Joint Center for Housing Studies

Harvard University

Believing in Homeownership:

Behavioral Drivers of Housing Tenure Decisions

Rachel Bogardus Drew

University of Massachusetts, Boston

May 2014

W14-3

Parts of this paper are excerpted from the author's PhD dissertation in the Public Policy department at the McCormack School of Policy and Global Studies at the University of Massachusetts, Boston

Abstract:
While numerous studies have sought to identify determinants of individual decisions about owning and renting housing (Fu 2013), very few have considered the role that behavioral factors play, particularly in the United States (Reid 2013). This paper fills this gap in the literature, using recently collected survey data on beliefs about the benefits of homeownership to analyze their relationship with renters' stated intentions to buy or rent housing in the future. The analysis finds that such beliefs are strong indicators of expectations to own, more so than even some economic and socio-demographic characteristics that are commonly assumed to drive tenure preferences, such as family composition and income (Henderson and Ioannides 1983; Clark et al. 2003). Individuals' perceptions about constraints on their ability to purchase and own homes, meanwhile, are not generally predictive of future tenure intentions. These findings suggest that future research on tenure decisions should do more to account for behavioral factors.

Acknowledgements:
The author would like to thank Steven Deggendorf of Fannie Mae for his assistance with the National Housing Survey data used in this analysis, Chris Herbert and Eric Belsky of the Joint Center for Housing Studies for their support and comments on this research, and Michael Johnson and Christian Weller of the McCormack School of Policy and Global Studies at the University of Massachusetts, Boston for their advisory role in the dissertation on which this paper is based.

Disclaimer:
This paper uses data from the January-December 2011 Fannie Mae National Housing Survey. The author is solely responsible for the content of this paper, which does not necessarily reflect the views of Fannie Mae.

Introduction

Homeownership in the United States has long been associated with achievement of the American Dream (Cullen 2003). The many benefits ascribed to homeownership – including wealth accumulation, better neighborhoods, better outcomes for children, and a sense of personal success and stability – have cast it as a means to a better life. Generations of homeowning families are a testament to homeownership's ability to deliver on this dream, providing not just upward socioeconomic mobility but also inclusion in a social practice viewed as being as central to American life as voting (Shlay 2006). Federal policies, which since the 1930s have supported homeownership and the financial markets that make home purchases possible for many households, facilitate the realization of this dream and further promote homeownership as the preferred housing option for all Americans (Carliner 1998; Ronald 2008). Indeed, the desire for homeownership has become so pervasive among Americans that some commentators have described it as a religion, a right, and a moral obligation for any upstanding member of American society (Lands 2008; Dickerson 2009).

Numerous academic studies have sought to substantiate these claims about the effects of homeownership on American households, with generally mixed results (Rohe, van Zandt, and McCarthy 2002; Dietz and Haurin 2003). While owning does generally correlate with better economic, social, and personal outcomes, not all homeowning households in the United States realize these benefits equally (Apgar 2004; Di, Belsky, and Liu 2007). Indeed, some evidence suggests such outcomes may be a function of the characteristics of households that are more likely to own, rather than of their tenure status, i.e., of whether they own or rent their housing (DiPasquale and Glaeser 1999; Dietz and Haurin 2003; Apgar 2004). Moreover, homeownership comes with many risks and costs, including making a long-term commitment to live in a particular structure and neighborhood, investing in an undiversified asset that can decrease in value, and taking responsibility for maintaining the quality and condition of the home (Apgar 2004). The need to finance most home purchases can constrain geographic mobility, commit households to financial contracts with little recourse in the event of economic distress, and drain resources from other family needs (Apgar 2004; Belsky and Drew 2008). For households that fail to sustain homeownership, the consequences of delinquency and foreclosure in the

U.S., in terms of both economic value and personal sacrifice, can haunt former owners for years (Belsky and Drew 2008).

Given the many significant and long-term consequences of homeownership, understanding individual decisions about housing tenure is an important topic for both scholars and policy makers (Apgar 2004; Belsky and Drew 2008). Most of the existing research on the determinants of tenure decisions in the United States, however, focuses on economic and socio-demographic factors that are observed among existing homeowners, rather than considering how beliefs and behavioral factors contribute to pre-purchase preferences for owning and renting housing (Reid 2013). In particular, no studies have been conducted that directly link individual perceptions of homeownership as a safe investment and beneficial tenure option to stated intentions to buy.

This paper attempts to fill this gap in the academic literature. The analysis presented below examines what effect, if any, beliefs about the benefits of homeownership have on renters' intentions to buy homes in the future. It also compares this effect with that of economic and socio-demographic characteristics that prior research suggests are important determinants of tenure preferences. The paper begins with a review of the existing literature on decisions about homeownership, noting the paucity of behaviorally driven factors examined in this research. The paper then describes data and methods used to test the hypothesis that individuals who hold strong beliefs about the benefits of homeownership are more likely to expect to own in the future, which is supported by the analysis. It concludes by noting some implications of these findings for future research on tenure decisions.

Literature Review

Economic Determinants

Most of the academic literature on individual tenure decisions[1] (broadly defined as any conclusions reached about housing tenure, including preferences, intentions, and choices)

[1] This review does not include studies of tenure decisions observed at an aggregate level, e.g., by ethnic groups, income levels, or nationality. Summaries of this literature can be found in Gyourko, Linneman,

emphasizes one of three sets of factors assumed to influence decisions about owning and renting housing: economic and financial considerations, socio-demographic characteristics, and psychological and behavioral drivers (Fu 2013). The most common of these is the literature on economic factors, the majority of which is grounded either implicitly or explicitly in the neoclassical economic theory of consumer behavior (Arnott 1997; Megbolugbe, Marks, and Schwartz 1991; Hubert 2007). This theory posits that consumption decisions are the product of preferences for certain goods, given constraints on supply and the resources available to make purchases (Megbolugbe, Marks, and Schwartz 1991). In the case of housing tenure decisions, this theory suggests that decisions about owning versus renting housing are determined by the combination of individual demands for attributes associated with different kinds of tenure, and constraints on an individual's ability to access the desired kind of tenure.

