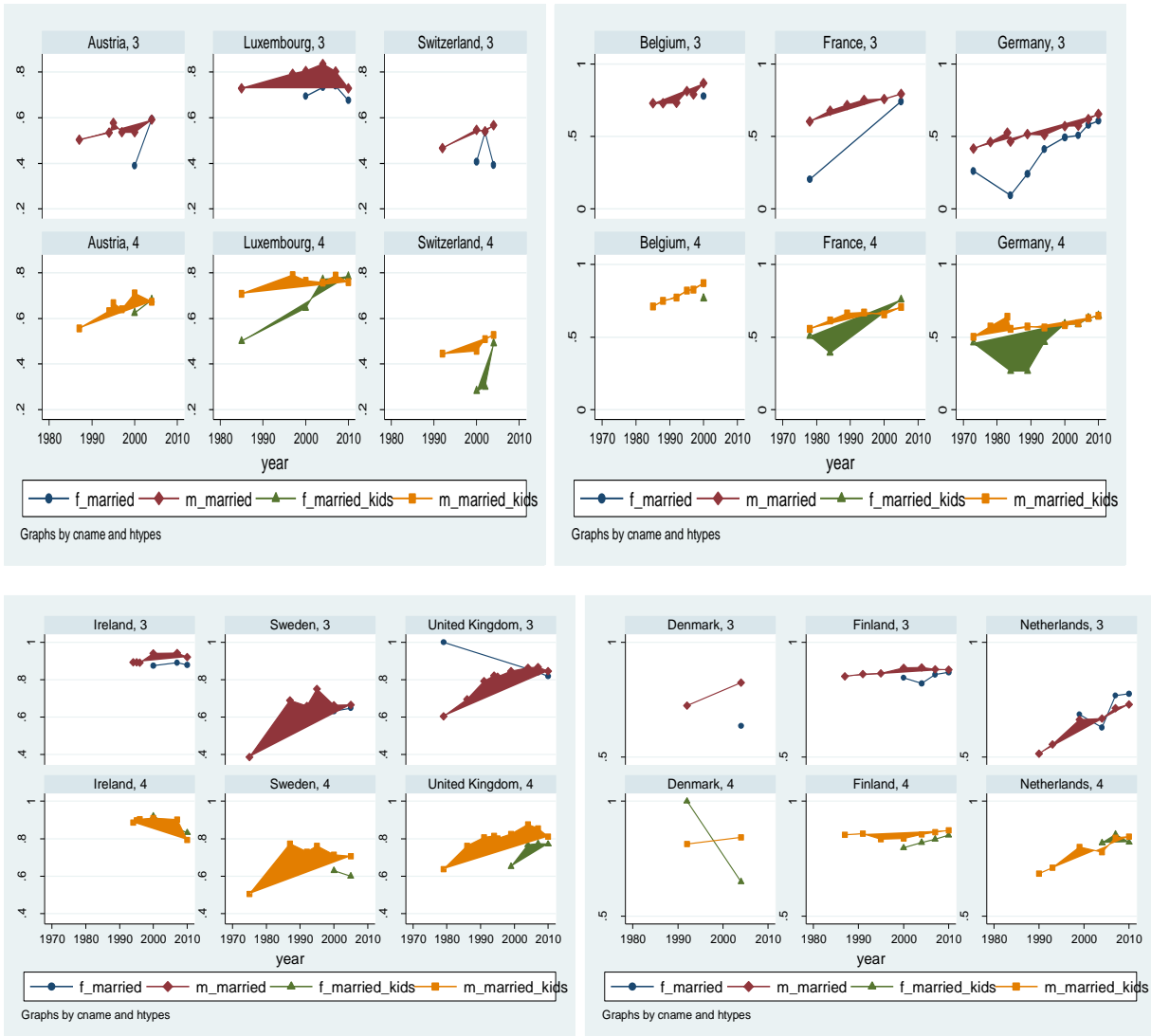
Figure A.2a. Homeownership by family type (for singles and singles with kids).

