



OWNING A HOME OR TWO: AN ANALYSIS OF THE FINANCIAL AND BEHAVIOURAL DETERMINANTS OF SINGLE VERSUS MULTIPLE PROPERTY OWNERSHIP IN THE U.S. PRE- AND POST-COVID

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ABSTRACT

This study investigates behavioural and financial determinants of single versus multiple property ownership in the United States before and after COVID-19. Using nationally representative Survey of Consumer Finances data from 2019 and 2022, we examine how risk tolerance, financial literacy, and financial confidence influence these ownership outcomes. Results reveal shifts across the two periods, with education and ethnicity assuming different roles over time. Unlike prior work focused solely on homeownership, this paper compares determinants of multiple and single property ownership across contrasting economic contexts, offering insights for financial planners advising clients on complex housing and investment decisions.



Introduction

The transition from non-homeowner to homeowner may signal increased economic mobility, particularly in the U.S., where homeownership has long been romanticised as a symbol of personal independence and prosperity. This association has persisted despite growing recognition of the legal and social constraints that limit true ownership (Carswell 2024). While studies have explored homeownership and real estate investment motives (Goodman & Mayer 2018; Kemp 2020), few have examined how these determinants differ before and after the COVID-19 pandemic using national representative data. There has been increased interest in multiple property ownership (MPO; Kemp 2020), as more consumers see real estate as an investment (Fernandez et al. 2016) and MPO's relationship to social stratification (Forrest & Hirayama 2018).

From a financial-planning perspective, decisions about acquiring a second or third property are more complex than those for first-time homeownership. Advisors must evaluate whether clients' financial literacy, confidence, and risk tolerance align with the risks of carrying additional debt and managing multiple assets. Comparing the determinants of multiple property ownership before and after COVID-19 provides a natural experiment to understand how households adapt financial decisions in changing economic contexts, offering insights that financial planners can apply directly in client counselling and education.

While MPO was growing in the years leading up to 2020, evidence indicates that the pandemic spurred additional property ownership. For example, in England, researchers found that the pandemic spurred the purchase of multiple homes as wealthier households sought second homes in rural areas (Gallent & Madeddu 2021). Favourable homebuying conditions in 2020 and 2021 (e.g., lower prices and interest rates) also contributed to a rise in MPO in the UK (Gallent et al. 2023). However, research has not examined how the factors that determine whether someone is likely to purchase additional properties have changed from the pre-pandemic period to today, especially in the U.S. There is evidence, however, that the landscape of homeownership changed during this period. Homeownership surged in 2020–2021 under low interest rates but cooled as rates rose in 2022, leaving affordability concerns that may influence MPO (Beck & Petry 2023; Joint Center for Housing Studies 2024).

While it is difficult to pinpoint precisely how MPO has changed, the National Association of Home Builders reported that the number of second homes in the U.S. declined from 7.15 million in 2020 to 6.5 million in 2022 (Zhao 2024). While MPO is often associated with purchasing an additional home, there may be other types of properties and different motivations for buying multiple properties. MPOs can provide a variety of interests, such as investment opportunities (Kadi et al. 2020), secondary residences, including vacation homes for urban dwellers or part-time homes for commuters (Carliner 2002; Stiman 2020), or housing for employees or family members (Kemp 2020).

This study examines whether differences exist in the attributes that make individuals more likely to own one versus multiple properties. Understanding the factors that drive MPO is crucial to fully comprehending the complexity of the housing market, wealth accumulation among households, and social inequality (Kadi et al. 2020; Kemp 2020). When people buy additional properties, this can have significant implications for housing affordability and supply. MPO, therefore, can be seen as a mechanism for increased economic mobility or increased economic stratification. Studying the factors that drive MPO can aid researchers and policymakers in



identifying how behavioural, attitudinal, and financial factors shape property-purchasing decisions. Comparing these determinants pre- and post-COVID additionally helps explain how households adjusted their decision-making during a rapidly changing housing market.