Neoclassical economic theory is predicated on the assumption that individuals are rational decision makers who seek only to maximize the utility derived from their consumption choices (Megbolugbe, Marks, and Schwartz 1991). That utility is often measured in financial terms, e.g., differences in expected user costs or financial returns from owning or renting housing.[2] Neoclassical economics also assumes that preferences for different consumption goods are revealed through observations of actual choices made under known individual and market conditions (Timmermans, Molin, and van Noortwijk 1994; Jansen, Coolen, and Goetgeluk 2011). In studies of tenure decisions, the current tenure status of a household (i.e., the product of tenure choices made in the past) is therefore assumed to reveal tenure preference, while observed economic and socio-demographic characteristics (e.g., income, age, race/ethnicity, educational attainment, marital status, family size and composition) are used as proxies for the types of housing services they need, demand, or can afford (Jones 1989; Boehm 1993; Haurin, Hendershott, and Wachter 1996; Gyourko and Linneman 1996; Gyourko, Linneman, and Wachter 1999; Gabriel and Painter 2003; Haurin and Rosenthal 2004; Di and Liu

---

and Wachter (1999), Deng, Ross, and Wachter (2003), Herbert et al. (2005), Cortes et al. (2007), and Haurin, Herbert, and Rosenthal (2007).

[2] Some economists do concede that non-financial forms of utility may also be gained through tenure choices, such as feelings of pride, security, convenience (Mills 1990). Since these are difficult to observe and quantify, however, they are rarely included in economic analyses of tenure decisions.

2007). Market conditions considered in these studies can also include levels and changes of house prices, interest rates and mortgage qualification requirements, tax rates and deductions for homeowners, and expected capital gains from owned property (Follain and Ling 1988; Goodman 1988; Linneman and Wachter 1989; Haurin 1991; Poterba 1991; Ortalo-Magné and Rady 2002; Sinai and Souleles 2005).

Of course, housing differs from many other consumer choices because it is both an investment and a consumption good (Megbolugbe, Marks, and Schwartz 1991). Henderson and Ioannides (1983) were among the first economists to model the demand for these two functions as determinants of tenure decisions, finding that when an individual's investment demand is at least as great as his consumption demand, owning is preferred to renting. In their model, wealth and income are the primary drivers of these demand functions, with higher-wealth and higher-income consumers having generally greater risk tolerances and thus preferences for owning, with the opposite outcome for those with less wealth and income. Empirical tests have confirmed these theoretical assumptions in the real-life housing demand and tenure decisions of owners and renters (Ioannides and Rosenthal 1994; Brueckner 1997; Frantantoni 1998; Ortalo-Magné and Rady 2002; Sinai and Souleles 2005).

Socio-Demographic Characteristics

The second category of tenure decision literature emphasizes the role of sociology and demography in shaping individual views on owning and renting. These studies differ from the economics literature by emphasizing non-financial motives for buying and renting housing that are not adequately captured in neoclassical models. Chief among these are the socio-demographic characteristics of households, which are viewed as the primary determinants of decisions about owning and renting housing, rather than as static proxies for tenure needs and preferences, as in most neoclassical economics-based research (Andersen 2011). Sociological and demographic studies do acknowledge that economic factors, such as income and wealth, are also relevant to tenure decisions, but downplay the profit and investment aspects of

homeownership in their conceptualizations of the tenure decision making process (Artle and Varaiya 1978).

Many sociological and demographic studies of housing tenure are based on a life-course model, which considers how changes in the characteristics and life stages of households influence their preferences for different housing attributes, including tenure (Dieleman, Clark, and Deurloo 1989; Clark and Dieleman 1996). Central to the life-course model is the idea that households follow a set of overlapping trajectories through different phases of their lives, e.g., their familial, economic, employment, geographic, and personal life cycles (Clark, Deurloo, and Dieleman 2003; Jansen, Coolen, and Goetgeluk 2011). When shifts in any of these trajectories occur, the housing needs and preferences of the household are reevaluated, and may be changed if necessary and feasible. For example, if a household experiences the birth of a child, their need for a larger dwelling could precipitate a move to a new residence. At each change in the housing career, however, a decision must also be made about the preferred tenure of the household given their new circumstances. The need for more space, along with a higher demand for proximity to good schools and family-oriented amenities, may thus encourage the household to buy rather than rent their new home (Clark, Deurloo, and Dieleman 1994; Clark and Dieleman 1996). Other "trigger events" linked to tenure changes in life-course studies include changes in marital status, beginning or ending an employment spell, and income shocks (Morrow-Jones 1988; Clark, Deurloo, and Dieleman 1994; Dieleman, Clark, and Deurloo 1995).

The life-course approach, though more commonly found in European studies (Deurloo, Dieleman, and Clark 1987; Pickles and Davies 1991; Deurloo, Dieleman, and Clark 1997; Mulder and Wagner 1998), does offer some insights into the tenure decisions of U.S. households. Morrow-Jones (1988) uses longitudinal data to model transitions from renting to owning among young adults in the United States, and finds both demographic and social factors to be strongly predictive of such tenure changes. Clark, Deurloo, and Dieleman (1990) similarly conclude that the timing of tenure transitions by American households, with the exception of those at the extremes of the income distribution, are determined largely by demographic factors and prior housing experiences rather than market conditions and economic motives. A subsequent analysis by these authors extends the life-course framework to consider multiple

tenure changes over a household's life span, noting again the relevance of trigger events and changes in household composition to the sequencing of tenure decisions (Clark, Deurloo, and Dieleman 2003). While this analysis confirms the prevailing notion that most tenure sequences follow the "housing-ladder" analogy of continually moving up to larger and better housing, it also reveals exceptions to this pattern, especially among lower-income households that tend to experience more instability in their housing and consequent moves down the ladder over their housing careers.

Behavioral Factors

The third category of studies considers the behavioral and psychological factors that may influence tenure decisions. These studies differ from the economics and sociology/demography literatures by examining individual preferences for buying and renting housing, often prior to or independent of an actual tenure choice. Using mostly small samples and qualitative methods, analysts are able to isolate the demand for owning and renting from the effect of potential constraints on available tenure options, and to identify drivers of that demand that are not well captured in large survey analyses. In particular, behavioral approaches consider how the feelings and desires of individuals for the attributes of owned and rented housing determine their tenure preferences (Fu 2013). These studies do not, however, all share a common disciplinary or theoretical orientation; indeed, many are multidisciplinary, incorporating elements from economics, sociology, demography, and other fields of study

Research on the psychology of tenure decisions in the United States has been, until very recently, rare in the academic literature.[3] Among the few early scholars to study psychological influences on preferences for owning and renting were Morris and Winter (1978), who examined the role that family and social norms play in decisions about housing attributes. Their study identified homeownership as the normative tenure form among American households,

[3] Some research has been conducted on behavioral drivers of preferences for owning and renting housing in non-U.S. contexts (Coolen, Boelhouwer, and van Driel 2002; Ben-Shahar 2007; Arbel, Ben-Shahar, and Gabriel 2012; Fortin, Hill, and Huang 2012), which supports the proposition that such factors may be relevant to the tenure decisions of American households.

who were described as having a "predisposition" towards owning based on family norms for the attributes of owning (i.e., control, stability) and social norms that favored owning over renting. Case and Shiller (1988) also investigated behavioral drivers of tenure decisions, by asking recent homebuyers about the motivations for their purchases. They found that buyers in booming real estate markets reported being influenced in their purchase decisions by the perceived level of excitement for home buying. They also identified a number of social factors that buyers gave as reasons for why their market was booming, including changing demographics and general perceptions of the area as a nice place to live.