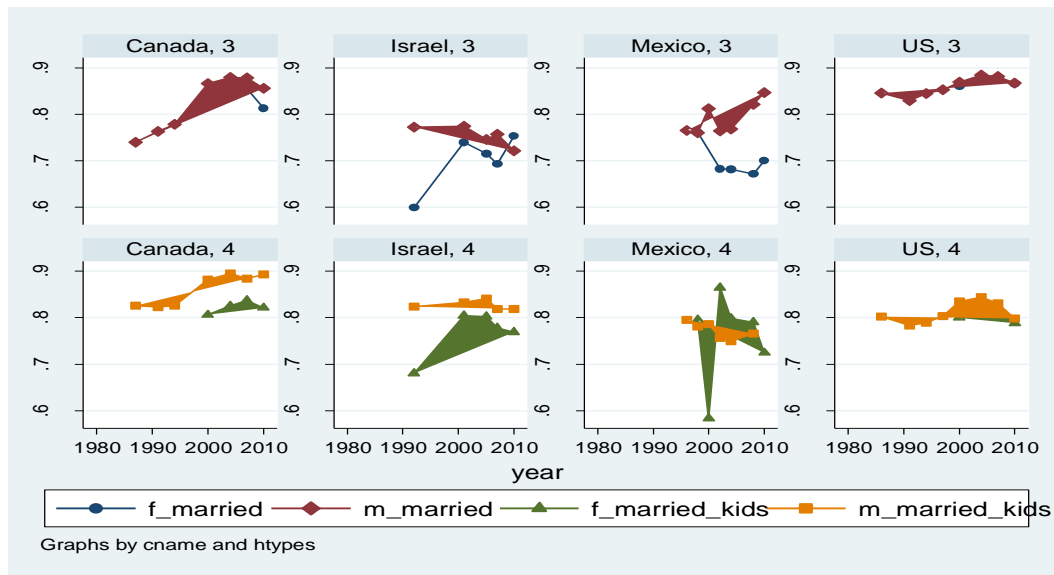
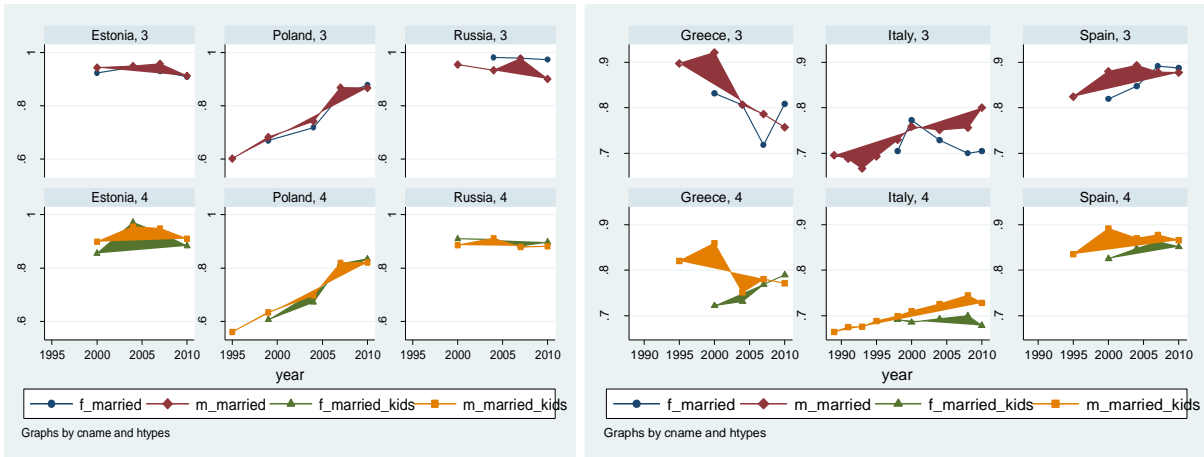




