Journal of Urban Economics 99 (2017) 62–78

Contents lists available at ScienceDirect

Journal of Urban Economics

journal homepage: www.elsevier.com/locate/jue

Financial literacy: A barrier to home ownership for the young?☆

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ARTICLE INFO

Article history:
Received 28 August 2015
Revised 20 January 2017
Available online 9 February 2017

JEL classification:
D10
D12
G21

Keywords:
Home ownership
Financial literacy
Mortgages
Household finance

ABSTRACT

The decision to buy a home is one of the most important choices faced by a household. Most young households who purchase a home do so using a mortgage. But mortgages are complex financial instruments and this complexity may be a barrier to less sophisticated households becoming homeowners. Using survey data from a sample of English and Welsh households we measure household financial literacy related to mortgages, including concepts such as loan duration, interest compounding and amortization. We find that in the population mortgage financial literacy is generally low and among renters mortgage financial literacy is substantially worse than among homeowners. Econometric estimates show mortgage financial literacy predicts home ownership for younger, but not for older households. Financial literacy also affects the type of mortgage and leverage position of younger households. Young homeowners with poorer financial literacy take on larger mortgage debts and are more likely to use alternative mortgage products.

1. Introduction

The decision to buy a family home is one of the most important financial choices made by households. The family home is typically the largest single durable good purchased over the life-cycle, for which financial and non-financial costs of adjustment can be large. It is also an investment asset, a source of collateral and in many cases the main component of a bequest. A large literature has considered the benefits arising from home ownership (DiPasquale and Glaeser, 1999; Engelhardt et al., 2010; Grinstein-Weiss et al., 2013; Coulson and Li, 2013), including local amenities and social capital effects plus also positive effects on child well-being (Haurin et al., 2002) and consumption smoothing (Benito and Mumtaz, 2009). For a review of the effects of home ownership see Dietz and Haurin (2003).

Given the importance of home ownership, understanding the barriers to achieving ownership faced by younger households is an important research topic. Younger households may choose not to own their homes due to their higher rates of geographic mobility coupled with transaction costs of moving across owner-occupied housing. Nevertheless, prior studies have identified a broad range of potential barriers including borrowing constraints (Haurin et al., 1997; Ortalo-Magné and Sven, 2006; Chambers et al., 2009; Kolodziejczyk and Leth-Petersen, 2013), lack of mortgage market development (Sanders, 2005) and racial differences (Charles and Hurst, 2002; Collins and Margo, 2011). A large literature also considers the interplay between house price volatility, rental price volatility and income risk (Sinai and Souleles, 2005; Banks et al., 2016; Amior and Halket, 2014; Bostic and Lee, 2008; Diaz-Serrano, 2005). Many government initiatives have been introduced to alleviate barriers to home ownership including, for example, mortgage subsidies (Fetter, 2013; Glaeser and Shapiro, 2003) and discounted private sales of social housing (Aalbers, 2004), though the long-term effects of these appear limited (Gabriel and Rosenthal, 2015). However, there is some evidence that pre-purchase financial counseling reduces delinquency (Hirad et al., 2001).

Is poor financial literacy also a barrier to home ownership? For most young households, an integral component of purchasing a home is a mortgage. But a mortgage is a complex financial product requiring a degree of financial sophistication on the part of households (Campbell, 2006; Bucks and Pence, 2008; Agarwal et al., 2013). Lack of financial understanding of mortgage products may affect younger households in particular, as they may lack finan-

☆ We would like to thank the editor and two anonymous referees for their extensive comments on earlier versions of paper. We acknowledge research funding that contributed towards this work under ESRC grants RES-061-25-0478 and ES/K002201/1 (Network for Integrated Behavioural Science). We would also like to thank YouGov for incorporating questions into their household survey and making the data available for the purposes of this research project.

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http://dx.doi.org/10.1016/j.jue.2017.02.001
0094-1190/

cial experience. This might in turn go some way to explaining the age-home ownership gradient. Existing studies show home ownership rates increase sharply with age (Haurin and Rosenthal, 2007), partly due to borrowing constraints among the young (Haurin et al., 1997). Lack of financial literacy may be another important constraint for younger households.

In this paper, we use a specially commissioned survey of a representative sample of English and Welsh households to examine whether poor financial literacy is a barrier to home ownership, particularly among the young. We also examine whether, conditional on home ownership, financial literacy affects the type of terms of mortgage products used by younger households. Our study is closest to that of Haurin and Morrow-Jones (2006), who show that home ownership rates increase with real estate market knowledge among a sample of residents in the Columbus, Ohio area. The authors show this contributes to the racial gap in home ownership rates. Whereas Haurin and Morrow-Jones (2006) focus on the racial gap in home ownership, our study focuses on the relationship between financial literacy and the age-home ownership gradient. Recent studies have also shown that poor financial literacy discourages households from participation in a range of financial markets.[1]