Since the end of the 2000s housing boom, more scholars are taking a renewed interest in studying potential social and psychological influences on tenure decisions. Some of these studies are grounded in principles from the field of behavioral economics, which starts from the same utility-maximizing premise as standard neoclassical economic theory, but relaxes some of the restrictive assumptions of the latter that often do not hold in empirical analyses of consumer preferences. One of these assumptions, particularly relevant for the study of tenure decisions, is that individuals make their consumption choices rationally and selfishly, without influence from environmental or external biases (see for example Camerer and Loewenstein 2004). Behavioral economics instead allows for social and behavioral factors to influence decisions, and explains just how such processes operate.

Reid (2013) applies a behavioral economics approach in her qualitative study of low-income American families making the transition from renting to owning. She finds that many of her subjects employed heuristics to understand the financial aspects of their purchases, such as anchoring their house price budget to their current rental costs, relying on advice from peers and "experts," and making assumptions about future price increases based on recent market trends. Bracha and Jamison's (2012) study of tenure preferences after the recent housing boom also uses behavioral finance to explain why individuals with greater exposure to the housing market downturn, measured both by house price declines in their zip code and by their personal experiences with foreclosure, do not have more pessimistic views on the financial benefits of owning versus renting relative to those who were less impacted by the declining housing market.

A study similar to Bracha and Jamison's also considers whether exposure to the effects of the recession and foreclosure crisis was associated with different preferences for owning and renting. Drew and Herbert (2013) use a larger, nationally representative sample surveyed over a longer period, but arrive at similar conclusions; in particular, they find that measures of local market distress (house price declines and high mortgage default rates) and direct knowledge of others in default or foreclosure were unrelated to views on either the financial superiority of owning to renting or the future tenure intentions of survey respondents. Only current homeowners' experience of being underwater on their own mortgage was associated with a lower probability of their expecting to buy in the near future (Drew and Herbert 2013).

While these recent studies offer some interesting new insights into the motivations of individual tenure decisions, none addresses the issue of beliefs as a potential driver of preferences for owning and renting. Only one known study comes close, using a variant of the Theory of Planned Behavior (TPB) (Fishbein and Ajzen 2010) to assess the effect of belief-driven attitudes, norms, and perceptions about homeownership on the home purchase behavior of low- and moderate-income renters. Cohen et al. (2009) find that these indicators of beliefs are actually stronger predictors of home purchase behavior than the socio-demographic and financial characteristics of renters. When intention to own is added as a mediating factor between belief-driven attitudes and actual tenure behavior, however, their analysis reveals significant differences in the effect of intentions on purchases among subsets of the sample by race and income; specifically, the authors find minority and low-income households' intentions are less predictive of behavior, relative to whites and high-income households. They posit that there may be a large disconnect between the low perceived constraints and higher actual constraints on tenure options among minority and low-income respondents (Cohen et al. 2009). The model used by Cohen et al. (2009) serves as a template for the analysis of belief effects on stated tenure intentions in this paper.

Data and Methods

The data used for this study of tenure beliefs and decisions comes from the Fannie Mae National Housing Survey (NHS), a monthly cross-sectional survey of approximately 1,000

respondents, with samples redrawn for each survey iteration (Fannie Mae 2013). Respondents are selected through random digit dialing of phone numbers, 25 percent of which are cell phones, to produce a nationally-representative sample. The 200-plus questions asked in the NHS cover a wide range of housing-related issues, including current housing situation, prior housing market experiences, expectations for future housing market performance, and personal views on different housing options.

This study uses a subsample of the NHS data to assess whether beliefs about the benefits of homeownership are related to intentions to buy in the future. The subsample includes 1,487 renters who were between twenty-five and sixty-four years old when surveyed, and who plan to change residences at some point in the future. Owners, who have already demonstrated a preference for owning over renting, are excluded from the analysis, as are respondents who indicate no intentions to move in the future. Respondents who are under twenty-five years old and over sixty-four years old are also excluded, as these age groups are more likely to have housing and affordability needs that limit their tenure options. Finally, the sample is restricted to respondents surveyed between January and December 2011, due to changes in the NHS questionnaire that introduced some variables relevant to this analysis after 2010, and eliminated others at the start of 2012.

The tenure decision variable used in this research is a composite of two NHS questions that ask about intentions to buy or rent housing in the future. The first question asks all respondents, “If you were to move, would you be more likely to buy or rent your next residence?” Those that reply “rent” are then asked a second question: “In the future, are you more likely to…” with response options “always rent,” “buy at some point in the future,” or “don’t know.” Respondents who reply to either question that they are more likely to buy are coded with a value of one, while respondents who say they will either always rent or do not know their future tenure plans are coded with a value of zero. **Table 1** shows response frequencies for this variable, overall and cross-tabulated with most of the explanatory variables used in the analyses below.

Two sets of variables are used in this research as measures of beliefs in the benefits of homeownership. The first is based on a question in the NHS that asks respondents to choose

the statement that is closer to their view about the financial outcomes associated with owning and renting, which provides a proxy measure of individual beliefs in the financial benefits of homeownership. Those that choose the statement "Owning makes more sense because you're protected against rent increases and owning is a good investment over the long term" are coded for this variable with a value of one, while those that agree with the statement "Renting makes more sense because it protects you against house price declines and is actually a better deal than owning," along with those that do not know which statement is closer to their view, are coded with a value of zero.