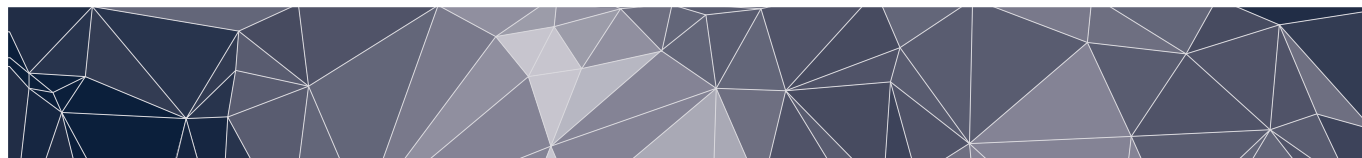
Moreover, the factors that lead someone to purchase a second property may differ significantly from those that motivate the purchase of their first, and it is also important to understand how behavioural factors drive property ownership. Drew (2014) examined multiple factors that motivate homeownership, finding that personal beliefs about the benefits of homeownership were one of the primary drivers of whether someone owned a home. Although the Great Recession tampered some of the fervour for owning a home, many people still pursue homeownership as a financial goal (Goodman & Mayer 2018). This study builds on Drew's (2014) work by examining multiple forms of property ownership in addition to homeownership and by examining how spending behaviours, financial confidence, risk tolerance, and a household's likelihood of moving are associated with purchasing decisions. Unlike prior studies that largely examined homeownership or investment housing markets in isolation, this paper compares determinants of multiple-property ownership before and after COVID-19 using nationally representative U.S. data. By linking behavioural attitudes with property decisions across two contrasting economic contexts, it provides fresh insights for both researchers and financial planning practitioners. Specifically, the research questions for this study are as follows:

1. How have multiple and single property ownership changed from before and after the COVID-19 pandemic?
2. Do financial attitudes and behavioural factors impact the likelihood of owning multiple properties compared to one or no properties?

Theoretical framework

This study is framed within the neoclassical theory of housing demand, which posits that housing decisions are made rationally to maximise utility while operating within budget, market, and other economic constraints (Megbolugbe et al. 1991). Property ownership is, therefore, both a good and an investment asset. Within this theoretical framework, people purchase property when the perceived benefit of owning outweighs the cost, and there are no constraints to doing so. They can choose to spend their income on either housing or non-housing goods (Megbolugbe et al. 1991). Regarding MPO, the neoclassical theory of housing demand also explains that someone would buy an additional property when a household has accumulated sufficient resources and sees an opportunity to maximise utility through mechanisms like rental income, asset appreciation, lifestyle benefits, or future intergenerational transfers of wealth.

The econometric equation for housing demand comprises income, price, taste factors, and, in some studies, household demographics. As researchers have continued to examine and test this model, Megbolugbe et al. (1991) note that other factors like mobility, borrowing and credit constraints, and, most critically, consumer behaviours (e.g., socioeconomic status, social class, lifestyle, and psychographic traits) were omitted from the original model. Since then, as will be described in greater detail in the literature review, researchers have incorporated these variables into housing demand models (Boelhouwer 2011). Behavioural factors, such as savings behaviour,



risk tolerance, and financial confidence, may shape consumers' housing expectations and the constraints they face.

Following Megbolugbe et al's. (1991) call, this study examines whether behavioural, psychological, and knowledge factors contribute to the decision to purchase one or more properties, supporting the suggestion that income- and price-driven economic behaviour is influenced by more than consumer taste and constraints. By examining the determinants of single- and multiple-property ownership before and after the COVID-19 pandemic, this study also tests how changes in market conditions and household resources influence the demand for one or more properties. This aligns with the neoclassical theory of housing demand, which posits that households adjust their consumption in response to market shifts.

Literature Review

Financial behavioural determinants of homeownership

There are many financial behavioural factors that may impact one's ability or decision to purchase an initial property, which is often a primary residence. Saving and spending habits can significantly affect the ability to buy a home; Ong ViforJ et al. (2025) found that those with disciplined spending habits, compared with those who spend more than their income, had a 30% higher likelihood of homeownership. Residential mobility may also be a significant contributor to homeownership, with frequent movers less likely to attain or maintain homeownership status (Botsch & Morris 2021). This may be especially true if the move is a result of a negative economic consequence like job loss (Botsch & Morris 2021). Risk tolerance is also associated with homeownership decisions, with studies finding that homeowners tend to be more risk tolerant than those in other tenure statuses (Le 2018; Letkiewicz & Heckman 2018). Lastly, confidence in one's financial knowledge may contribute to homeownership rates, as those who assess their financial knowledge more highly may engage in better financial behaviours (Despard et al. 2020), which could increase the likelihood of homeownership. However, little research has examined the direct association between economic confidence and homeownership.

