

The Changing Association Between Homeownership and the Transition to Parenthood

Valentina Tocchioni, Ann Berrington, Daniele Vignoli, and Agnese Vitali

ABSTRACT The literature suggests a positive link between homeownership and the transition to parenthood. However, in recent decades, couples' preference for becoming homeowners before having their first child has been undermined by rising housing unaffordability and housing uncertainty. An archetypal example is Britain, where homeownership rates among young adults have fallen substantially as a result of low wages, unemployment, reductions in the availability of mortgage credit, and rising house prices. This situation has produced a housing crisis. Using longitudinal data from the British Household Panel Survey (1991–2008) and the United Kingdom Household Longitudinal Study (2009–2016), we apply multilevel, discrete-time event-history techniques to a sample of women aged 18–42. We investigate whether and how the link between homeownership and entering parenthood has changed in Britain in recent decades. Our findings reveal that in comparison with the 1990s, the likelihood of becoming a parent has declined among homeowners, whereas childbearing rates among private renters have remained stable. Thus, owner-occupiers and private renters have become more similar in terms of their likelihood of entering parenthood. Overall, our findings question the classical micro-level assumption of a positive link between homeownership and transition to parenthood, at least among Britain's "Generation Rent." These findings are subsequently interpreted in terms of increased housing uncertainty.

KEYWORDS Housing tenure • Transition to motherhood • Britain • Multilevel event-history analysis • Panel data

Introduction

Substantial attention has been devoted to the impact of rising economic uncertainty on life transitions (Mills and Blossfeld 2013). The Great Recession, which engendered downturns in financial and labor market fortunes beginning in 2008, intensified interest in understanding how economic conditions affect childbearing (e.g., Alderotti et al. 2021; Barbieri et al. 2015; Kreyenfeld et al. 2012; Vignoli, Tocchioni, and Mattei 2020). However, housing conditions have been frequently overlooked, despite studies on the link between homeownership and family formation (e.g., Mulder 2006a, b; Mulder and Billari 2010) suggesting that young adults prefer to be homeowners before

having children (Feijten and Mulder 2002; Kulu and Steele 2013; Mulder and Wagner 1998, 2001), homeownership carries emotional value for many people (Saunders 1990), and housing security and housing stability are important prerequisites for family formation (Kulu and Milewski 2007; Vignoli et al. 2013).

In this context, dramatic changes to housing markets in many high-income countries are of significant interest. Property and rental prices have increased considerably—albeit with some temporary declines during the global financial crisis— and mortgage credit access became more restrictive after 2008; this situation is especially true for countries, such as the United Kingdom, Netherlands, and Denmark, that previously demonstrated lenient borrowing practices (Lennartz et al. 2016). Combined with progressively uncertain job markets, these trends have reduced housing affordability and increased levels of housing uncertainty, which can be characterized as insecurity regarding where an individual will reside and under what conditions. Uncertainty may arise for owner-occupiers due to the fear of eviction resulting from mortgage default, which is usually an effect of other financial and employment-related uncertainties and the need to maintain an (often dual) income to service a mortgage. For private renters, uncertainty might arise from the threat of eviction (by landlords in the context of fixed-term tenancies), unregulated increases in rental prices, the lack of rights regarding property maintenance and enhancement, and the perceived inability to call a house a home and be able to “settle down” (Hoolachan et al. 2017). Thus, housing uncertainties figure notably in the transition to parenthood. In many countries, entrance into the housing market has become increasingly difficult for low-income earners, especially young people (Arundel and Doling 2017). Housing unaffordability and general housing uncertainty may prevent individuals from both owning a home and starting a family (Mulder 2006b).

In this article, we posit that the positive association between homeownership and fertility identified by earlier studies is changing due to increasing housing uncertainty. Despite homeownership remaining a preferred setting for parenthood, the costs associated with homeownership increasingly compete with the direct and indirect costs of childbearing and childrearing (Becker 1991). We explore the links between homeownership and transitioning to motherhood in Britain between the early 1990s and 2016. In Britain, house prices have been increasing dramatically since the early 1990s, and declines in homeownership and increases in private renting among young adults have been much more pronounced than in other countries (Lennartz et al. 2016) and for other age groups. We focus on first childbirth because it marks the entry into parenthood that is being postponed or forgone: that is, couples entering parenthood in the United Kingdom usually have (at least) another child (Berrington et al. 2015). Using longitudinal data from the 18 waves of the British Household Panel Survey (BHPS) in combination with data from the first 7 waves of Understanding Society, the UK Household Longitudinal Study (UKHLS), we document a change in the traditional micro-level assumption of a positive link between homeownership and the transition to parenthood. The changing association between homeownership and parenthood is observed to persist after controlling for the changing socioeconomic and demographic characteristics of people in different housing tenures over time and considering any moderating effect of local house prices.

Background

Homeownership, Private Renting, and Entry Into Parenthood

Analyzing the link between homeownership and fertility is complicated by the reciprocal nature of the relationship (Holland 2012; Mulder and Wagner 2001). For example, although starting a family can influence subsequent housing choices, some individuals postpone childbearing until finding the right home (Murphy and Sullivan 1985). Based on a U.K. sample, Ermisch and Steele (2016) demonstrated that expecting to have a(nother) child increases the probability of moving; Kulu and Steele (2013), using Finnish data, simultaneously modeled conceptions and housing moves, finding evidence in support of a joint process.

Microeconomic approaches revealed that having more economic resources may positively impact fertility (Becker 1991). Nonetheless, although previous studies have focused extensively on the role of income, education, and employment, housing has been ignored or downplayed as a potential economic resource. Those studies suggest that the effect of property ownership on fertility may be either positive or negative.

A positive link between homeownership and fertility is usually presumed: access to a suitable home leads couples to have children earlier (Castiglioni and Dalla Zuanna 1994; Krishnan and Krotki 1993; Mulder and Wagner 2001). In most societies, homeownership represents a key asset and source of stability in people's lives, providing secure tenure and generally guaranteeing future consumption (Vignoli et al. 2016). Compared with rented homes, owner-occupied homes are generally more spacious and adaptable to a household's needs, providing better housing conditions for starting a family (Mulder and Smits 1999; Ricci 1997).

There is considerable empirical support for a link between homeownership and family formation at the macro, meso, and micro levels (Clark and Mulder 2000; Clark and Withers 2007; Fiori et al. 2014; Mulder and Wagner 1993). Mulder and Billari (2010) argued that macro-level fertility is associated with the share of owner-occupied housing and mortgage accessibility. In countries with high homeownership levels—namely, the “easy” and “difficult” homeownership regimes—fertility is higher if access to mortgages is easier. In contrast, in countries with lower levels of homeownership—namely, the “career” and the “elite” homeownership regimes—fertility and access to mortgages are unrelated (Mulder and Billari 2010). At the meso level, owning a home provides the stability, safety, and access to services that are critical to raising a family. According to Clark (2012), ownership neighborhoods provide better access to schools and various urban amenities than rental neighborhoods. At the micro level, couples may prefer to secure housing of a certain quality before they have children (Mulder 2006a; Pinnelli 2020). Evidence that homeownership may be a prerequisite for childbearing has been found in the Netherlands (Feijten and Mulder 2002), West Germany (Mulder and Wagner 2001), and the United States (Deurloo et al. 1994).

However, a negative link can exist between homeownership and fertility if the cost of purchasing a house competes with the cost of childbearing and childrearing (Hakim 2003; Murphy 1984). Such a situation may lower or postpone fertility among those who attach great importance to becoming a homeowner, as has been found in France (Courgeau and Lelièvre 1992). Meeting the financial demands of both homeownership and a child may not be possible because of an unstable employment situation for one

or both partners. Job loss and other employment-related uncertainties impact the ability of individuals to repay their mortgages and other types of loans. For women, in particular, employment-related uncertainties are especially common around childbirth, when extended periods of maternity leave or discrimination might engender pay cuts or personal preferences might promote a shift from full-time to part-time employment. Discussing Britain, Hakim (2003) suggested that the attraction of homeownership and the associated financial burdens of mortgages have increased employment among women in recent decades, especially work-oriented women.

Local variation in housing affordability and availability is also likely to moderate the association between housing tenure and first births. If the housing market can provide good housing at a reasonable price, it is easier to become a homeowner before becoming a parent (Öst 2011). However, difficulties accessing homeownership may delay coresidential partnership and childbearing (Castiglioni and Dalla Zuanna 1994; Krishnan and Krotki 1993; Pinnelli 2020). The impact of local house prices on fertility has only rarely been addressed. For example, Sato (2007) illustrated how in Japan, large city sizes were characterized by high land prices and lower fertility. Simon and Tamura (2009) documented a negative correlation between high rents and fertility in the United States between 1940 and 2000. Clark (2012) examined the links between age at first birth and the cost of housing—measured by rent or sale price—in the United States in 2006–2008, finding that being in an expensive housing market delays first births by three to four years, net of other confounders.