The second set of variables reflecting beliefs in the benefits of homeownership are derived from an NHS question that asks respondents for their opinions on why people buy homes, listing fifteen reasons that respondents can rate as a "major reason," "minor reason," "not at all a reason," or "don't know." These reasons, shown in **Table 2,** include a range of financial, personal, social, and familial benefits associated with owning. The top four reasons, with more than two thirds of all respondents rating them as major reasons to buy, all refer to lifestyle benefits of owning: having a good place to raise children, a physical structure that feels safe, more control over the use and alteration of the living space, and more space for families. Each of these four reasons is converted into a binary variable, with respondents who state that the presumed outcome is a "major reason" to buy coded with a value of one, and all other respondents coded with a value of zero. These four variables are proxy measures of the strength of individual beliefs in the non-financial benefits of homeownership.

Beliefs about the benefits of homeownership are not the only ones that matter to tenure decisions, however. Cohen et al. (2009) demonstrate that beliefs about the perceived constraints on tenure options are also relevant. Two questions in the NHS capture this type of belief, by asking respondents about their self-perceived ability to qualify for a mortgage and the amount of financial sacrifice respondents think they would need to make to buy a house. Both these questions are assessed on a 4-point Likert scale, with responses ranging from "very easy" to "very difficult" to qualify for a mortgage, and from "none" to "a lot" of sacrifice required to buy. Responses to these questions are converted to categorical dummy variables for the four

self-assessments options, with one response from each question excluded from the analysis as a reference group.

Also included in the analysis are control variables that capture the socio-demographic, economic, and experiential characteristics of respondents in the subsample, which the literature summarized above suggests are also related to tenure preferences. These include respondents' race/ethnicity, marital status, employment status, age, presence of children in the household, income, total household debt, and satisfaction with their renting experience. These variables are converted from NHS question responses into categorical dummy variables, with one response for each category excluded from the analysis as a reference group. The distribution of these variables within the sample, as well as the share of respondents within each category expressing an intention to buy in the future, are shown in **Table 1**.

Multicollinearity among all these variables does not appear to be a concern for this study. Tetrachoric correlations on these binary variables (not shown) suggest generally low levels of bivariate associations, with correlation coefficients below 0.4 for nearly all variable pairs not within the same category. The exception is among the belief variables, some of which are more highly correlated (0.54-0.56) with each other. The belief variables are thus all assessed in separate models in the analyses below.

Analyses and Findings

The analyses of the binary tenure intentions variable use a logistic regression method to assess the probability that a particular outcome will occur given the explanatory variables (Liao 1994).[4] The results of these models are reported below as odds ratios, which are the exponentiated regression coefficients of the explanatory variables. Odds ratios represent the estimated difference in the odds that the dependent variable equals one given a one-unit increase in the explanatory variable, or in the case of binary explanatory variables, given that an

[4] A three-category version of the stated-intentions-to-buy dependent variable, with the "always rent" and "don't know" responses coded separately, was also tested using a multinomial logistic regression (Liao 1994). Because the results of the multinomial regression were not much different from the binomial logistic model, with regression coefficients and variable significance levels on the buy vs. always rent comparison in the multinomial model similar to those in the binomial (buy vs. rent/don't know), only the results from the simpler binomial model are shown.

observation exhibits the indicated characteristic, relative to observations in the excluded reference group for that category. Subtracting one from the odds ratio and multiplying it by 100 gives the estimated percent difference in the odds of intending to buy; odds ratios greater than one thus suggest a higher likelihood of intending to buy, and ratios less than one suggest a lower likelihood (Liao 1994).

The five regression models evaluate the effect of each belief variable on intentions to buy a home in the future, controlling for the personal characteristics of respondents. Results of these models, shown in **Table 3**, indicate that beliefs are important drivers of expectations to purchase a home, with all five of the belief variables statistically significant. The high odds ratios on these variables, meanwhile, suggests that even after accounting for a range of personal characteristics, respondents who believe in these benefits of owning have between 70 percent and 280 percent greater odds of expecting to own in the future than those who do not hold such beliefs. These findings confirm that beliefs influence tenure intentions independent of personal characteristics, and support the hypothesis that individuals with strong beliefs in the benefits of homeownership are more likely to expect to buy homes in the future.

While beliefs in the benefits of owning are clear indicators of tenure intentions, many of the personal characteristics assessed in the analyses also appear to be relevant to future tenure plans. Age in particular appears to be a strong driver of expectations for purchasing a home in the future, with especially high odds ratios estimated for young renters (25-34 years old), who may perceive a longer time horizon in which to achieve their goal of owning a home, relative to those in the excluded age category (55-64 years old). Older renters may also be more jaded by their observations of, and past experiences with, housing markets, and/or less optimistic about their prospects for owning in the not-too-distant future. Black and Hispanic respondents also have statistically significant differences in their stated intentions to buy a home, relative to white respondents, despite the association observed between race and beliefs in the first set of regressions. Unsurprisingly, minorities have higher odds of expecting to own in the future, reflecting their stronger beliefs in the benefits of homeownership.

With respect to the financial conditions of renter respondents, those with higher incomes have greater odds than low-income respondents (under $25,000) of intending to buy

in the future, though the effect tails off or is insignificant among those with at least $100,000 in annual family income. This may indicate that low-income renters perceive more long-term barriers to becoming homeowners, even after accounting for their mortgage qualifications and the financial sacrifice required to own. The level of household debt, however, does not appear to be significantly related to tenure intentions, which is somewhat surprising given growing concerns about high levels of student debt impeding the long-term homeownership prospects of many young adults (Couch 2013). Employment status is also not significant in any of the models.

The variable for the presence of children in the household is significant in three of the five models (those assessing beliefs in the financial, safety, and control benefits of homeownership), which suggests that family can still be an important consideration for aspiring owners, even when controlling for these beliefs. Marital status, meanwhile, is not significant in any of the models, though this does not necessarily indicate that marriage is not relevant to intentions to own; some would-be owners may not be married at the moment, but may expect to be when they purchase homes in the future.

Along with the findings about socio-demographic and financial characteristics, the model results also show that respondents' experiences with renting are significantly related to expectations for buying in the future. In particular, these findings suggest that renters who report having negative or only somewhat positive experiences have higher odds of expecting to own than those with very positive experiences. Indeed, renters with very negative experiences have odds of future homeownership that are 154-217 percent greater. This finding is not surprising, particularly when considered through the life course view of tenure decisions, which suggests prior experiences with housing tenure are important determinants of desires to own or rent (Clark, Deurloo, and Dieleman 1990; van Ham 2012). It may also indicate that positive renting experiences can offset some of the social bias in favor of owning among Americans.