Source: LIS data; own calculations

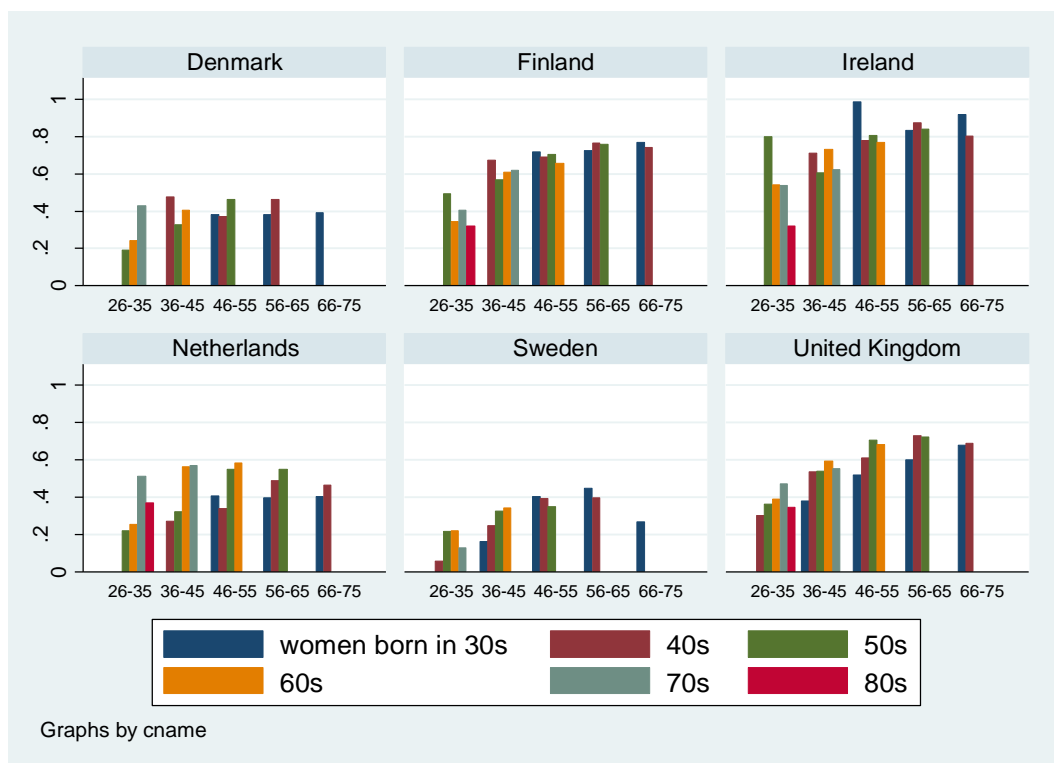
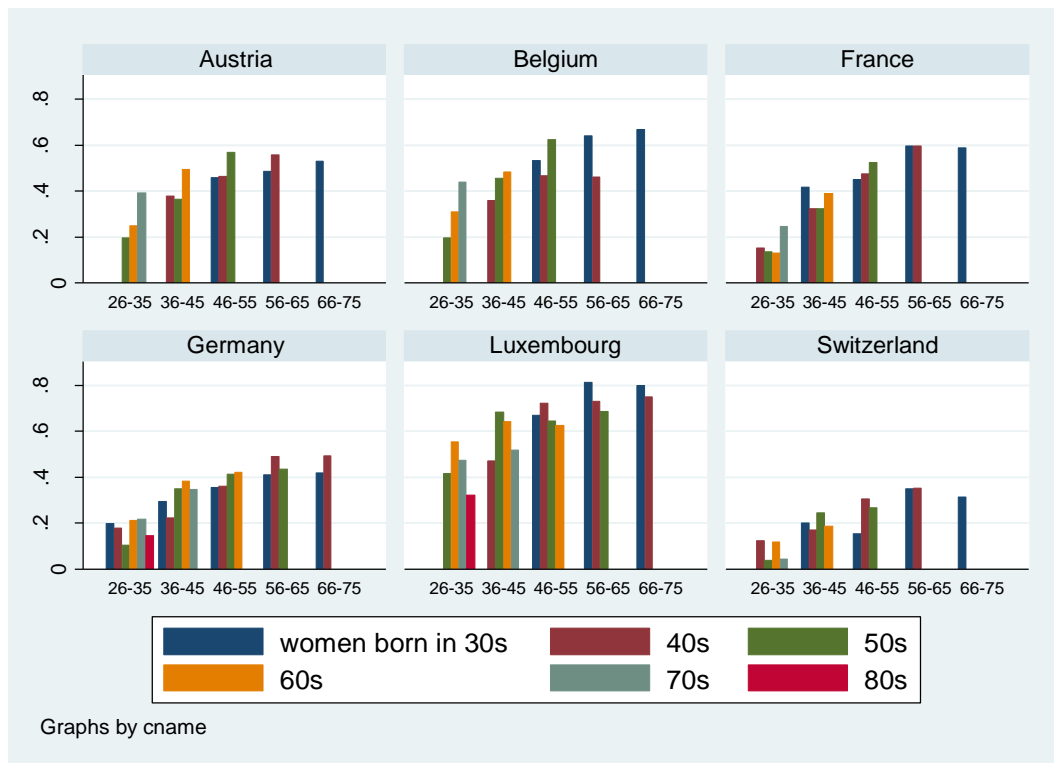
Figure A.2b. Homeownership by family type (for married and married with kids).