H1. Spending less than income each year will be positively associated with single property ownership.

H2. Residential mobility will be negatively associated with single property ownership.

H3. Risk tolerance will be positively associated with single property ownership.

H4. Financial confidence will be positively related to single property ownership.

Household characteristics, household finances, financial knowledge, and external factors are related to homeownership (Goodman & Mayer 2018; Letkiewicz & Heckman 2018). For example, higher income and more retirement savings were associated with a greater likelihood of being a homeowner (Letkiewicz & Heckman 2018). A person's level of financial literacy may also be an important determinant of their ability to purchase a home. Not only are those with higher financial literacy more likely to purchase a home, but those with lower financial literacy may also be more likely to adopt riskier mortgage products (Gathergood & Weber 2017). However, this

may only be the case for certain populations. van Ooijen & van Rooij (2016) found that, in Dutch households, greater financial sophistication was associated with a higher likelihood of holding riskier mortgage properties during the 2007-2008 financial crisis. More research is needed to fully unpack how financial literacy is related to homeownership choices.

H5. Income will be positively related to homeownership.

H6. Financial literacy will be positively related to homeownership.

Non-housing debt may also deter individuals from purchasing a home. As the cost of attending universities has risen and student loan debt balances have increased, there is considerable interest in whether student loans are inhibiting other financial goals, such as homeownership (Agbonlahor 2025; Kim & Kim 2025). Some studies have found that student loans can detract from homeownership (Agbonlahor 2025; Goodman et al. 2015; Mountain et al. 2020; Xu et al. 2015), but other studies did not find a significant relationship between student loans and homeownership (Houle & Berger 2015; Letkiewicz & Heckman 2018). Other types of consumer debt could also negatively affect homeownership rates, which may be especially pronounced for Millennials, many of whom have now surpassed the historical age at first-time homeownership. Xu et al. (2015) put the problem facing young people this way: “To successfully become homeowners, millennials need to overcome the constrained credit constraint to obtain a mortgage, the wealth constraint to accumulate savings for a down payment and other upfront costs, and the income constraint to meet the debt-to-income ratio limit.” These financial determinants are critical in evaluating the likelihood of homeownership.

H7. Non-housing debt will be negatively associated with homeownership, with those having less non-housing debt having higher rates of homeownership.

Demographic factors contributing to homeownership

Demographic characteristics that are positively related to homeownership are age (Goodman & Mayer 2018), educational attainment (Goodman & Mayer 2018; Letkiewicz & Heckman 2018), and full-time employment (Houle & Berger 2015). Family characteristics also matter. Owning a home was positively associated with being married (Goodman & Mayer 2018; Houle & Berger 2015; Letkiewicz & Heckman 2018; Xu et al. 2015) and having (more) children (Houle & Berger 2015; Letkiewicz & Heckman 2018; Xu et al. 2015). Begley (2019) found that the value of a parent’s house was related to the probability that they transferred money to their children and their children purchased homes.

Racial and ethnic minorities are less likely to own a house. Goodman and Mayer (2018) found evidence that Hispanic and non-white households have substantially lower homeownership rates than non-Hispanic white households. Black families have historically had greater challenges becoming homeowners due to redlining and a higher likelihood of foreclosures during the Great Recession (DeVaney et al. 2007; Shapiro et al. 2013). DeVaney et al. (2007) examined the factors that increased the likelihood of homeownership among Black and White families. They found that homeownership was positively associated with education, marriage, and regular contact with financial institutions among Black households, with similar results for



White households. While demographics can influence homeownership decisions, other factors, including market conditions, tax incentives, and credit and wealth constraints, may be much more influential (Belsky 2009; Biehl 2018).