The last two sets of variables in the tenure intention models consider the effect of perceived constraints on the ability of respondents to become owners in the future. The results show that expectations of financial sacrifices needed to own are relevant to future tenure plans, with respondents reporting that "some" or "not much" sacrifice would be required

having greater odds of intending to buy relative to those expecting "a lot" of financial sacrifice (the reference category). Interestingly, respondents who report expecting that no sacrifice would be needed to own actually have lower odds of intending to buy in the model with the financial belief variable, and insignificant coefficients in the four models with lifestyle beliefs. This result is surprising and may be worth further inspection. The variables for perceived ability to qualify for a mortgage, meanwhile, are not significant in any of the models. This result may be due to a temporal mismatch between the NHS questions about tenure intentions, which ask about plans to buy in some unspecified, potentially distant time frame, and the mortgage qualification question based on current financial conditions. Thus, renters who would not qualify for a home loan at present may expect to be in a better position to buy a home several years from now.

All told, the findings of the regression analyses confirm that tenure decisions are complex processes influenced by a wide range of personal, financial, and behavioral factors. Of primary interest to this study are the results on the belief variables, which indicate a strong behavioral element to expectations about owning in the future. This finding supports the hypothesis that individuals who hold strong beliefs in the benefits of homeownership are more likely to expect to own in the future. The results of the personal characteristic variables, meanwhile, demonstrate that beliefs are only part of the tenure decision process, and that age, income, race/ethnicity, prior experiences, and some perceived constraints on tenure options are also important determinants, which is consistent with prior economic and socio-demographic research on tenure determinants.

Implications and Limitations

The findings of the analysis of belief effects on intentions to buy or rent housing have some potentially important implications for academic research on tenure decisions. First, the finding that behavioral factors are among the strongest determinants of views on owning and renting suggests that housing researchers should account for these drivers in their analyses. This means using datasets that collect information on the views and preferences of individuals for owning and renting housing, and encouraging more surveys to ask questions that capture

these important determinants. More information on behavioral influences would both greatly enhance what is known about how individuals make decisions about their tenure, as well as invite new inquiry into the origins of such beliefs themselves.

This research makes a second contribution to existing scholarship through its examination of stated intentions to buy and rent housing, rather than of observed tenure status (i.e., the product of tenure choices made in the past). Very few studies of tenure decisions in the United States have considered the pre-choice tenure decisions of households, which are less influenced by external constraints on tenure options. Stated intentions are thus better measures of whether people prefer to own or rent their housing, independent of the economic, market, or policy conditions they face when buying or renting. By explicitly assessing pre-purchase intentions, therefore, this research provides one of the first glimpses into what Americans *want*, rather than what they *do*, with respect to their housing tenure preferences. To better understand what encourages action on tenure choices, as well as what inhibits those who want to own from doing so, more research should take this approach.

It is important to note, however, some limitations of this research on tenure decisions. For one, the analysis is restricted to renters, some of whom will likely face constraints on their tenure options in the future. It is assumed, however, that the unspecified time frame for future tenure decisions implied in the question about tenure intentions mitigates any potential short-term constraints on these renters' ability to buy. Moreover, the high percentage of renters in the subsample that expect to buy – including more than three quarters of those with incomes under $25,000, those who think they would have a very hard time qualifying for a mortgage, and those who expect they would have to make a lot of financial sacrifice to own – suggests that few of these respondents perceive long-term barriers to owning. Another limitation of the analysis is the time frame it covers, which follows a period of decline in housing markets and the national economy; this decline may have temporarily influenced the views of some respondents. A recent study using the same data from the NHS, however, finds little evidence of a fundamental change in preferences for owning over renting as a consequence of recent market events (Drew and Herbert 2013). The model is also limited by the high share of sample respondents that report intentions to buy a house in the future, which leaves only a small

amount of variation to explain with the variables included in the model. It is likely that the small share of respondents who expect to always rent have idiosyncratic tastes that are not captured by the limited demographic and personal experience variables available from the NHS. Further research on the minority of Americans who do not have strong intentions to buy would be useful for unpacking the potential drivers of such views. Despite these few limitations, however, the results above suggest some important findings about the effect of beliefs on decisions about owning and renting housing.

Conclusion

This paper describes the rationale, data, methods, and findings of recent analysis of the tenure decisions of renter households following the recent housing market downturn. Specifically, this analysis tests whether beliefs about homeownership appear to influence stated intentions to buy a house in the future. The logistic regression models used to estimate these effects provide clear support for the hypothesis that individuals with strong beliefs in the benefits of homeownership are more likely to expect to buy in the future than those without such beliefs. The results of the analysis show that these expressions of beliefs are not only significant in the statistical analyses, but have odds ratios that rate them among the most predictive factors of intentions to buy a home. Thus, regardless of a renter's race, age, income, marital status or family composition, their beliefs in the benefits of owning are still indicative of whether they expect to buy or always rent in the future.

References

Andersen, H. S. 2011. "Motives for Tenure Choice during the Life Cycle: The Importance of Non-economic Factors and Other Housing Preferences." *Housing, Theory and Society* 28, no. 2: 183-207.

Apgar, W. 2004. "Rethinking Rental Housing: Expanding the Ability of Rental Housing to Serve as a Pathway to Economic and Social Opportunity." Working Paper W04-11. Cambridge, MA: Joint Center for Housing Studies, Harvard University.

Arbel, Y., D. Ben-Shahar, and S. Gabriel. 2012. "Anchoring and Housing Choice: Results of a Natural Policy Experiment." Working Paper. Los Angeles: UCLA Ziman Center for Real Estate.

Arnott, R. 1997. "Economic Theory and Housing." In *Handbook of Regional and Urban Economics*, vol. II, edited by E.S. Mills, 959-88. New York: Elsevier Science Publishing.

Artle, R., and P. Varaiya. 1978. "Life Cycle Consumption and Homeownership." *Journal of Economic Theory* 18, no. 1: 38–58.

Belsky, E.S. 2013. "The Dream Lives On: The Future of Homeownership in America." Working Paper W13-1. Cambridge, MA: Joint Center for Housing Studies, Harvard University.

Belsky, E. S., and R.B. Drew,. 2008. "Rental Housing Challenges and Policy Responses." In *Revisiting Rental housing: Policies, Programs, and Priorities*, edited by N.P. Retsinas and E.S. Belsky, 14-56. Washington: Brookings Institute Press.

Ben-Shahar. D. 2007. "Tenure Choice in the Housing market: Psychological versus Economic Factors." *Environment and Behavior* 39, no. 6: 841-58.

Boehm, T. P. 1993. "Income, Wealth Accumulation, and First Time Homeownership: An Intertemporal Analysis." *Journal of Housing Economics* 3, no. 1: 217–32.