In recent decades, particular attention has been devoted to the impact on fertility of rising uncertainty (Mills and Blossfeld 2003, 2013). The pioneering work of Kohler et al. (2002) advanced that couples in the lowest-low fertility countries have limited their childbearing due to mounting levels of economic uncertainty. Other researchers have found that because childbearing and childrearing are resource-intensive, such a long-term commitment tends to be postponed when people face uncertainty (Blossfeld and Hofmeister 2006; Blossfeld et al. 2005; Blossfeld et al. 2006; Mills and Blossfeld 2013). Uncertainty regarding future residential location makes it difficult to plan and secure future access to formal childcare and schools. Elsewhere, it has been emphasized how having legal control over a property and being able to call a dwelling “home” are important components of well-being (Easthope 2014; Hoolachan et al. 2017). Accordingly, we posit that housing uncertainties are likely to postpone childbearing and should, therefore, be considered in future childbearing studies.

Housing and Family Formation in Britain

The three main types of housing tenure in Britain are homeownership, social rented housing, and the private rental sector. Homeownership is the most common across all age groups and is usually acquired through a mortgage loan after the payment of an initial deposit. Homeownership grew steadily during the 1980s and 1990s (ONS 2016), promoted by government policies associated with an “ideology of homeownership” (Ronald 2008). Subsequently, homeownership rates among young adults plummeted, declining from 46% of 25- to 29-year-olds in 1996 to 25% in 2016 (Cribb et al. 2018). Numerous factors are responsible, including the increase in house prices coupled with stagnating or declining wages and employment security. The median price paid

for residential property in England and Wales increased by 259% between 1997 and 2016; in the same period, median individual annual earnings increased by 68% (ONS 2017a), resulting in greater income multiples for mortgage lending (Udagawa and Sanderson 2017). These trends were compounded by the restrictions on mortgage credit from 2008, which nearly doubled the average mortgage deposit, from around 13% of the purchase price in 1991 to 22% in 2014 (ONS 2016). More than one-third of first-time buyers in England in 2013/2014 asked family for a financial gift or loan to help them buy their home; that proportion was around one-fifth in the early 1990s (Udagawa and Sanderson 2017).

For those who could not afford homeownership in Britain between the 1950s and 1970s, household and family formation were supported by the availability of social rented housing, which was perceived as more secure and more suitable for childrearing than the private rental sector (Di Salvo and Ermisch 1997; Ineichen 1981; Murphy 1984; Murphy and Sullivan 1985). However, beginning in the early 1980s, social housing stock has decreased due to fewer publicly supported new builds coupled with policies that allowed social tenants to purchase their homes at a discounted price (Berrington and Stone 2014). The sector has now become *residualized*, available only to individuals in priority need, such as those who are living without a home or with health problems. Consequently, more low-income individuals have entered the private rental sector.

The private rental sector in Britain has become an increasingly important tenure type for all income groups. Historically, private renting was seen as a transitional tenure, which fulfilled an individual's needs before s/he was able to move into their permanent tenure—either owner-occupation or social housing (Hoolachan et al. 2017). However, more young people have been renting recently. For example, 48% of English 25- to 34-year-olds were renting privately in 2013/2014, twice the percentage of a decade before. In public discourse, this generation has been labeled Generation Rent (Cole et al. 2016; Coulter 2016; McKee 2012) because its members continue to rent into their 30s, the time at which family formation typically occurs. In other European countries, private rented accommodation is highly regulated; however, tenants in Britain have very few rights. An example of private renting's particular insecurity is how assured shorthold tenancies mean that the landlord can ask tenants to leave, without giving a reason, upon meeting the initial contract period, which is usually 6 or 12 months (Clapham et al. 2014).

Homeownership traditionally preceded or coincided with an individual establishing their first coresidential union (Mulder 2006b). However, the lack of affordable homes, decreasing availability of social renting, and rising house prices have made private renting the only affordable solution for many young adults who live independently (Lennartz et al. 2016; Rugg 2010). As such, it would seem likely that the relationship between homeownership and family formation in Britain has been altered.

Mulder and Billari (2010) included Britain in the category of “career homeownership” regimes, meaning that homeownership is linked to gaining a sufficient and stable income and is acquired via a mortgage. In addition, homeownership in Britain was seen as a preferred setting for parenthood, with evidence from the 1990s and 2000s showing significantly higher first-birth rates for homeowners compared with private renters (Fiori et al. 2014). However, following subsequent changes to the housing market, Britain may be moving to the category of “elite” homeownership regimes, where mortgages are no longer widely accessible and homeownership is a prerogative for only those who

are wealthier, are confident of retaining their job (to be able to pay their mortgage), and maintain a strong preference for homeownership, even if this means postponing or forgoing childbearing. Nonetheless, the United Kingdom still seems to be a “career” homeownership regime in terms of social norms, with aspirations for homeownership remaining strong across the country (Pannell 2016). Consequently, homebuyers may be postponing or forgoing parenthood because the costs of housing deposits and mortgage payments compete with the costs of parenthood.

In the context of Europe, childbearing levels are relatively high in Britain, with the total fertility rate trend somewhat different from that of other Western countries (Comolli 2017). For example, in England and Wales, the total fertility rate has fluctuated in recent decades, declining from 1.81 in 1992 to 1.63 in 2003, before increasing steadily to 1.94 in 2012, and then declining to 1.70 in 2018 (ONS 2019). As in most high-income countries, the mean age at first birth has risen (from 25.6 in 1991 to 28.8 in 2016) (ONS 2017b). However, these averages obscure considerable differences in the changing age profile of childbearing women according to socioeconomic status. Although British women with low educational levels still tend to begin childbearing in their teens and 20s, graduates are more likely to wait until their late 20s and early 30s (Berrington et al. 2015). Early childbearing in lower socioeconomic classes means that unlike in many other European countries, fertility rates for women under 25 remained reasonably high and stable until they began to reduce in 2010 (ONS 2019).

Research Questions

To investigate whether and how the link between housing tenure and first birth has changed in Britain in recent decades, we addressed the following research questions.

1. Has the association between homeownership and the probability of conceiving the first child changed since 1991?

Conscious that the association between homeownership and entry into motherhood might change over time because of compositional changes (see, e.g., Fisher and Gervais 2011), we wanted to test whether results from our first research question were robust to the inclusion of a series of controls:

2. Is this change explained by the socioeconomic and demographic characteristics of women in the different housing tenures?

Finally, there is growing concern that young people’s ability and inclination to form a family may be constrained by increasing house prices, making homeownership broadly unaffordable. However, house prices vary geographically (Bayrakdar and Coulter 2017), requiring acknowledgment and consideration of whether and how within-country differences in local housing markets influence the transition to parenthood. To do this, we merged the individual prospective data with time-varying, area-based house price data measured at the local authority district (LAD) level. Accordingly, we asked the following:

3. To what extent does the relationship between homeownership and the probability of conceiving the first child differ according to local house prices?

Data and Methods

Data

The study used data from the BHPS spanning 1991–2008 and the UKHLS for 2009–2016 (University of Essex Institute for Social and Economic Research 2018), including information from the Consolidated Marital, Cohabitation and Fertility Histories data set (Pronzato 2011). The BHPS and the UKHLS are nationally representative surveys based on a prospective panel design, which provide an outstanding basis for the empirical analysis of the first motherhood-housing nexus. Taking a longitudinal approach, we considered a sample of women who were childless at the time of their first interview, and we followed them for at least three consecutive waves. Women who joined the BHPS sample and were continuously interviewed until Wave 18 in 2008, if still childless, continued to be followed in the UKHLS¹ (Fumagalli et al. 2017). We could not examine men's childbearing behavior because information about past childbearing was not collected directly within the BHPS panel questionnaires. We relied on the household grid to identify when a child was born. Given that one-quarter of young fathers are not living with their children in the United Kingdom (Berrington and Stone 2014), estimates based on the household grid are incomplete for men.

Our sample comprised women aged 18–42 living independently of their parental home (i.e., their housing tenure does not represent that of their parents). We excluded 20 women who had adopted, fostered, or had stepchildren before conceiving their first natural child.² We did not focus solely on couples but included all women; that is, we considered all births, including those to single mothers. This is important in the British context, where a relevant minority of births are to unpartnered women (ONS 2017b). We focused on Britain rather than the United Kingdom because information on local housing markets at the LAD level was unavailable for Northern Ireland for much of the historical period. The UKHLS ethnic boost sample from Wave 1 was included, but we excluded the recent immigrant boost sample because that started in 2014/2015. Ultimately, the total sample comprised 5,082 women born between 1948 and 1997 (for a total of 17,371 person-years) residing in 374 districts of Britain. Each woman was observed for an average of 3.6 years, ranging from 1 person-year to 23 person-years. Of the 1,296 first-birth conceptions, just more than 5% were to single mothers.