Behavioural and financial determinants of MPO

MPO has been associated with greater housing booms and busts (García 2021), underscoring its economic significance. As more consumers invest in MPO, research has examined issues such as financialization, inequality, wealth accumulation, and asset-based welfare (Kemp 2020). MPO has traditionally been understood to imply a “second home,” which suggests a consumption motive. However, MPO also includes different property types, such as private rental properties, which imply an investment motive (Kadi et al. 2020). While owning multiple properties may indicate an investment motive, there is a “heterogeneity of motivations and practices” (Stiman 2020, p. 54) that must be accounted for. Most single-unit rentals were owned by individuals before 2007 (Seay et al. 2018), and most are still owned by individuals (DeSilver 2021). However, the substantial time commitment, perceived complexity of property management, and investment-related risk may discourage individuals from pursuing multiple property ownership through residential rentals (Pires et al. 2018).

The factors that have been shown to contribute to homeownership may similarly apply to MPO. For example, saving capacity or behaviour is a significant driver of both single and multiple property ownership in Spain (Torrado et al. 2020). However, some of these factors may work in opposite directions. While residential mobility may inhibit single property ownership, MPO may be bolstered by it. Those who seek to be more mobile in their residence may invest in additional properties to facilitate this aim, such as older people buying a second home to retire in (Lardiés-Bosque 2017) or for those wishing to have seasonal living patterns (Hiltunen & Rehunen 2014). Property buying is inherently risky, as it represents a major asset (Letkiewicz & Heckman 2018). Higher risk tolerance and financial confidence may be more crucial for MPO, which often requires complex financial decisions (Pires et al. 2018). These factors lead us to expect that higher financial confidence, literacy, and risk tolerance will increase the likelihood of MPO, particularly in a post-pandemic environment with elevated market uncertainty.

H8. Spending less than income each year will be positively associated with MPO.

H9. Residential mobility will be positively associated with MPO.

H10. Risk tolerance will be positively associated with MPO.

H11. Financial confidence will be positively related to MPO.

Wealthier and higher-income households may see MPO as a valuable investment opportunity (Aalbers 2016; Ryan-Collins 2018). With MPO demanding more financial resources, it naturally follows that greater financial resources increase the likelihood of owning more than one property (Kadi et al. 2020). Even when a household perceives MPO as an opportunity for a second home rather than an investment opportunity, higher income is still a significant driver of MPO, along with family considerations (Torrado et al. 2020). While no study to the authors' knowledge has examined how financial literacy is related to MPO, it appears reasonable to assume the well-documented relationship between financial literacy and homeownership would extend to MPO as well. Controlling for factors like income, non-housing debt, and financial literacy is critical to fully understanding who is buying more properties and what enables them to do so.

- H12.** Income will be positively related to MPO.
H13. Financial literacy will be positively related to MPO.
H14. Non-housing debt will be negatively related to MPO.

Demographic factors contributing to MPO

Previously studied determinants of MPO include age, race and ethnicity, education, and income and wealth (Belsky et al. 2006; Carliner 2002; Di et al. 2001). Studies found that White households tend to own multiple properties compared to diverse households (Belsky et al. 2006; Di et al. 2001), but others found that when controlling for other factors, Black households were more likely to own rental real estate (Seay et al. 2013). More educated households and those with more financial assets and higher income were more likely to own multiple properties than their counterparts (Belsky et al. 2006; Carliner 2002; Di et al. 2001; Torrado et al. 2020).

Methodology

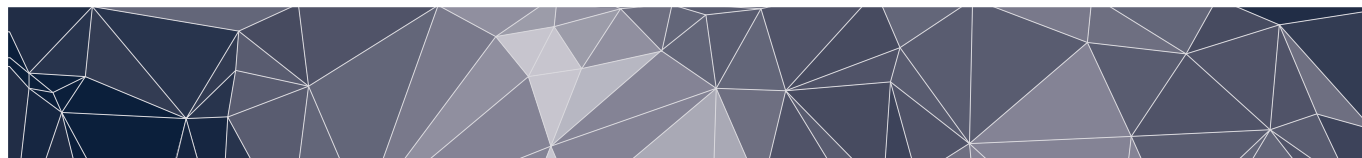
Data

This study uses national household survey data from the 2019 and 2022 Survey of Consumer Finances (SCF), a triennial cross-sectional survey of U.S. families sponsored by the Federal Reserve and the U.S. Treasury. The data includes family balance sheets, pensions, income, and demographics. The SCF uses complex sampling to ensure representativeness, selecting families across economic strata and oversampling wealthy families. It employs multiple imputations across variables, using five imputations to address missing values and enhance confidentiality. The sample size for the 2019 SCF is 5,777 respondents, and 4,595 respondents in the 2022 SCF. Missing data were addressed using the Repeated Imputation Inference (RII) technique (Lindamood et al. 2007) to account for the multiple-implicate structure of the SCF. However, bootstrapping with the *scfcombo* command is not available for a multinomial logistic regression in Stata, so this technique was not used. Instead, we estimated the models using the *mi estimate* command to account for the implicate structure of the data and applied population weights. The standard errors were computed directly from the *mi estimate* results that reflect the within-imputation and between-imputation variance.