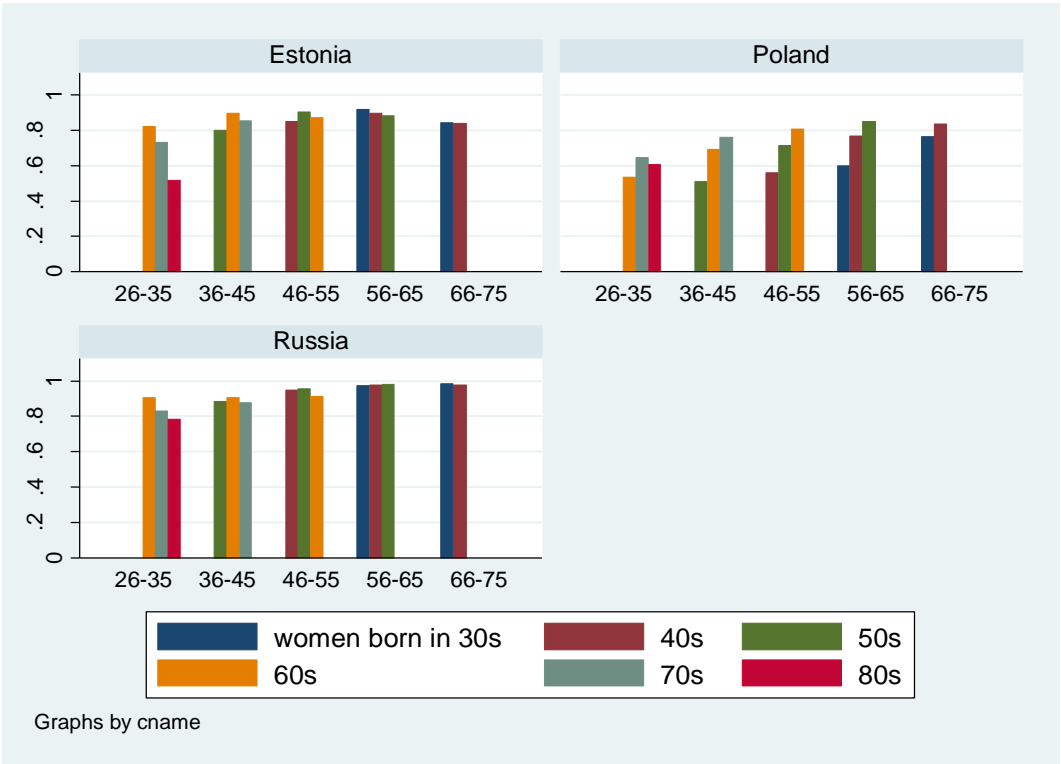
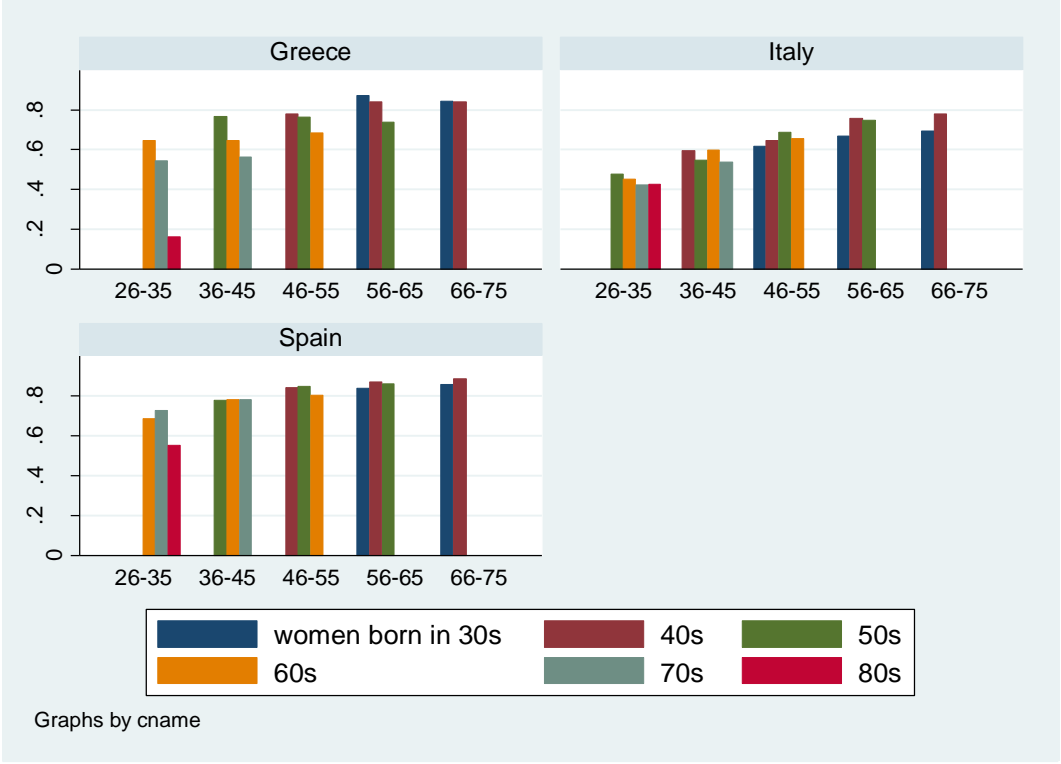