Survey weights for the cross-sectional sample at each panel wave,³ calculated by the BHPS and the UKHLS survey teams (Knies 2018), were used to account for initial nonresponse and attrition from the sample over time. Nonresponses and sample attrition were higher for the first seven waves of the UKHLS than they were for the BHPS. Young adults who were unemployed, living in urban areas, or living in privately rented housing were more likely to have been lost to follow up. Nonetheless,

¹ Women interviewed in the BHPS until Wave 18 were interviewed in the UKHLS starting from its second wave in 2010/2011.

² Although adopted children, fostered children, and stepchildren compete for space in a household as do natural children, we did not have information on the date of adoption, fostering, or when the stepchild began living with the respondent.

³ We use cross-sectional weights because the longitudinal weights were valid only for those who had responded to all the previous waves.

weighted fertility rates based on the BHPS and the UKHLS were similar to those collected by the vital registration system, with a slight tendency for rates of childlessness to be underestimated (Berrington et al. 2015; Kulu and Hannemann 2016). As such, these two harmonized panels provide an unparalleled opportunity to examine the changing relationship between housing tenure and childbearing in Britain.

Method

We studied the transition to parenthood using a multilevel logistic, discrete-time, event-history model with random intercept (Barber et al. 2000), with person-years nested within LADs. The baseline hazard was the woman's age, grouped into four categories: 18–24, 25–29, 30–34, and 35–44. Whether women entered the sample when first interviewed or after their 18th birthday, it was after beginning living independently from parents. The event of interest was the woman's first conception leading to a live birth. Women were censored at the last available wave, when they attrited from the survey, when they returned to the parental home, or when they reached the age of 44, whichever occurred first. Overall, the two-level, discrete-time logit model has the following form:

$$\text{logit}(h_{ijt}) = \alpha D_{ijt} + \sum_{p=1}^P \beta_p X_{pijt} + \gamma Z_{jt} + \delta_j, \quad (1)$$

where h_{ijt} is the hazard of conceiving a first child for woman i in LAD j at time t ; D_{ijt} is a step function representing the baseline hazard function: namely, woman's age divided in four time intervals; and X_{pijt} is the p th individual-level covariate for woman i in LAD j , which can vary over time (i.e., housing tenure) or remain constant (i.e., if a woman is born outside the United Kingdom). Z_{jt} is an LAD-level covariate: namely, the lower-quartile of the house prices (in our third research question only), which varies over time. Finally, δ_j is the random effect for LAD j (Barber et al. 2000; Browning et al. 2004). We assumed that the random intercept was normally distributed, with 0 mean and unknown variance; this would represent the unobserved heterogeneity of the LADs upon the inclusion of all individual- and LAD-level covariates in the model.

Analytical Strategy

Our first research question is whether the association between housing tenure and the probability of conceiving a first child changed between 1991 and 2016. The key explanatory variable for answering this question, in Model 1, was the woman's current housing tenure, which distinguishes among homeownership,⁴ private renting, and social renting. Housing tenure, like all the explanatory covariates, lagged by one year. It was included in the model in interaction with the survey year, which

⁴ *Homeownership* means that the house is owned by a household member.

was grouped into four periods: 1991–1999, 2000–2007, 2008–2012, and 2013–2016. The cutoff points for each period were chosen to reflect the timing of changes in the British housing market. The 1990s witnessed a sharp increase in house prices (which continued until 2007); during the 2000s, the private rental sector saw a marked increase; 2008 signaled the start of the Great Recession, during which house prices fell; and 2013 marked the beginning of the post-crisis period, during which house prices started to increase again (ONS 2017a; see Figure B1 in the online appendix). We also included a term representing the interaction between a woman's age and her current housing tenure to capture the changing role of tenure across the woman's life course and the social polarization of childbearing timing.

Our second research question is whether any changes observed in the association between homeownership and fertility over time can be explained by the changing socioeconomic and demographic characteristics of individuals or their household residing in a different tenure group. To answer this question, we used Model 2, which includes socioeconomic and demographic covariates through a stepwise procedure. We added the woman's partnership status (single, married, or cohabiting) and her education level. Partnership formation was a proximate determinant of childbearing, with homeowners more likely to be in a partnership, likely because a dual income and long-term commitment are often precursors to purchasing a house. Educational attainment contrasted those with a low education level (who attained secondary education and left school at age 16) with those with a medium education level (who obtained advanced qualifications, such as nursing or teaching qualifications), and those with a high education level (who typically had a first or higher degree). Given that more educated women demonstrate lower rates of childbearing at a younger age and higher rates of childbearing at an older age (Berrington et al. 2015), we interacted education to baseline duration (i.e., woman's age).⁵

We added economic activity (full-time student, employed, unemployed, or inactive), followed by equivalized income categorized in quintiles⁶ (derived from the annual household income and adjusted to consider the number of household members using the modified OECD equivalence scale; see Hagenaars et al. 1994). Additional control variables included whether the woman was foreign-born, parental social class (either or both of mother and father's highest class according to the National Statistics Socio-economic Classification, which features five categories: management and professional; intermediate; small employers and own account; lower supervisory and technical; and semi-routine and routine;⁷ Rose and Pevalin 2003), and an overcrowding index (a household was considered overcrowded if the total number of people in the household exceeded the number of rooms). Finally, we added time since moving into the current dwelling (zero for those who had moved that year, and then one year, two years, or three years or more). This variable was designed to capture the pre-childbearing anticipatory household moves previously found in the literature (Ermisch and Steele 2016; Kulu and Steele 2013). In sensitivity analyses (not pre-

⁵ Although we also test a triple-interaction effect for calendar period, age group, and housing tenure, this was dropped because it was not significant.

⁶ We test whether the association between homeownership and fertility differed according to household income. However, the interaction between housing tenure and income quintiles is not significant.

⁷ We add into this category also those who were long-term unemployed.

sented), we interacted these anticipatory moves with tenure but found that the effect was similar across tenure-type groups.^{8,9}

Our third research question relates to how the housing market context shaped the probability of having a first conception while privately or socially renting compared with owning and occupying. For Model 3, in addition to the controls included in Model 2, we added a cross-level interaction term between house prices—measured at the LAD level—and housing tenure to allow the effect of housing tenure to vary according to neighborhood labor market characteristics. The measure of house price chosen was the value of a lower-quartile house price for each LAD—that is, the price of the 25th percentile of house prices in a given LAD for a year. The statistics for lower-quartile house prices have been part of the House Price Statistics for Small Areas release (ONS 2017c) for England and Wales since 1995. For Scotland, annual statistics on lower-quartile house prices for a range of subnational geographies have been released since 1993 (Scottish Government 2017).¹⁰ First-time buyers are generally not able to afford houses with as many bedrooms and square meters as the average house sold in the area. For each year, using the distribution of the lower-quartile house prices in the different LADs, we created a categorical variable splitting the distribution into quintiles, enabling measurement of whether a lower-quartile house price in a given LAD was, for a given year, nationally in the least expensive 20% (e.g., areas within Liverpool and Nottingham), the most expensive 20% (e.g., the Kensington and Chelsea boroughs of London and Oxford), or in between. This measure's range increased markedly over the study period, with house prices in London accelerating at a faster rate than in other areas.

All interaction terms were tested using likelihood ratio tests, which compared the model with the interaction term and the model considering only the main effects. All but the interaction between tenure and calendar period (first research question) and the interaction between tenure and house prices (third research question) were significant. Nonetheless, we retained them to answer our research questions.

Descriptive Statistics

Table 1 shows the person-years distribution of socioeconomic and demographic characteristics according to housing tenure. Owner-occupiers tended to be older and more likely to be married than private or social renters. Although educational attainment among homeowners and private renters was similar, social renters tended to be less educated. Whereas most childless homeowners were employed, a high proportion

⁸ We do not control for duration of employment because we had information about employment only at the time of interview for each wave (employment history was asked about only in a few waves).

⁹ One might argue that it would have been important to control for partnership duration to control for the changing composition of women across tenure groups. We deliberately abstain from including such a variable because preliminary analyses verify that it would introduce substantial selection effect: that is, increased time being childless in a coresidential relationship lowers probability of having a child.

¹⁰ For England and Wales, the 1995 house price data were also used for 1991–1994. For Scottish districts, the 1993 house price data were also used for 1991–1992. See Figure B1 in the online appendix for descriptive statistics regarding lower-quartile house prices in England, Wales, and Scotland for the period considered.