Key variables

The dependent variable was a categorical variable coded as zero if a household owned no property. The question asks explicitly for properties owned by the individual, *not* a business. If a household owned one property, it was coded as 1; if a household owned multiple properties, the response was coded as 2. Both residential and non-residential properties were included in this variable, per Kadi et al. (2020) recommendation to analyse MPO as an integrated measure.

The key explanatory variables included (1) spending measure, (2) residential mobility, (3) risk tolerance, (4) financial confidence, (5) total non-housing debt, (6) household income, and (7) financial literacy. The spending indicator was a dichotomous variable of whether the household spent more than its income in the previous year. Households were asked what the likelihood was that they would stay at their current address for the next two years. The probability of moving in



the next two years was coded as *moving for sure* if the respondents chose 0% chance of staying, a *high chance of moving* if they chose 10 to 30 percent, a *medium chance of moving* if they selected 40 to 60 percent, a *low chance of moving* if they chose 70 to 90% and *not moving for sure* if they chose 100%. Risk tolerance was measured using the question that asked households to rate how willing they are to take risks, and these responses were categorised into *low*, *medium*, and *high*. Financial confidence was measured on a 0-10 scale, with participants providing a self-reported rating of their personal financial knowledge. Finally, there were three financial literacy questions from Lusardi and Mitchell (2011) relating to diversification, compound interest, and inflation. This was a summative scale of the number of correct answers the respondents had.

There were seven control variables for this study: (1) education, (2) gender; (3) race, which included non-Hispanic White, non-Hispanic Black, Hispanic, and other; (4) marital status, which included married, partner, single female, and single male, (5) number of children in the household, (6) how volatile a household expects their income to be in a normal year from low to high, (7) age.

Multivariate Analysis

Multinomial regression was used to examine differences among individuals with 0, 1, or 2 or more properties. The proportional odds test results indicated that a multinomial regression was preferred over an ordered logistic regression.¹ As Shin and Hanna (2017) recommended, population-weighted data were used for both statistical models to explore the direction and magnitude of the effects of each factor associated with owning one or multiple properties.

Results

Descriptive statistics

Weighted descriptive statistics for the variables used in this study are provided in Tables 1 and 2. In the 2019 weighted SCF data, 50% of respondents owned one property, and 15% owned multiple properties. In the 2022 weighted SCF data, 52% of respondents owned one property, and 14% owned multiple properties. Of all properties reported by multiple property owners, single-family houses (33%), vacation or seasonal homes (23%), and land only (17%) were the most common properties owned in 2019. Similarly, in 2022, most multiple property owners had single-family homes (23%), vacation or seasonal homes (22%), and land (15%).

In 2019, 5% of respondents reported spending more than their income. Most households reported a low or no chance of moving in the next two years (72%). Most households had moderate risk tolerances (51%). About 43% of households had high financial literacy. The mean financial confidence score was 7.13, and the average amount of non-residential debt was \$21,462. The average income for respondents was \$106,251.

Regarding demographics, most respondents (64%) had at least some college education or higher. Half of the respondents were male, and 65% were White. Forty-six per cent of households were married, and 61% had no children. The average age for respondents was 51 years old.

¹ 2019 $\chi^2(29) = 1551, p < .001$; 2022 $\chi^2(28) = 1088, p < .001$.

Table 1. Distribution of Homeownership Dependent variable

	2019 Weighted Data	2022 Weighted Data
	%	%
<u>Owns Property</u>		
None	35	34
One property	50	52
Multiple properties	15	14

Note. Weighted results from the 2019 Survey of Consumer Finances (N = 5,777) and 2022 Survey of Consumer Finances (N = 4,595). Percentages may not total 100 due to rounding.