Bracha, A., and J.C. Jamison. 2012. "Shifting Confidence in Homeownership: The Great Recession." *The B.E. Journal of Macroeconomics* 12, no. 3: 1-46.

Brueckner, J. 1997. "Consumption and Investment Motives and the Portfolio Choices of Homeowners." *Journal of Real Estate Finance and Economics* 15, no. 2: 159-80.

Camerer, C. F., and G. Loewenstein. 2004. "Behavioral Economics: Past, Present, and Future". In *Advances in Behavioral Economics*, edited by C.F. Camerer, G. Loewenstein, and M. Rabin, 3-51. Princeton: Princeton University Press.

Carliner, M. S. 1998. "Development of Federal Homeownership 'Policy.'" *Housing Policy Debate*

9, no. 2: 299-321.

Case, K. E., and R.J. Shiller. 1988. “The Behavior of Home Buyers in Boom and Post-Boom Markets.” *New England Economic Review* (November/December): 29-46.

Clark, W. A. V., M.C. Deurloo, and F.M. Dieleman. 1990. “Household Characteristics and Tenure Choice in the US Housing Market.” *Journal of Housing and the Built Environment* 5, no. 3: 251-70.

———. 1994. “Tenure Changes in the Context of Micro-Level Family and Macro-Level Economic Shifts.” *Urban Studies* 31, no. 1: 137-54.

———. 2003. “Housing Careers in the United States: Modeling the Sequencing of Housing States.” *Urban Studies* 40, no. 1: 143-60.

Clark, W. A. V., and F.M. Dieleman. 1996. *Households and Housing: Choice and Outcomes in the Housing Market*. New Brunswick, NJ: Center for Urban Policy Research, Rutgers University.

Cohen, T. R., M.R. Lindblad, J.G. Paik, and R.G. Quercia. 2009. “Renting to Owning: An Exploration of the Theory of Planned Behavior in the Homeownership Domain.” *Basic and Applied Social Psychology* 31, no. 4: 376-89.

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, no. 3: 215–36.

Cortes, A., C.E. Herbert, E. Wilson, and E. Clay. 2007. “Factors Affecting Hispanic Homeownership Rates: A Review of the Literature.” *Cityscape* 9, no. 2: 53-91.

Couch, R.M. 2013. “The Great Recession’s Most Unfortunate Victim: Homeownership.” Working Paper 13-1. Cambridge, MA: Joint Center for Housing Studies, Harvard University.

Cullen, J. 2003. *The American Dream: A Short History of an Idea that Shaped a Nation*. New York: Oxford University Press.

Deng, Y., S.L. Ross, and S.M. Wachter. 2003. “Racial Differences in Homeownership: The Effect of Residential Location.” *Regional Science and Urban Economics* 33, no. 5: 517-56.

Deurloo, R.C., F.M. Dieleman, and W.A.V. Clark. 1987. “Tenure Choice in the Dutch Housing Market.” *Environment and Planning A* 19: 763–81.

———. 1997. “Tenure Choice in the German Housing Market: A Competing Risks Model.” *Tijdschrift voor Economische en Sociale Geografie* 88, no. 4: 321–31.

Di, Z.X., E.S. Belsky, and X. Liu. 2007. “Do Homeowners Achieve More Household Wealth in the Long Run?” *Journal of Housing Economics* 16: 274-90.

Di, Z.X., and X. Liu. 2007. “The Importance of Wealth and Income in the Transition to Homeownership.” *Cityscape* 9, no. 2: 137-52.

Dickerson, A.M. 2009. “The Myth of Home Ownership and Why Home Ownership is Not Always a Good Thing.” *Indiana Law Journal* 84, no. 1: 189-237.

Dieleman, F.M., W.A.V. Clark, and M.C. Deurloo. 1989. “A Comparative View of Housing Choices in Controlled and Uncontrolled Housing Markets.” *Urban Studies* 26, no. 5: 457-68.

Dieleman, F. M., W.A.V. Clark, and M.C. Deurloo. 1995. “Falling out of the Home Owner Market.” *Housing Studies* 10, no. 1: 3–15.

Dietz, R.D., and D.R. Haurin, D. R. 2003. “The Social and Private Micro-Level Consequences of Homeownership.” *Journal of Urban Economics* 54, no. 3: 401-50.

DiPasquale, D., and E.L. Glaeser. 1999. “Incentives and Social Capital: Are Homeowners Better Citizens?” *Journal of Urban Economics* 45, no. 2: 354-84.

Drew, R. B., and C. Herbert. 2013. “Post-Recession Drivers of Preferences for Homeownership.” *Housing Policy Debate* 23, no. 4: 666-87.

Fannie Mae. 2013. National Housing Survey – Technical Notes. www.fanniemae.com/resources/file/research/housingsurvey/pdf/nhstechnicalnotes.pdf .

Fishbein, M., and I. Ajzen. 2010. *Predicting and Changing Behavior: The Reasoned Action Approach*. New York: Psychology Press.

Follain, J.R., and D.C. Ling. 1988. “Another Look at Tenure Choice, Inflation, and Taxes.” *Real Estate Economics* 16, no. 3: 207-29.

Fortin, N.M., A.J. Hill, and J. Huang. 2012. “Superstition in the Housing Market.” Working Paper. Vancouver: University of British Columbia.

Fratantoni, M.C. 1998. “Homeownership and Investment in Risky Assets.” *Journal of Urban Economics* 44, no. 1: 27–42.

Fu, K. 2013. “A Review of Housing Tenure Choice.” In *Proceedings of the 17th International Symposium on Advancement of Construction Management and Real Estate*, edited by J. Want, Z. Ding, L. Zou, and J. Zuo, 351-60. Berlin: Springer.

Gabriel, S., and G. Painter. 2003. “Pathways to Homeownership: An Analysis of the Residential Location and Homeownership Choices of Black Households in Los Angeles.” *Journal of Real Estate Finance and Economics* 27, no. 1: 87-109.

Goodman, A.C. 1988. “An Econometric Model of Housing Price, Permanent Income, Tenure Choice, and Housing Demand.” *Journal of Urban Economics* 23, no. 3: 327-53.

Gyourko, J., and P. Linneman. 1996. “Analysis of the Changing Influences on Traditional Households' Ownership Patterns.” *Journal of Urban Economics* 39, no. 3: 318-41.