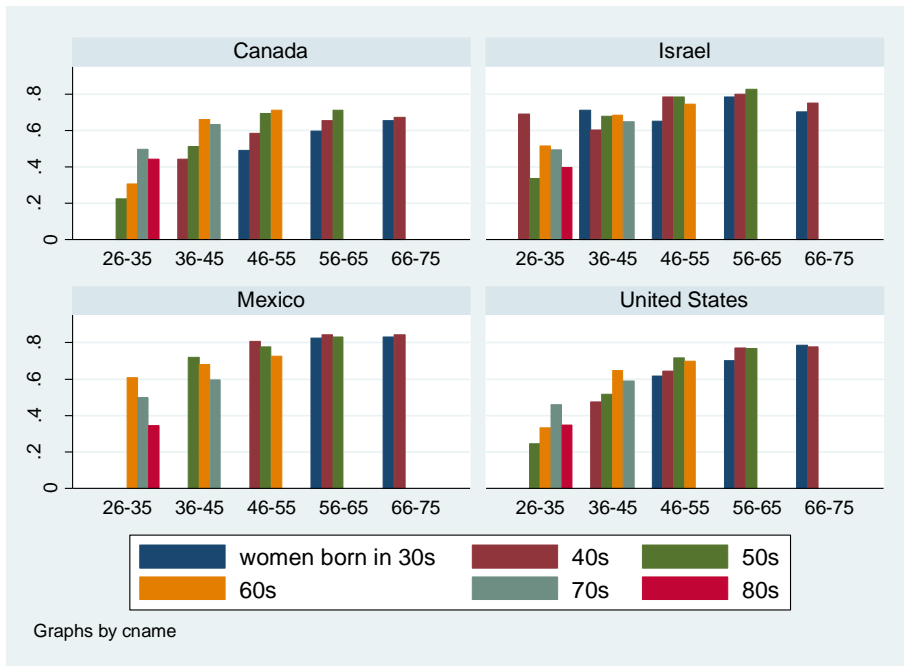


Source: LIS data; own calculations

Figure A.3. Homeownership across different cohorts of female household heads.







Source: LIS data; own calculations

Appendix Table A. 1. Data availability in our selected countries in the LIS database.

waves	0	1	2	3	4	5	6	7	8
Austria			87		94/95/97	00	04		
Belgium			85	88/92	95/97	00			
Canada	71	75/81	87	91	94/97	98/00	04	07	10
Switzerland		81		92		00	02/04		
Germany	73	78/81	83/84	89	94	00	04	07	10
Denmark				92	95	00	04		
Estonia						00	04	07	10
Spain		80	85	90	95	00	04	07	10
Finland			87	91	95	00	04	07	10
France		78	84	89	94	00	05		10
Greece					95	00	04	07	10
Ireland			87		94/95/96	00		07	10
Israel		79		92	97	00	05	07	10
Italy			86/87	89/91	93/95	98/00	04	08	10
Luxembourg			85		97	00	04	07	10
Mexico			84	89/92	94/96	98/00	02/04	08	10
Netherlands			83/87	90	93	99	04	07	10
Poland			86	92	95	99	04	07	10
Russia						00	04	07	10
Sweden		75/81	87	92	95	00	05		
UK	69/73	79	86	91	94/95	99	04	07	10
US	74	79	86	91	94/97	00	04	07	10

Appendix Table A. 2. Variables used in the estimation.

Variable names	definitions
female (d)	0/1 indicator: 0=male; 1=female
single (d)	0/1 indicator: 1=1-person household; 0=otherwise
single+kids	0/1 indicator: 1=1-person household with children under 18; 0=otherwise
married (d)	0/1 indicator: 1=2-person household married; 0=otherwise
married+kids	0/1 indicator: 1=2-person household married with children under 18; 0=otherwise
cohabiting	0/1 indicator: 1=2-person household not married; 0=otherwise
cohabiting+kids	0/1 indicator: 1=2-person household not married with children under 18; 0=otherwise
age	age of respondent
university degree	0/1 indicator: respondent obtained university degree
unemployed	0/1 indicator: respondent in unemployed
employed (d)	0/1 indicator: respondent in employed
log income	log of household disposable income
tenure	years worked at current job

Appendix Table A.3. Household structure across countries by waves.