Table 1 Sample characteristics: Overall person-years (column percentages)

	Homeownership	Social Renting	Private Renting
Person-Years (<i>n</i>)	11,118	1,383	4,870
Age Group (%)			
18–24	12.5	29.8	38.7
25–29	27.8	21.8	31.2
30–34	25.6	19.4	16.9
35–44	34.2	29.1	13.2
Partnership status (%)			
Single	27.2	59.5	51.5
Married	39.3	16.3	14.2
Cohabiting	33.5	24.3	34.3
Education (%)			
Low	25.6	54.7	20.9
Medium	35.4	29.6	37.8
High	39.0	15.7	41.4
Economic activity (%)			
Employed	93.7	57.6	76.9
Full-time student	2.3	8.0	17.1
Unemployed	2.2	16.7	4.4
Inactive	1.9	17.7	1.5
Calendar period (%)			
1991–1999	29.3	22.6	17.6
2000–2007	28.9	21.0	21.2
2008–2012	25.6	35.0	37.5
2013–2016	16.3	21.4	23.7
Parental social class (%)			
Management and professional	18.7	13.7	24.1
Intermediate	16.6	9.9	13.4
Small employers and own account	8.5	9.0	11.3
Lower supervisory and technical	7.8	5.8	4.3
Semi-routine, routine, and long-term unemployed	48.4	61.6	46.8
Equivalentized household income (into quintiles) (%)			
First (lowest income)	7.0	53.0	30.5
Second	16.1	27.7	24.2
Third	21.8	11.2	18.8
Fourth	24.4	6.3	16.0
Fifth (highest income)	30.6	1.8	10.6
Overcrowded household (%)			
No	62.9	32.7	34.8
Yes	37.0	67.3	65.2
Born outside the United Kingdom (%)			
No	91.9	88.4	84.4
Yes	8.1	11.6	15.6
Time since move (%)			
Moved that year ^a	18.8	22.6	45.7
One year before	16.1	17.2	21.2
Two years before	13.4	12.1	12.7
Three or more years before	51.6	48.1	20.4

^a If a woman moved that year, it means that she moved house sometime in between wave $t - 1$ and wave t .

of private renters were still involved in education. The selection of particularly vulnerable (childless) women into social housing was reflected by the fact that around one-third of the person-years of social renters were characterized as unemployed or not economically active. Whereas homeowners dominated the top two income quintiles, private and social renters were more prevalent among the two lowest income quintiles. Homeownership was associated with larger properties, with two-thirds of person-years of both social and private renters spent in overcrowded households, compared with just one-third of owner-occupiers.

Private renting was associated with greater levels of mobility. Whereas 71.5% of person-years were categorized as owning a home in 1991–1999, this had dropped to 56.3% by the period 2013–2016. Contextually, private renters increased from constituting 21.7% of person-years in the period 1991–1999 to 35.4% in the period 2013–2016. Further analyses of how the composition of tenure groups changed over the 25-year period (see Table B2 in the online appendix) show that during the 2010s, private renting also became widespread among older age groups. Meanwhile, homeownership—initially widespread across all education groups—has recently become dominated by the highly educated, with social renting becoming increasingly dominated by those with the lowest levels of educational attainment. Finally, bivariate analysis of the number of conceptions according to age group and calendar period is reassuring about the number of events in each cell of the contingency table (see Table B1 in the online appendix).

Results

To aid interpretation, we estimated predicted annual probabilities of conceiving a first child¹¹ for each hazard model. These probabilities are presented graphically. Full model results are presented in Table A1 in the online appendix.

Addressing our first research question, [Figure 1](#) shows the predicted annual probability of conceiving a first child according to housing tenure and calendar period (Model 1). The predicted annual probability was significantly higher for mothers who were homeowners than for those who were private renters in the first three periods (i.e., until 2012). However, in the last period (2013–2016), the confidence intervals for homeowners and private renters overlapped (with the point estimates not statistically different at the 1% significance level). The probability of conceiving a first child as a private renter did not change substantially across the four periods, remaining at 3.8% for 2013–2016. However, the probability of homeowners conceiving a first child was significantly lower for 2013–2016 than for the previous period, decreasing from 8.2% for 2008–2012 to 5.6% for 2013–2016.

In other words, the overall decline in the probability of conceiving a first child (consistent with the downturn in total fertility rates in Britain since 2012) was driven mostly by a decline among homeowners and, to a lesser extent, by a decline in child-bearing among social renters. The probability of having a first child as a social renter

¹¹ We use the margins command in Stata, setting the control covariates at their average level with the random effect fixed at its mean value of 0 (StataCorp 2017; Williams 2012).

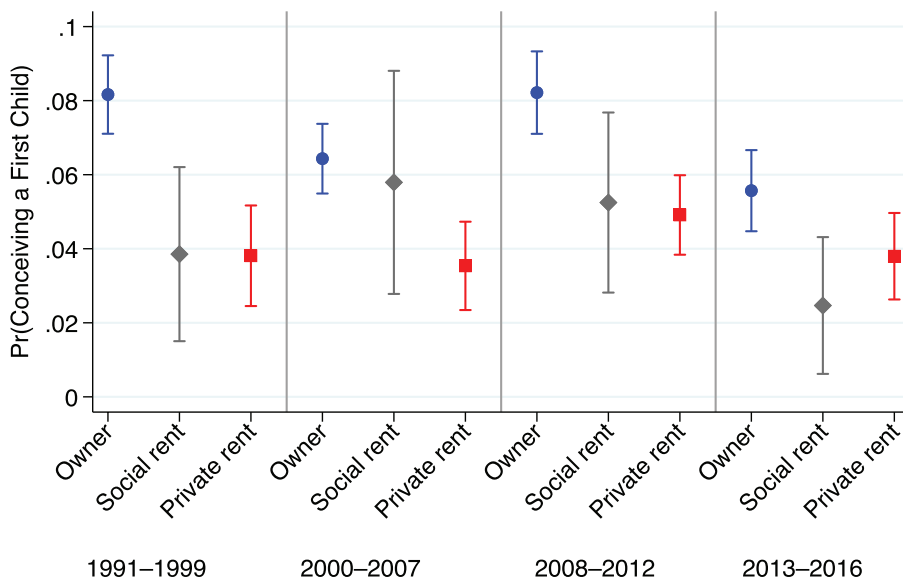


Fig. 1 Results from Model 1: Predicted annual probabilities of conceiving a first child according to calendar period and housing tenure, 1991–2016. To estimate predicted annual probabilities, we allow housing tenure and calendar period to vary and keep the age group at its mean value. *Sources:* Waves 1–18 of the British Household Panel Survey and Waves 1–7 of the United Kingdom Household Longitudinal Study.

did not show any meaningful change over the study period. Given the scarcity of childless women in that tenure group, the confidence intervals were considerably wider, complicating the interpretation of the results. However, point estimates suggest that first conceptions among social renters have declined during the most recent period, reaching their lowest level at 2.5% in 2013–2016. In contrast, rates of entry into first parenthood among private renters were sustained during the housing crisis. Consequently, the difference in birth rates between homeowners and private renters declined markedly.

Our second research question is whether the changing relationship between tenure type and entry into motherhood could be explained by the changing composition of the tenure groups. Model 2 (Figure 2 and Table A1 in the online appendix) demonstrated that controlling for women's socioeconomic and demographic characteristics did not alter the substantive finding. The predicted annual probability of conceiving a first child was significantly higher for homeowners than for private tenants in the first three periods but was not statistically significantly different for 2013–2016 (Figure 2). Hence, the temporal change in the relationship between homeowners and private renters emerged clearly, as did the decline in the probability of conceiving among homeowners for the most recent period, even after we controlled for a variety of demographic and socioeconomic factors.