Gyourko, J., P. Linneman, and S.M. Wachter. 1999. “Analyzing the Relationships among Race, Wealth, and Home Ownership in America.” *Journal of Housing Economics* 8, no. 2: 63-89.

Haurin, D.R. 1991. “Income Variability, Homeownership, and Housing Demand.” *Journal of Housing Economics* 1, no. 1: 60-74.

Haurin, D.R., P.H. Hendershott, and S. Wachter. 1996. “Borrowing Constraints and the Tenure Choice of Young Households.” *Journal of Housing Research* 8, no. 2: 137-54.

Haurin, D.R., C.E. Herbert, and S.S. Rosenthal. 2007. “Homeownership Gaps among Low-Income and Minority Households.” *Cityscape* 9, no. 2: 5-51.

Haurin, D.R. and S.S. Rosenthal. 2004. *The Sustainability of Homeownership: Factors Affecting the Duration of Homeownership and Rental Spells*. Washington: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Henderson, J.V., and Y.M. Ioannides. 1983. “A Model of Housing Tenure Choice.” *American Economic Review* 73, no. 1: 98-113.

Herbert, C.E., D.R. Haurin, S.S. Rosenthal, and M. Duda. 2005. *Homeownership Gaps among Low Income and Minority Borrowers and Neighborhoods.* Washington: U.S. Department of Housing and Urban Development.

Hubert, F. 2007. “The Economic Theory of Housing Tenure Choice.” In *A Companion to Urban Economics*, edited by R.J. Arnott and D.P. McMillen, 145-58. Oxford: Blackwell.

Ioannides, Y.M., and S.S. Rosenthal. 1994. “Estimating the Consumption and Investment Demands for Housing and their Effect on Housing Tenure Status.” *Review of Economics and Statistics* 76, no. 1: 127-41.

Jansen, S.J.T., H. Coolen, and R.W. Goetgeluk. 2011. *Measurement and Analysis of Housing Preference and Choices.* New York: Springer

Jones, L.D. 1989. “Current Wealth and Tenure Choice.” *Real Estate Economics* 17, no. 1: 17-40.

Lands, L. 2008. “Be a Patriot, Buy a Home: Re-imagining Homeowners and Homeownership in Early 20th Century Atlanta.” *Journal of Social History* 41, no. 4: 943-65.

Liao, T.F. 1994. *Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models*. London: Sage Publications.

Linneman, P., and S. Wachter. 1989. “The Impacts of Borrowing Constraints on Homeownership.” *Real Estate Economics* 17, no. 4: 389-402.

Megbolugbe, I.F., A.P. Marks, and M.B. Schwartz. 1991. “The Economic Theory of Housing Demand: A Critical Review.” *Journal of Real Estate Research* 6, no. 3: 381-93.

Mills, E.S. 1990. “Housing Tenure Choice.” *The Journal of Real Estate Finance and Economics* 3, no. 4: 323-31.

Morris, E.W., and M. Winter. 1978. *Housing, Family, and Society*. New York: Wiley.

Morrow-Jones, H.A. 1988. “The Housing Life Cycle and the Transition from Renting to Owning a Home in the United States: A Multistate Analysis.” *Environment and Planning A* 20, no. 9: 1165-84.

Mulder, C.H., and M. Wagner. 1998. “First-Time Homeownership in the Family Life Course: A West German-Dutch Comparison.” *Urban Studies* 35, no. 4: 687–713.

Ortalo-Magné, F., and S. Rady. 2002. “Tenure Choice and the Riskiness of Non-Housing Consumption.” *Journal of Housing Economics* 11, no. 3: 266-79.

Pickles, A.R., and R.B. Davies. 1991. “The Empirical Analysis of Housing Careers: A Review and a General Statistical Modeling Framework.” *Environment and Planning A* 23, no. 4: 465-84.

Poterba, J. M. 1991. “Taxation and Housing Markets: Preliminary Evidence on the Effects of Recent Tax Reforms.” NBER Working Paper No. 3270. Cambridge, MA: National Bureau of Economic Research.

Reid, C. 2013. “To Buy or Not to Buy? Understanding Tenure Preferences and the Decision-Making Processes of Lower-Income Households.” Working Paper HBTL-14. Cambridge, MA: Joint Center for Housing Studies, Harvard University.

Rohe, W. M., and M. Lindblad. 2013. “Re-examining the Social Benefits of Homeownership after the Housing Crisis.” Working Paper HBTL-04. Cambridge, MA: Joint Center for Housing Studies, Harvard University.

Rohe, W. M., S. van Zandt, and G. McCarthy. 2002. “Social Benefits and Costs of Homeownership.” In *Low-income homeownership: Examining the unexamined goal*, edited by N.P. Retsinas and E.S. Belsky, 381-406. Washington: Brookings Institute Press.

Ronald, R. 2008. *The Ideology of Home Ownership: Homeowner Societies and the Role of Housing.* Hampshire: Palgrave Macmillan.

Shlay, A.B. 2006. “Low-Income Homeownership: American Dream or Delusion?” *Urban Studies* 43, no. 3: 511-31.

Sinai, T., and N.S. Souleles. 2005. “Owner-Occupied Housing as a Hedge against Rent Risk.” *The Quarterly Journal of Economics* 120, no. 2: 763-89.

Timmermans, H., E. Molin, and L. van Noortwijk. 1994. “Housing Choice Processes: Stated versus Revealed Modeling Approaches.” *Netherlands Journal of Housing and the Built Environment* 9, no. 3: 215-27.

van Ham, M. 2012. “Housing Behavior.” In *The Sage Handbook of Housing Studies*, edited by D.F. Clapham, W.A.V. Clark, and K. Gibb, 47-65. London: Sage Publications.