We measure the financial literacy of households in the domain of mortgage choice by inserting multiple-choice questions into our survey, encapsulating concepts of loan duration, interest calculation, interest compounding and loan amortization. The multiple-choice questions we include do not require complicated mathematical calculations, but do require an understanding of key economic concepts. Alongside our questions on financial literacy, we include a broad set of questions to capture relevant variables, which explain home ownership choices, including measures of income risk and credit constraints. We also consider other behavioral determinants of home ownership, including the role of risk attitude and time preferences in the form of patience and present bias.[2]

The decision to invest in understanding mortgages is itself potentially secondary to the decision to become a homeowner, or could be learned through mortgage market experience. We therefore follow recent studies in adopting an instrumental variable (IV) strategy in which we instrument the financial literacy index with a source of variation in financial literacy that pre-dates mortgage market experience. Among a range of possible instruments we use mathematical performance when young, shown to be a powerful instrument in a recent study by Jappelli and Padula (2013). Mathematical performance at school when young pre-dates housing market experience and therefore removes any learning effects through owning a home. However, there may be other unobserved factors pertaining to home ownership that correlate with our instrument, such as parental wealth and bequests. Hence, unobserved factors might still in part explain the relationship we find between financial literacy and home ownership.

Our results show levels of mortgage financial literacy among our sample are generally low. Among our whole sample comprising homeowners and renters, the average number of questions answered correctly is two out of four. Most respondents answer questions on loan duration and a simple interest calculation correctly, but only 40% show understanding of compound interest and less than one third answer our loan amortization question correctly. However, financial literacy is better among homeowners compared with renters – and this is true for both older and younger households. Households who score highest on the financial literacy index are 20 percentage points more likely to be homeowners compared with the lowest scoring households. In an unconditional comparison, answering one more financial literacy question correctly is associated with a 5 percentage point increase in the likelihood of home ownership.

When we estimate econometric models, we find a clear result that financial literacy raises the likelihood of home ownership among younger households in our sample, but has no statistically significant effect on home ownership among older households. This result is robust to the inclusion of a broad range of controls for demographic, socio-economic and local housing market conditions as well as other behavioral characteristics measured at the individual level. We also test the sensitivity of our results to alternative sample restrictions, with results unchanged. To gauge the quantitative importance of financial literacy, a one-unit increase in financial literacy (that is answering one more of our questions correctly) increases the likelihood of home ownership among young households by 5.3%, an effect equivalent to increasing household permanent income by approximately £5000 per year.

As an extension of our analysis of how financial literacy affects home ownership choices, in the second part of the paper we analyze the mortgage choices of young households. Most young households require a mortgage to become homeowners, but households with less understanding of mortgage products may be more exposed to taking on riskier mortgages, especially when young and lacking mortgage market experience. Such households may also be more susceptible to predatory lending practices, which tend to target subprime households with lower levels of financial sophistication (Ho and Pennington-Cross, 2006; Bond et al., 2009; Agarwal et al., 2014). For example, alternative mortgage products (AMPs) offer some features such as 'interest only' terms or slower amortization that could be attractive to younger households desiring to buy a home, but may not fully understand mortgage terms and misinterpret the short-term benefits of these products. We estimate a series of models in which we relate financial literacy to mortgages types (standard vs. alternative mortgage; fixed vs. adjustable rate) and mortgage characteristics (loan-to-value ratio and loan-to-income ratio). To econometrically control for selection into holding a mortgage, we use a selectivity correction. The selectivity correction is used together with the IV model to control for the endogeneity of financial literacy.

Results show that young mortgage homeowners with lower financial literacy make mortgage choices that result in holding higher levels of mortgage debt (relative to the value of their home and relative to their income) and use potentially riskier AMPs. These findings are suggestive that poor financial literacy causes households to take more risks in the mortgage market, though they might also reflect unobserved factors such as low wealth, which induce households to take AMPs. We also show that lower financial literacy increases the likelihood of a young household choosing to fix their mortgage interest rate and refinance their mortgage.

The remainder of the paper proceeds as follows. In Section 2 we describe our survey design, content and questions that comprise the financial literacy index. In Section 3 we present descriptive results for the relationship between financial literacy and home ownership. In Section 4 we present estimates from our econometric models, first models that explain home ownership status and second models that explain the characteristics of mortgages held by young households. Section 5 concludes the paper.

[1] For example, lack of understanding of the stock market and investment vehicles lowers the likelihood of households owning stocks (van Rooij et al., 2011b). Also, ignorance of basic financial concepts integral to retirement saving discourages individuals from forming a plan for retirement saving (Lusardi and Mitchell, 2007a). In recent research we show that financial literacy is an important determinant for choice of mortgage type (Gathergood and Weber, 2015).

[2] In our recent paper we show that time preferences are important for choice of mortgage type, specifically the choice over a standard repayment mortgage or an alternative mortgage with interest-only payments (Gathergood and Weber, 2015).