All the control coefficients from Model 2 (Table A1 in the online appendix) conform with expectations from the published literature, including previous findings based on the BHPS showing that entry into motherhood was far more likely among married women, intermediate for cohabiting women, and lowest for unpartnered women (Fiori et al. 2014; Kulu and Washbrook 2014). Partnership mediated the link

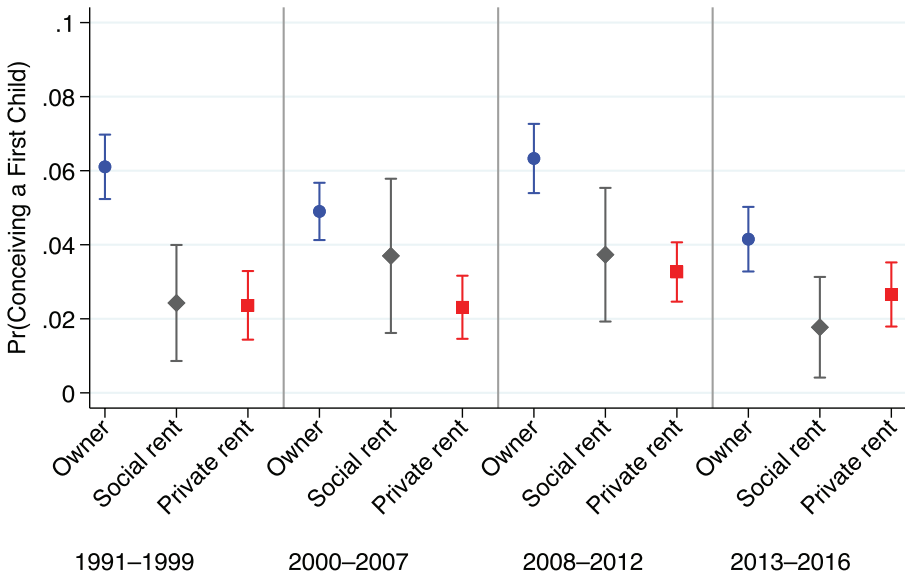


Fig. 2 Results from Model 2: Predicted annual probabilities of conceiving a first child according to calendar period and housing tenure, 1991–2016. To estimate predicted annual probabilities, we allow housing tenure and calendar period to vary and keep age group, partnership, education, parental social class, economic activity, equivalized income (in quintiles), overcrowding, country of birth outside the United Kingdom, and time since move at their mean values. *Sources:* Waves 1–18 of the British Household Panel Survey and Waves 1–7 of the United Kingdom Household Longitudinal Study.

between housing tenure and the first child's conception to a limited extent, partly capturing the preference for being homeowners before conceiving a first child.¹² This finding corroborates the view that the simultaneity between coresidential partnership formation and homeownership is not as strong as in the past. As Tavares (2016) found, educational enrollment was negatively associated with childbearing, and the interaction between education and age was strong: at younger ages, the probability of conceiving a first child was highest among those with lower levels of education, whereas a positive relationship between education and entry into motherhood was observed at older ages. Education also partly mediated tenure, as found in the stepwise procedure. Overcrowding was not associated with the probability of conceiving a first child. Some evidence of anticipatory moves was observed, whereby those who had moved into a property in the previous year were more likely to experience a conception than those who had lived at a property for at least three years (an anticipatory effect consistent across housing tenure groups). Because of space constraints, we cannot offer a detailed discussion of the relationships between the remaining coefficients and the outcome.

The significant interaction between age and tenure demonstrated by Model 2 (see Table A1 in the online appendix and Figure 3) suggests that the effect of housing

¹² We check the mediator effect of partnership formation on the link between housing tenure and the first child's conception, including partnership status in the model for the first research question as the first step in the stepwise procedure (see Table B8 in the online appendix).

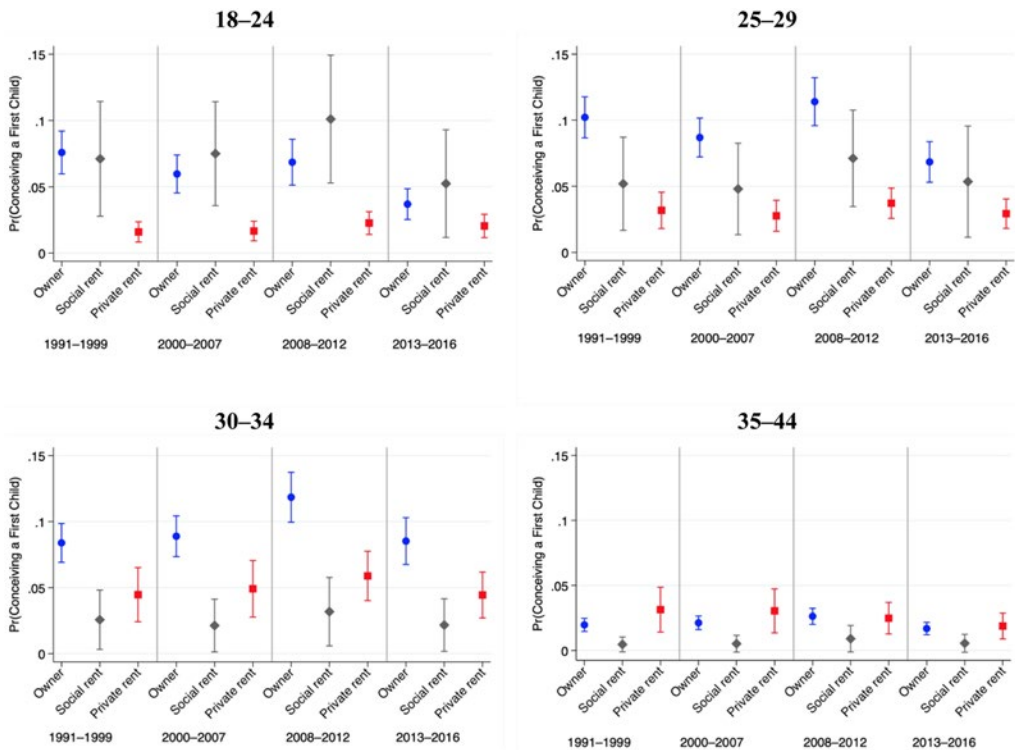


Fig. 3 Results from Model 2: Predicted annual probabilities of conceiving a first child according to calendar period, housing tenure, and age group, 1991–2016. To estimate predicted annual probabilities, we allow housing tenure, calendar period, and age group to vary, while keeping partnership, education, parental social class, economic activity, equivalized income (in quintiles), overcrowding, country of birth outside the United Kingdom, and time since move at their mean values. *Sources:* Waves 1–18 of the British Household Panel Survey and Waves 1–7 of the United Kingdom Household Longitudinal Study.

tenure on entry into motherhood depends on a woman's age. In recent years, women belonging to Generation Rent have been equally likely to start a family as homeowners or private renters. For the youngest women (those aged 18–24), the probability of conceiving a first child was higher among homeowners than private renters until 2012; in the most recent period (2013–2016), the probability of having a child as a homeowner had nearly halved compared with the previous period (from 6.9% for 2008–2012 to 3.7% for 2013–2016), meaning it was not statistically different (at 1%) from the probability of private renters having a child. In contrast, the probability of conceiving a first child among private renters was highest (over 2.0%) during the final two periods, indicating an overall increasing trend over time. For women aged 25–29 and 30–34, although the predicted annual probability of conceiving a first child remained significantly higher among homeowners compared with private renters for all periods, it also declined for those aged 25–29. In contrast, for women aged 30–34, the probability of having a child as a homeowner remained as high for the final period as it was for 1991–1999. Finally, for women aged 35–44, the probability of having a first child was substantially lower, being equally likely for homeowners and private renters during

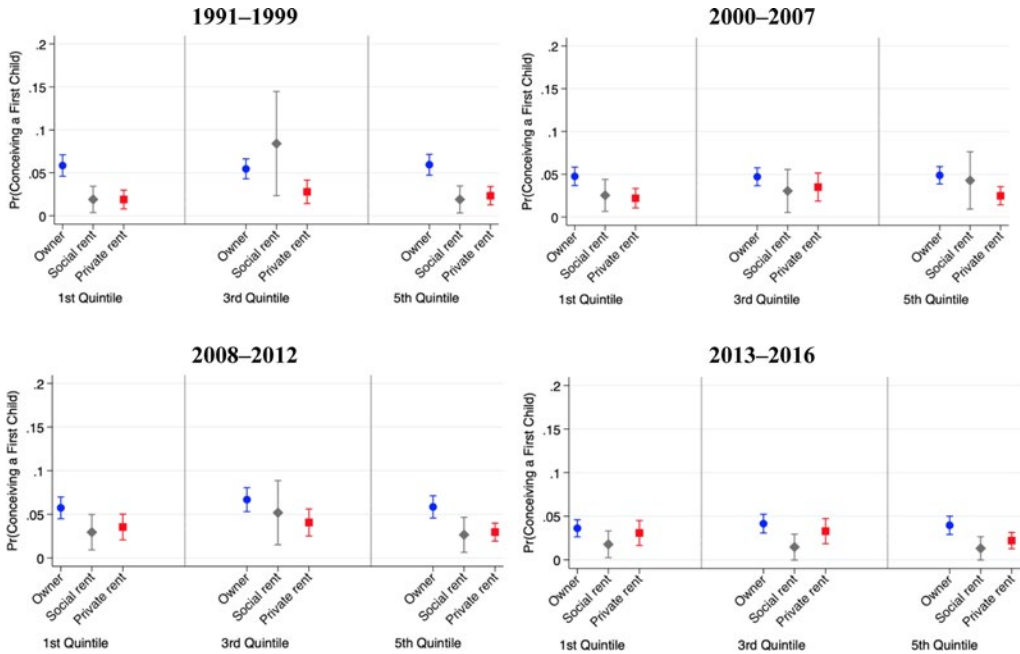


Fig. 4 Results from Model 3: Predicted annual probabilities of conceiving a first child according to calendar period, lower-quartile house prices (1st, 3rd, and 5th quintiles), and housing tenure, 1991–2016. To estimate predicted annual probabilities, we allow calendar period, housing tenure, and lower-quartile house prices to vary while keeping age group, partnership, education, parental social class, economic activity, equivalized income (in quintiles), overcrowding, country of birth outside the United Kingdom, and time since move at their mean values. *Sources:* Waves 1–18 of the British Household Panel Survey and Waves 1–7 of the United Kingdom Household Longitudinal Study.

every period. This finding suggests that for women approaching the end of their reproductive period, tenancy status is less relevant than, for example, their aspirations for motherhood, after other socioeconomic and demographic factors are controlled for.