Table 1: Variables Included in Analysis, by Share that Expect to Rent/Buy in the Future, and as Shares of the Subsample

Future Tenure Intentions		**Rent/DK**	**Buy**	**Total**
Total Respondents in Subsample (#)		263	1,224	1,487
Percent of Subsample (%)		17.7	82.3	100.0
		% response		***% of sample***
Better tenure financially (***financial***	Renting/DK*	35.5	64.5	*25.0*
	Owning	11.7	88.3	*75.0*
Race/Ethnicity	White*	21.2	78.8	*48.2*
	Black	14.4	85.6	*20.6*
	Hispanic	13.4	86.6	*22.6*
	Other/DK	17.2	82.8	*8.6*
Marital Status	Married	14.1	85.9	*43.5*
	Unmarried*	21.0	79.0	*52.7*
Employment Status	Full time	14.7	85.3	*55.2*
	Part time	18.7	81.3	*13.3*
	Not employed*	22.9	77.1	*26.1*
Age	25-34	11.6	88.4	*39.9*
	35-44	13.5	86.5	*28.4*
	45-54	25.4	74.6	*20.9*
	55-64*	36.3	63.8	*10.8*
Children in the household	No*	21.9	78.1	*50.4*
	Yes	13.4	86.6	*49.6*
Income	Less than $25,000*	23.6	76.4	*35.9*
	$25,000-$49,999	14.4	85.6	*30.3*
	$50,000-$99,999	11.4	88.6	*21.3*
	$100,000+	14.7	85.3	*6.4*
Total Debt	Less than $10,000*	20.3	79.7	*50.4*
	$10,000 - $49,999	14.7	85.3	*27.9*
	$50,000+	15.7	84.3	*6.0*
Good experience renting?	Very positive*	21.9	78.1	*32.5*
	Somewhat positive	15.3	84.7	*46.5*
	Somewhat negative	16.2	83.8	*13.7*
	Very negative	11.5	88.5	*5.2*
How much sacrifice to own?	A lot*	21.1	78.9	*51.5*
	Some	12.5	87.5	*30.1*
	Not very much	9.2	90.8	*10.3*
	None at all	26.8	73.2	*6.5*
Hard to get a mortgage?	Very easy	15.2	84.8	*7.5*
	Somewhat easy	11.4	88.6	*19.4*
	Somewhat difficult	17.3	82.7	*35.4*
	Very difficult*	21.2	78.8	*35.8*

Note: Variables indicated with an asterisk (*) are excluded from the regression analyses as reference categories.

Table 2: "Reason to Buy" Variables, by Share that Expect to Rent/Buy in the Future, and by Percent of the Subsample Reporting "Major Reason" to Buy

Future Tenure Intentions	**Rent/ DK**	**Buy**	*% of sample*
It means having a good place to raise children and provide them with a good education (***children belief***)	15.0	85.0	*76.0*
You have a physical structure where you and your family feel safe (***safety belief***)	14.2	85.8	*74.6*
It allows you to have more space for your family (***space belief***)	15.3	84.7	*73.4*
It gives you control over what you do with your living space, like renovations and updates (***control belief***)	14.7	85.3	*68.0*
Owning a home is a good way to build up wealth that can be passed along to my family	14.4	85.6	*61.8*
It allows you to live in a nicer home	15.4	84.6	*60.4*
It is a good retirement investment	14.5	85.5	*58.2*
Buying a home provides a good financial opportunity	13.3	86.7	*57.5*
Paying rent is not a good investment	12.6	87.4	*57.4*
It allows you to live in a more convenient location that is closer to work, family, or friends	17.0	83.0	*48.6*
It allows you to select a community where people share your values	15.0	85.0	*48.3*
Owning a home provides tax benefits	14.8	85.2	*48.0*
It's a symbol of your success or achievement	14.0	86.0	*37.0*
Owning a home gives me something I can borrow against if I need it	15.9	84.1	*35.5*
It motivates you to become a better citizen and engage in important civic activities	13.9	86.1	*27.6*

Note: The NHS asks respondents to rate each of these reasons as a "major reason," "minor reason," "not at all a reason," or "don't know." The percent of sample figures in the right-most column indicate the share of respondents in the analytical sample that rate each as a major reason. The top four reasons (children, safety, space, control) are included in the models as measures of the strength of individual beliefs in these benefits.

Table 3: Odds Ratios from Regression Models with Tenure Intentions as the Dependent Variable (N=1,487)

Type of Benefit (Explanatory Variable in Model)		General Financial	Better for Children	Safe Place to Live	Control over Living Space	More Space
Other Explanatory Variables						
Type of Benefit	General financial	**3.80***	--	--	--	--
	Better for children	--	**1.77***	--	--	--
	Safe place to live	--	--	**1.70***	--	--
	Control over space	--	--	--	**1.90***	--
	More space	--	--	--	--	**2.33***
Race/ Ethnicity	Black	**2.11***	**2.08***	**2.11***	**2.17***	**2.05***
	Hispanic	**1.71***	**1.80***	**1.80***	**1.86***	**1.74***
	Other race	1.15	1.10	1.15	1.18	1.12
Marital	Married	1.30	1.27	1.27	1.28	1.27
Employment Status	Full time	1.12	1.09	1.11	1.08	1.09
	Part time	1.05	1.05	1.04	1.05	1.08
Age	25-34	**3.85***	**3.65***	**3.64***	**3.90***	**3.94***
	35-44	**2.93***	**2.94***	**2.87***	**2.98***	**3.12***
	45-54	**1.60***	**1.51***	**1.45***	**1.52***	**1.63***
Children in	Yes	**1.32***	1.26	**1.31***	**1.33***	1.30
Income	$25,000-$49,999	**1.50***	**1.52***	**1.55***	**1.57***	**1.55***
	$50,000-$99,999	**2.20***	**2.20***	**2.20***	**2.15***	**2.23***
	$100,000+	**1.90***	1.67	**1.80***	1.62	**1.93***
Debt	$10,000-$49,999	1.18	1.25	1.22	1.24	1.23
	$50,000+	0.99	1.02	1.04	0.98	0.94
Experience Renting	Somewhat positive	**1.39***	**1.53***	**1.60***	**1.56***	**1.57***
	Somewhat negative	1.28	**1.53***	**1.52***	**1.51***	1.46
	Very negative	**2.54***	**3.17***	**3.15***	**3.12***	**3.00***
Sacrifice Needed to Own	Some	**1.44***	**1.68***	**1.64***	**1.68***	**1.70***
	Not very much	**2.50***	**2.68***	**2.59***	**2.70***	**2.66***
	None at all	**0.59***	0.69	0.69	0.74	0.69
Ability to Get Mortgage	Very easy	1.31	1.23	1.25	1.24	1.22
	Somewhat easy	1.21	1.30	1.30	1.26	1.25
	Somewhat difficult	1.00	0.97	0.98	0.98	0.98
Pseudo R2		*0.17*	*0.12*	*0.12*	*0.13*	*0.13*

Note: Odds ratios are the estimated difference in the odds that a respondent with the characteristic indicated by the explanatory variable intends to buy, relative to the excluded reference group for that category. Subtracting 1 from the odds ratio and multiplying by 100 gives the percent difference in odds. Odds ratios indicated with an asterisk (*) have coefficients that are significant at the 10-percent level, both individually and jointly with the other variables in that category.