		Single	Single Parents	Couples	Couples with Kids	
Austria	years					
wave 1	1987	24%	8%	27%	42%	100%
wave 2	1994-1995-1997	19%	7%	24%	50%	100%
wave 3	2000-2004	19%	7%	25%	49%	100%
Belgium						
wave 1	1985	8%	3%	29%	59%	100%
wave 2	1988-1992-1995-1997	12%	4%	30%	54%	100%
wave 3	2000	17%	5%	30%	48%	100%
Canada						
wave 1	1987	10%	8%	25%	57%	100%
wave 2	1991-1994	14%	6%	29%	52%	100%
wave 3	2000-2004	18%	6%	29%	46%	100%
wave 4	2007	21%	7%	30%	42%	100%
wave 5	2010	20%	8%	30%	43%	100%
Denmark						
wave 2	1992	25%	4%	31%	40%	100%
wave 3	2004	25%	4%	35%	36%	100%
Finland						
wave 1	1987	15%	3%	29%	53%	100%
wave 2	1991-1995	16%	3%	33%	49%	100%
wave 3	2000-2004	16%	3%	39%	42%	100%
wave 4	2007	16%	2%	42%	40%	100%
wave 5	2010	18%	2%	42%	38%	100%
France						
wave 1	1978-1984	14%	3%	29%	54%	100%
wave 2	1989-1994	16%	4%	31%	50%	100%
wave 3	2000-2005	18%	4%	34%	44%	100%
Germany						
wave 1	1973-1978-1983-1984	9%	2%	34%	55%	100%
wave 2	1989-1994	10%	3%	33%	54%	100%
wave 3	2000-2004	11%	2%	40%	47%	100%
wave 4	2007	14%	2%	41%	43%	100%
wave 5	2010	16%	2%	42%	40%	100%
Luxembourg						
wave 1	1985	15%	6%	28%	51%	100%
wave 2	1997	20%	7%	23%	50%	100%
wave 3	2000-2004	21%	6%	26%	47%	100%
wave 4	2007	23%	5%	23%	49%	100%
wave 5	2010	21%	5%	24%	50%	100%
Switzerland						
wave 1	1982					
wave 2	1992	7%	1%	33%	58%	100%
wave 3	2000-2002-2004	14%	2%	37%	47%	100%
United States						
wave 1	1974- 1986	15%	7%	31%	47%	100%

wave 2	1991-1994-1997	18%	7%	31%	44%	100%
wave 3	2000-2004	20%	7%	32%	41%	100%
wave 4	2007	21%	7%	33%	39%	100%
wave 5	2010	22%	7%	33%	37%	100%

Appendix Table A.3. Household structure across countries by waves (cont'd).

		Single	Single Parents	Couples	Couples with Kids	
Greece						
wave 2	1995	18%	5%	26%	51%	100%
wave 3	2000-2004	15%	7%	25%	53%	100%
wave 4	2007	13%	8%	21%	59%	100%
wave 5	2010	11%	7%	21%	60%	100%
Ireland						
wave 2	1994-1995-1996	19%	5%	17%	59%	100%
wave 3	2000	18%	9%	17%	56%	100%
wave 4	2007	20%	13%	22%	45%	100%
wave 5	2010	20%	9%	25%	45%	100%
Israel						
wave 1	1979					
wave 2	1992	14%	7%	17%	62%	100%
wave 3	2001-2005	11%	7%	16%	66%	100%
wave 4	2007	11%	8%	16%	65%	100%
wave 5	2010	11%	8%	16%	65%	100%
Italy						
wave 2	1989-1991-1993-1995	11%	6%	20%	63%	100%
wave 3	1998-2000-2004	15%	6%	23%	56%	100%
wave 4	2008	19%	6%	25%	50%	100%
wave 5	2010	17%	6%	26%	50%	100%
Mexico						
wave 2	1996	7%	11%	7%	75%	100%
wave 3	1998-2000-2002-2004	8%	12%	9%	70%	100%
wave 4	2008	10%	13%	11%	66%	100%
wave 5	2010	12%	14%	13%	61%	100%
Netherlands						
wave 2	1990-1993	14%	3%	28%	56%	100%
wave 3	1999-2004	17%	2%	31%	50%	100%
wave 4	2007	17%	3%	31%	49%	100%
wave 5	2010	19%	3%	33%	45%	100%
Spain						
wave 2	1995	12%	8%	20%	60%	100%