Addressing our third research question as the final step (Model 3, Table A1 in the online appendix), we considered local house prices, measured by the distribution of lower-quartile house prices in the LAD, as a second-level covariate. As shown in Figure 4,¹³ although conception rates for 1991–1999 were significantly higher among homeowners than among private renters for all LADs, the confidence intervals for the probability of becoming a mother as a homeowner compared with as a private renter overlapped during the period 2013–2016 (with the point estimates not statistically different at the 1% significance level). The LADs with average house prices (third quintile) were the first to experience the change in the association between housing tenure and first conception, beginning in 2000.

¹³ For readability, we opt for including only the first, third, and fifth quintiles in the figure. Nonetheless, Table A1 in the online appendix shows all model coefficients.

Discussion

This study adds to the discussion of how the association between homeownership and parenthood is changing in Britain as a consequence of the reaction of younger generations to the U.K. housing crisis. Homeownership rates have plummeted, especially among younger people. Social housing has become a residualized sector providing support for the most vulnerable groups. Consequently, the number of people living in private rented accommodation into their late 20s has increased rapidly. Our study suggests a new family formation dynamic, involving a change over time in the relationship between homeownership and entry into motherhood. The likelihood of becoming a parent while in owner-occupied accommodation has slumped in recent years, to the point that becoming a parent while living in private rented accommodation is equally likely. Although there is no longer any significant difference between homeowners and private renters aged 18–24, the probability of having a child as a homeowner among those aged 25–29 has declined, suggesting that it might continue to decline enough that there will be no significant difference. This signals a radical change from the recent past, when buying a house with a partner was often experienced as the step *before* family formation.

Estimated fertility rates among our sample of childless women demonstrate a period trend consistent with vital registration data, indicating that the recent decline in fertility rates may be associated with a decline in fertility among owner-occupiers. Although our data do not allow us to determine the underlying reasons for this decline, we hypothesize that homeownership is progressively competing with the cost of childbearing, especially given that the majority of owner-occupied homes are purchased with a mortgage and that a higher proportion of income is used to service that debt (Udagawa and Sanderson 2017) or to repay (at least partly) money received to fund a deposit (Heath and Calvert 2013; Ronald and Druta 2016). Homeownership increasingly requires households to have a dual income; accordingly, buying a home encourages women to attach themselves to the labor market. Further, in a socioeconomic context where increasing economic difficulties challenge homeownership, homeowners might have become a more select group, one characterized by an (unmeasured) orientation toward career and material aspirations. Hakim (2003:220) anticipated this process, stating that “[w]omen’s sex role ideology and work orientations determine both fertility and the financial strength to afford home ownership.” If so, contemporary homeowners could delay childbearing—or remain childless—because they prioritize personal and material aspirations over having children.

Although local housing markets appear to substantially shape the transition to parenthood, the relationship is not linear, probably reflecting several counteracting forces (see, e.g., Arundel and Doling 2017; Lennartz et al. 2016). In areas where house prices accord with the British average (e.g., Cardiff, Dover, Edinburgh, and Southampton), the likelihood of entering parenthood became similar for homeowners and private renters in the early 2000s, with the convergence between the two groups beginning in these areas; here, private renters display the highest propensity to have a child. Until very recently, in areas where housing was more expensive, homeowners tended to exhibit higher childbearing rates than private renters. In the most expensive areas, which include London and Oxford, those able to buy a house are a select, wealthy group. We might speculate that this group is less in need of a dual income because

individuals buying homes in the most expensive housing markets are likely to have other sources of income (e.g., from family or inheritance). Thus, for the wealthiest group, homeownership and childbearing remain strongly associated, as was the case for most groups in the past. Similarly, where housing is less expensive, the need for a dual income is reduced, and homeownership may be secured in advance of parenthood. Nonetheless, since 2008, homeownership has also become less affordable in areas where house prices are the most and least expensive; as such, higher rates of parenthood among homeowners are not maintained.

Ultimately, local housing markets shape the association between homeownership and parenthood in complex ways. Although we cannot reach a definitive conclusion, these results provide some insight into the potential role of local house prices as a moderator of such an association. This study identified housing markets at the LAD level; it is possible that this geographical area is too large to represent a local housing market. Unfortunately, no smaller-scale data are available for Britain. Nonetheless, future studies could examine how the effect of local housing markets changes according to the measurement scale. Additionally, we did not examine the role of other contextual factors, such as childcare availability and labor market characteristics, which could also be tested in future work. Still, our results suggest increasing competition between the costs of homeownership and childbearing. Although this competition might have first emerged in areas where house prices accord with the country's average, it can now be observed in all areas.

Given that rising house prices, the need for a dual income, and reduced availability of mortgages are widespread in Western countries, the changing relationship between homeownership and parenthood posited by this study may also be observable in other countries. However, the Generation Rent phenomenon (Lennartz et al. 2016) and the strict regulation of private rentals in favor of landlords are U.K.-specific characteristics; thus, caution is advised if considering extending our findings to other settings.

The disconnection between homeownership and entry into parenthood has significant implications for parents and their children. In fact, the specific nature of the private rental housing market in Britain remains unregulated, insecure, and not family-friendly; for example, uncertainty exists around when a family in such a home could be asked to leave (Judge and Tomlinson 2018). Of particular concern to the parents of children in a private rental is that moving to a new house can require that their children change schools. In Britain, access to state schools is contingent on living in the school's catchment area (generally, a particular neighborhood), and there is often overdemand for better-performing schools, which diminishes housing choice (Hansen 2014). Social housing, traditionally important in Britain, is becoming increasingly marginal in the transition to parenthood. Low-income young people, who would have formed a family as social tenants in the past, are now often in precarious private rental situations or, in cases where housing is more affordable, have to manage disproportionately high mortgage costs.

The rise in private renting does not appear to be driven by changing tenure preferences. In fact, the vast majority of young Britons still aspire to become homeowners (Marshall and Smith 2016; Pannell 2016). Many young people regard homeownership as the only suitable tenure for starting a family (Hoolachan et al. 2017). However, homeownership is not viable for many young people because of homeownership's increasing unaffordability. In the words of Hoolachan et al. (2017:72), young adults

are faced with a “double disadvantage of housing and income insecurity.” Several authors have suggested that couples in the lowest-low fertility countries have limited their childbearing because of mounting economic uncertainty levels (Kohler et al. 2002; Mills and Blossfeld 2003, 2013; Vignoli, Guetto et al. 2020). Uncertainty makes it increasingly difficult for individuals to imagine their future, choose between alternatives, and strategize (Vignoli, Guetto et al. 2020). Housing uncertainty might additionally impact the transition to parenthood, producing insecurity regarding where and under what conditions an individual will reside. Private tenants have historically faced housing uncertainty; we posit that, for this reason, they have traditionally had lower fertility than owner-occupiers. However, housing uncertainty has increased for owner-occupiers in recent years, linked to macro-economic changes (financial and unemployment-related uncertainties) and changing pathways into homeownership (the increased importance of mortgage credit and loans from parents). We speculate that this increased uncertainty among homeowners lies beneath the weakening association between homeownership and childbearing. ■

Acknowledgments The research leading to these results has received support from the European Commission 7th Framework Programme (FP7/2013-2017) Grant Agreement No. 312691, InGRID - Inclusive Growth Research Infrastructure Diffusion. The authors acknowledge the financial support provided by the European Union Horizon 2020 research and innovation program/ERC Grant Agreement No. 725961 (EU-FER project “Economic Uncertainty and Fertility in Europe,” PI: Daniele Vignoli) and the Economic and Social Research Council funded Centre for Population Change Grant Nos. RES-625-28-0001 and ES/K007394/1.

References

- Alderotti, G., Vignoli, D., Baccini, M., & Matysiak, A. (2021). Employment instability and fertility in Europe: A meta-analysis. *Demography*, 58, 871–900. <https://doi.org/10.1215/00703370-9164737>
- Arundel, R., & Doling, J. (2017). The end of mass homeownership? Changes in labour markets and housing tenure opportunities across Europe. *Journal of Housing and the Built Environment*, 32, 649–672.
- Barber, J. S., Murphy, S. A., Axinn, W. G., & Maples, J. (2000). Discrete-time multilevel hazard analysis. *Sociological Methodology*, 30, 201–235.
- Barbieri, P., Bozzon, R., Scherer, S., Grotti, R., & Lugo, M. (2015). The rise of a Latin model? Family and fertility consequences of employment instability in Italy and Spain. *European Societies*, 17, 423–446.
- Bayrakdar, S., & Coulter, R. (2017). Parents, local house prices, and leaving home in Britain. *Population, Space and Place*, 24(2), 1–13.
- Becker, G. S. (1991). *A treatise on the family*. Cambridge, MA: Harvard University Press.
- Berrington, A., & Stone, J. (2014). Young adults’ transitions to residential independence in Britain: The role of social and housing policy. In L. Antonucci, M. Hamilton, & S. Roberts (Eds.), *Young people and social policy in Europe: Dealing with risk, inequality and precarity in times of crisis* (pp. 210–235). Basingstoke, UK: Palgrave Macmillan. Retrieved from <http://eprints.soton.ac.uk/372732/>
- Berrington, A., Stone, J., & Beaujouan, E. (2015). Educational differences in timing and quantum of childbearing in Britain: A study of cohorts born 1940–1969. *Demographic Research*, 33, 733–764. <https://doi.org/10.4054/DemRes.2015.33.26>
- Blossfeld, H.-P., & Hofmeister, H. (Eds.). (2006). *Globalization, uncertainty and women’s careers: An international comparison*. Cheltenham, UK: Edward Elgar Publishing.
- Blossfeld, H.-P., Klijzing, E., Mills, M., & Kurz, K. (Eds.). (2005). *Globalization, uncertainty and youth in society*. London, UK: Routledge.
- Blossfeld, H.-P., Mills, M., & Bernardi, F. (Eds.). (2006). *Globalization, uncertainty and men’s careers: An international comparison*. Cheltenham, UK: Edward Elgar Publishing.

- Browning, C. R., Leventhal, T., & Brooks-Gunn, J. (2004). Neighborhood context and racial differences in early adolescent sexual activity. *Demography*, *41*, 697–720.
- Castiglioni, M., & Dalla Zuanna, G. (1994). Innovation and tradition: Reproductive and marital behaviour in Italy in the 1970s and 1980s. *European Journal of Population*, *10*, 107–141.
- Clapham, D., Mackie, P., Orford, S., Thomas, I., & Buckley, K. (2014). The housing pathways of young people in the UK. *Environment and Planning A: Economy and Space*, *46*, 2016–2031.
- Clark, W. A. V. (2012). Do women delay family formation in expensive housing markets? *Demographic Research*, *27*, 1–24. <https://doi.org/10.4054/DemRes.2012.27.1>
- Clark, W. A. V., & Mulder, C. H. (2000). Leaving home and entering the housing market. *Environment and Planning A: Economy and Space*, *32*, 1657–1671.
- Clark, W. A. V., & Withers, S. D. (2007). Family migration and mobility sequences in the United States: Spatial mobility in the context of the life course. *Demographic Research*, *17*, 591–622. <https://doi.org/10.4054/DemRes.2007.17.20>
- Cole, I., Powell, R., & Sanderson, E. (2016). Putting the squeeze on ‘generation rent’: Housing benefit claimants in the private rented sector—Transitions, marginality and stigmatisation. *Sociological Research Online*, *21*(2), 1–14. <https://doi.org/10.5153/sro.3909>
- Comolli, C. L. (2017). The fertility response to the Great Recession in Europe and the United States: Structural economic conditions and perceived economic uncertainty. *Demographic Research*, *36*, 1549–1600. <https://doi.org/10.4054/DemRes.2017.36.51>
- Coulter, R. (2016). Parental background and housing outcomes in young adulthood. *Housing Studies*, *33*, 201–223.
- Courgeau, D., & Lelièvre, E. (1992). Interrelations between first home-ownership, constitution of the family, and professional occupation in France. In J. Trussell, R. Hankinson, & J. Tilton (Eds.), *Demographic applications of event history analysis* (pp. 120–140). Oxford, UK: Clarendon Press.
- Cribb, J., Hood, A., & Hoyle, J. (2018). *The decline of homeownership among young adults* (IFS Briefing Note BN224). London, UK: Institute for Fiscal Studies. Retrieved from <https://www.ifs.org.uk/uploads/publications/bns/BN224.pdf>
- Deurloo, M. C., Clark, W. A. V., & Dieleman, F. M. (1994). The move to housing ownership in temporal and regional contexts. *Environment and Planning A: Economy and Space*, *26*, 1659–1670.
- Di Salvo, P., & Ermisch, J. (1997). Analysis of the dynamics of housing tenure choice in Britain. *Journal of Urban Economics*, *42*, 1–17.
- Easthope, H. (2014). Making a rental property home. *Housing Studies*, *29*, 579–596.
- Ermisch, J., & Steele, F. (2016). Fertility expectations and residential mobility in Britain. *Demographic Research*, *35*, 1561–1584. <https://doi.org/10.4054/DemRes.2016.35.54>
- Feijten, P., & Mulder, C. H. (2002). The timing of household events and housing events in the Netherlands: A longitudinal perspective. *Housing Studies*, *17*, 773–792.
- Fiori, F., Graham, E., & Feng, Z. (2014). Geographical variations in fertility and transition to second and third birth in Britain. *Advances in Life Course Research*, *21*, 149–167.
- Fisher, J. D. M., & Gervais, M. (2011). Why has home ownership fallen among the young? *International Economic Review*, *52*, 883–912.
- Fumagalli, L., Knies, G., & Buck, N. (2017). *Understanding society: The UK Household Longitudinal Study—Harmonised British Household Panel Survey (BHPS): User guide*. Essex, UK: Institute for Social and Economic Research, University of Essex. Retrieved from <http://repository.essex.ac.uk/21094/1/bhps-harmonised-user-guide.pdf>
- Hagenaars, A. J. M., De Vos, K., & Asghar Zaidi, M. (1994). *Poverty statistics in the late 1980s: Research based on micro-data* (Report). Luxembourg: Luxembourg Office for Official Publications of the European Communities. Retrieved from <http://agris.fao.org/agris-search/search.do?recordID=XF2015009737>
- Hakim, C. (2003). *Models of the family in modern societies: Ideals and realities*. Aldershot, UK: Ashgate.
- Hansen, K. (2014). Moving house for education in the pre-school years. *British Educational Research Journal*, *40*, 483–500.
- Heath, S., & Calvert, E. (2013). Gifts, loans and intergenerational support for young adults. *Sociology*, *47*, 1120–1135.
- Holland, J. A. (2012). Home and where the heart is: Marriage timing and joint home purchase. *European Journal of Population/Revue Européenne de Démographie*, *28*, 65–89.