wave 3	2000-2004	14%	8%	22%	56%	100%
wave 4	2007	15%	7%	21%	57%	100%
wave 5	2010	17%	8%	22%	53%	100%
Sweden						
wave 1	1975-1987	10%	1%	43%	46%	100%
wave 2	1992-1995	16%	2%	44%	38%	100%
wave 3	2000-2005	10%	3%	42%	45%	100%
United Kingdom						
wave 1	1979-1986	16%	5%	30%	49%	100%
wave 2	1991-1994-1995	21%	6%	32%	41%	100%
wave 3	1999-2004	24%	7%	33%	36%	100%
wave 4	2007	26%	8%	32%	34%	100%
wave 5	2010	26%	8%	32%	34%	100%
Estonia						
wave 3	2000-2004	22%	11%	26%	41%	100%
wave 4	2007	26%	10%	27%	37%	100%
wave 5	2010	25%	9%	28%	38%	100%
Poland						
wave 2	1995	16%	4%	24%	56%	100%
wave 3	2000-2004	16%	6%	24%	55%	100%
wave 4	2007	19%	6%	22%	53%	100%
wave 5	2010	20%	4%	23%	52%	100%
Russia						
wave 3	2000-2004	26%	12%	22%	40%	100%
wave 4	2007	30%	15%	21%	34%	100%
wave 5	2010	29%	15%	21%	35%	100%

Source: LIS data; own calculations

Appendix Table A.4.

Country	Years	Survey (English)
Austria	87/95	Microcensus
	94/97/00	European Community Household Panel (ECHP)
	04	Survey on Income and Living Conditions (SILC)
Belgium	85/88/92/97	Socio-Economic Panel (SEP)
	95/00	Panel Study on Belgian Households (PSBH) / ECHP
Canada	87/91/94	Survey of Consumer Finances (SCF)
	00/04/07/10	Survey of Labour and Income Dynamics (SLID)
Denmark	92/04	Law Model
Finland	87/91/95/00	Income Distribution Survey (IDS)
	04/07/10	IDS / SILC
France	78/84/89/94/00/05/10	Household Budget Survey (BdF)
Germany	73/78/83	Income and Consumer Survey (EVS)
	84/89/94/00/04/07/10	German Socio-Economic Panel (GSOEP)
Luxembourg	85	Socio-economic Panel "Living in Luxembourg" (PSELL I)
	97/00	PSELL II / ECHP
	04/07/10	PSELL III / SILC
Switzerland	82	Swiss Income and Wealth Survey
	92	National Poverty Study
	00/02/04	Income and Expenditure Survey (ERC/EVE)
United States	74/86/91/94/97/00	Current Population Survey (CPS) - March Supplement
	04/07/10	CPS - Annual Social and Economic Supplement (ASEC)
Greece	95/00	ECHP
	04/07/10	SILC
Ireland	94/95/96/00	Living in Ireland Survey / ECHP
	07/10	SILC
Israel	79/92/01/05/07/10	Household Expenditure Survey
Italy	89/91/93/95/98/00/04/08/10	Survey of Household Income and Wealth (SHIW)
Mexico	96/98/00/02/04/08/10	Household Income and Expenditure Survey (ENIGH)
Netherlands	90	Amenities and Services Utilization Survey (AVO)
	93/99	Socio-Economic Panel Survey (SEP)
	04/07/10	SILC
Spain	95/00	ECHP
	04/07/10	SILC
Sweden	75/87/92/95/00/05	Income Distribution Survey (HINK)
United Kingdom	79/86/91/95	Family Expenditure Survey (FES)
	94/99/04/07/10	Family Resources Survey (FRS)
Estonia	00	Household Budget Survey
	04/07/10	Estonian Social Survey (ESS) / SILC
Poland	95/99/04/07/10	Household Budget Survey
Russia	00/04/07/10	Russia Longitudinal Monitoring Survey (RLMS)