- Hoolachan, J., McKee, K., Moore, T., & Soaita, A. M. (2017). 'Generation rent' and the ability to 'settle down': Economic and geographical variation in young people's housing transitions. *Journal of Youth Studies, 20*, 63–78.
- Ineichen, B. (1981). The housing decisions of young people. *British Journal of Sociology, 32*, 252–258.
- Judge, L., & Tomlinson, D. (2018). *Home improvements: Action to address the housing challenges faced by young people* (Intergenerational Commission report). Retrieved from <https://www.resolutionfoundation.org/app/uploads/2018/04/Home-improvements.pdf>
- Knies, G. (2018). *Understanding society: The UK Household Longitudinal Study—Waves 1–7 user guide*. Retrieved from <https://www.understandingsociety.ac.uk/documentation/mainstage/user-guides/main-survey-user-guide/>
- Kohler, H.-P., Billari, F. C., & Ortega, J. A. (2002). The emergence of lowest-low fertility in Europe during the 1990s. *Population and Development Review, 28*, 641–680.
- Kreyenfeld, M., Andersson, G., & Pailhé, A. (2012). Economic uncertainty and family dynamics in Europe: Introduction. *Demographic Research, 27*, 835–852. <https://doi.org/10.4054/Demres.2012.27.28>
- Krishnan, V., & Krotki, K. J. (1993). Life cycle effects on homeownership in Canada. *Housing Studies, 8*, 120–127.
- Kulu, H., & Hannemann, T. (2016). Why does fertility remain high among certain UK-born ethnic minority women? *Demographic Research, 35*, 1441–1488. <https://doi.org/10.4054/DemRes.2016.35.49>
- Kulu, H., & Milewski, N. (2007). Family change and migration in the life course: An introduction. *Demographic Research, 17*, 567–590. <https://doi.org/10.4054/DemRes.2007.17.19>
- Kulu, H., & Steele, F. (2013). Interrelationships between childbearing and housing transitions in the family life course. *Demography, 50*, 1687–1714.
- Kulu, H., & Washbrook, E. (2014). Residential context, migration and fertility in a modern urban society. *Advances in Life Course Research, 21*, 168–182.
- Lennartz, C., Arundel, R., & Ronald, R. (2016). Younger adults and homeownership in Europe through the global financial crisis. *Population, Space and Place, 22*, 823–835.
- Marshall, L., & Smith, N. (2016). *First-time buyers—An early life crisis: Britain's homeownership aspirations* (Yorkshire Building Society report). Retrieved from https://www.natcen.ac.uk/media/1123184/ybs-first-time-buyers-report_final-for-website.pdf
- McKee, K. (2012). Young people, homeownership and future welfare. *Housing Studies, 27*, 853–862.
- Mills, M., & Blossfeld, H.-P. (2003). Globalization, uncertainty and changes in early life courses. *Zeitschrift für Erziehungswissenschaft, 6*, 188–218.
- Mills, M., & Blossfeld, H.-P. (2013). The second demographic transition meets globalisation: A comprehensive theory to understand changes in family formation in an era of rising uncertainty. In A. Evans & J. Baxter (Eds.), *Negotiating the life course: Stability and change in life pathways* (pp. 9–33). New York, NY: Springer.
- Mulder, C. H. (2006a). Population and housing: A two-sided relationship. *Demographic Research, 15*, 401–412. <https://doi.org/10.4054/DemRes.2006.15.13>
- Mulder, C. H. (2006b). Home-ownership and family formation. *Journal of Housing and the Built Environment, 21*, 281–298.
- Mulder, C. H., & Billari, F. C. (2010). Homeownership regimes and low fertility. *Housing Studies, 25*, 527–541.
- Mulder, C. H., & Smits, J. (1999). First-time home-ownership of couples: The effect of inter-generational transmission. *European Sociological Review, 15*, 323–337.
- Mulder, C. H., & Wagner, M. (1993). Migration and marriage in the life course: A method for studying synchronized events. *European Journal of Population/Revue Européenne de Démographie, 9*, 55–76.
- Mulder, C. H., & Wagner, M. (1998). First-time home-ownership in the family life course: A West German-Dutch comparison. *Urban Studies, 35*, 687–713.
- Mulder, C. H., & Wagner, M. (2001). The connections between family formation and first-time home ownership in the context of West Germany and the Netherlands. *European Journal of Population, 17*, 137–164.
- Murphy, M. J. (1984). The influence of fertility, early housing-career, and socioeconomic factors on tenure determination in contemporary Britain. *Environment and Planning A: Economy and Space, 16*, 1303–1318.
- Murphy, M. J., & Sullivan, O. (1985). Housing tenure and family formation in contemporary Britain. *European Sociological Review, 1*, 230–243.

- Office for National Statistics (ONS). (2016). *UK perspectives 2016: Housing and home ownership in the UK* (ONS report). Retrieved from <https://visual.ons.gov.uk/uk-perspectives-2016-housing-and-home-ownership-in-the-uk/>
- Office for National Statistics (ONS). (2017a). *Housing affordability in England and Wales: 1997 to 2016* (ONS statistical bulletin). Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingaffordabilityinenglandandwales/1997to2016#affordability-gap-widens-over-time>
- Office for National Statistics (ONS). (2017b). *Births by parents' characteristics in England and Wales: 2016* (ONS statistical bulletin). Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsbyparentscharacteristicsinenglandandwales/2016>
- Office for National Statistics (ONS). (2017c). *Lower quartile price paid for administrative geographies: HPSSA dataset 15* [Data set]. Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/lowerquartilehousepriceforationalandsubnationalgeographiesquarterlyrolling-yearhpssadataset15>
- Office for National Statistics (ONS). (2019). *Births in England and Wales: 2018* (ONS statistical bulletin). Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2018>
- Öst, C. E. (2011). Housing and children: Simultaneous decisions?—A cohort study of young adults' housing and family formation decision. *Journal of Population Economics*, 25, 349–366.
- Pannell, B. (2016). *Home-ownership or bust: Commercial research into tenure aspirations* (CML report). London, UK: Council of Mortgage Lenders.
- Pinnelli, A. (2020). Marital fertility and the changing status of women in Europe. *Genus*, 76, 1. <https://doi.org/10.1186/s41118-020-0072-z>
- Pronzato, C. D. (2011). *British Household Panel Survey consolidated marital, cohabitation and fertility histories, 1991–2009* (3rd ed.) [Data collection]. Colchester, UK: UK Data Service, SN: 5629. Retrieved from <http://doi.org/10.5255/UKDA-SN-5629-1>
- Ricci, R. (1997). *Povert  abiativa in Italia, 1989–1993* [Housing poverty in Italy, 1989–1993] (Report). Rome, Italy: Presidency of the Council of Ministers, Department of Information and Publishing.
- Ronald, R. (2008). *The ideology of homeownership: Homeowners, societies and the role of housing*. Basingstoke, UK: Palgrave Macmillan.
- Ronald, R., & Druta, O. (2016). *How changes in housing, homes and households are reshaping urban Japan* (Working Paper Series No. 249). Singapore: Asia Research Institute.
- Rose, D., & Pevalin, D. J. (2003). *The National Statistics Socio-economic Classification: Origins, development and use*. London, UK: Office for National Statistics.
- Rugg, J. (2010). *Young people and housing: The need for a new policy agenda* (Viewpoint paper). York, UK: Joseph Rowntree Foundation. Retrieved from <https://www.jrf.org.uk/report/young-people-and-housing-need-new-policy-agenda>
- Sato, Y. (2007). Economic geography, fertility and migration. *Journal of Urban Economics*, 61, 372–387.
- Saunders, P. (1990). *A nation of home owners*. London, UK: Unwin Hyman.
- Scottish Government. (2017). *House prices—Value of residential property transactions: Lower quartile house prices* [Data set]. Retrieved from <http://statistics.gov.scot/data/house-sales-prices>
- Simon, C. J., & Tamura, R. (2009). Do higher rents discourage fertility? Evidence from U.S. cities, 1940–2000. *Regional Science and Urban Economics*, 39, 33–42.
- StataCorp. (2017). *Stata 15 base reference manual*. College Station, TX: Stata Press.
- Tavares, L. P. (2016). Who delays childbearing? The associations between time to first birth, personality traits and education. *European Journal of Population*, 32, 575–597.
- Udagawa, C., & Sanderson, P. (2017). *The impacts of family support on access to homeownership for young people in the UK* (Report). London, UK: Social Mobility Commission. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/602541/Impact_of_family_support_on_homeownership.pdf
- University of Essex Institute for Social and Economic Research. (2018). *Understanding society: Waves 1–8, 2009–2017 and harmonised BHPS: Waves 1–18, 1991–2009*: Special licence access, local authority district (10th ed.) [Data collection]. Essex, UK: UK Data Service, SN: 6666. Retrieved from <http://doi.org/10.5255/UKDA-SN-6666-10>

- Vignoli, D., Guetto, R., Bazzani, G., Pirani, E., & Minello, A. (2020). A reflection on economic uncertainty and fertility in Europe: The narrative framework. *Genus*, 76, 28. <https://doi.org/10.1186/s41118-020-00094-3>
- Vignoli, D., Rinesi, F., & Mussino, E. (2013). A home to plan the first child? Fertility intentions and housing conditions in Italy. *Population, Space and Place*, 19, 60–71.
- Vignoli, D., Tanturri, M. L., & Acciai, F. (2016). Home bitter home? Gender, living arrangements, and the exclusion from homeownership among older Europeans. *Genus*, 72, 9. Retrieved from <https://doi.org/10.1186/s41118-016-0014-y>
- Vignoli, D., Tocchioni, V., & Mattei, A. (2020). The impact of job uncertainty on first-birth postponement. *Advances in Life Course Research*, 45, 100308. Retrieved from <https://doi.org/10.1016/j.alcr.2019.100308>
- Williams, R. (2012). Using the margins command to estimate and interpret adjusted predictions and marginal effects. *Stata Journal*, 12, 308–331.

Valentina Tocchioni (corresponding author)
valentina.tocchioni@unifi.it

Tocchioni • Department of Statistics, Computer Science, Applications “G. Parenti,” University of Florence, Florence, Italy; <https://orcid.org/0000-0002-0793-6122>

Berrington • Department of Social Statistics and Demography, and Centre for Population Change, University of Southampton, Southampton, United Kingdom; <https://orcid.org/0000-0002-1683-6668>

Vignoli • Department of Statistics, Computer Science, Applications “G. Parenti,” University of Florence, Florence, Italy; <https://orcid.org/0000-0003-1227-5880>

Vitali • Department of Sociology and Social Research, University of Trento, Trento, Italy; <https://orcid.org/0000-0003-0029-9447>