Table 2. Weighted Descriptive Statistics of Key Variables 2019 and 2022 Survey of Consumer Finances

Variable	2019 Weighted Data		2022 Weighted Data	
	%	M(SD)	%	M(SD)
<u>Spending More than Income</u>				
Yes	5		5	
No	95		95	
<u>Relocation Probability</u>				
Moving for sure	9		9	
High chance of moving	5		5	
Medium chance	15		13	
Low chance	18		19	
Not moving for sure	54		54	
<u>Risk Tolerance</u>				
Low	27		29	
Medium	51		50	
High	22		21	
<u>Financial Confidence</u>		7.13(2.22)		7.24(2.21)
<u>Non-Res. Debt</u>		21,462(110,663)		24,573(140,588)
<u>Income</u>		106,251(458,987)		141,390(727,962)
<u>Financial Literacy</u>				
Very Low	4		3	
Low	19		16	
Medium	34		37	
High	43		44	
<u>Gender</u>				
Male	50		49	
Female	50		51	
<u>Race</u>				
White non-Hispanic	65		67	
Black African American	14		12	
Hispanic or Latino	10		9	
Other	11		12	
<u>Age</u>		51(17.4)		52(17.59)

(Continued)



Table 2: Continued

Variable	2019 Weighted Data		2022 Weighted Data	
	%	M(SD)	%	M(SD)
<u>Marital Status</u>				
Married	46		47	
Partner	10		10	
Single Female	26		26	
Single Male	18		16	
<u>Education</u>				
Less than High School	11		9	
High School	24		24	
Some College or Assoc.	28		27	
Bachelor's or higher	36		40	
<u># of Kids in the family</u>				
No kids	61		61	
1 Kid	17		18	
2 Kids	13		13	
3 or more	8		7	
<u>Income Volatility</u>				
Low	14		17	
Normal	77		72	
High	10		11	

Note. Weighted results from the 2019 Survey of Consumer Finances (N = 5,777) and 2022 Survey of Consumer Finances (N = 4,595). Means are reported with standard deviations in parentheses. Percentages may not total 100 due to rounding.

In 2022, the descriptive statistics were similar for spending and the probability of relocation. Only 5% of respondents reported spending more than their income, and 73% had a low or no chance of moving in the next two years. Half of the respondents had a medium risk tolerance, and 44% had high financial literacy. The mean financial confidence score was 7.24, and the average amount of non-residential debt was \$24,573. The mean income was \$141,390.

Regarding demographics, approximately 40% of respondents held a bachelor's degree. A little more than half (51%) of the respondents were female, and most were White (67%). 47% of respondents were married, and 61% did not have children. The average age was 52 years old.

2019 multinomial logistic regression results: not own vs. own one vs. own multiple properties

The multinomial logistic regression analysis results are presented in Table 3. For respondents who do not spend more than their income, the relative risk for owning one property compared to not owning a property at all was expected to increase by a factor of 1.43. Similarly, respondents who do not plan to move in the next two years have approximately 13 times the relative risk of owning property compared with those who plan to move within the next two years. Risk tolerance, financial confidence, non-housing debt, and income are positively associated with owning one property rather than none.

Table 3. Multinomial Logistic Regression of Property Ownership 2019 Survey of Consumer Finances.

Variable	None (Base) Versus One				One (Base) Versus Multiple				None (Base) Versus Multiple			
	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR
<i>Predictors</i>												
<u>Spending (Yes)</u>												
No	0.36	0.27	0.001	1.43	0.53	.05	0.002	1.7	0.89	0.04	<0.001	2.44
<u>Moving (100%)</u>												
High	0.81	0.02	<0.001	2.25	-0.66	.02	<0.001	0.52	0.15	0.03	0.015	1.16
Medium	1.01	0.02	<0.001	2.75	-0.19	0.03	0.008	0.83	0.82	0.02	<0.001	2.27
Low	1.42	0.01	<0.001	4.17	-0.6	0.03	<0.001	0.55	0.82	0.02	<0.001	2.27
100% Staying	2.55	0.01	<0.001	12.94	-0.5	0.02	<0.001	0.61	2.05	0.00	<0.001	7.77
<u>Risk Tol (Low)</u>												
Medium	0.19	0.00	0.001	1.21	0.28	0.01	<0.001	1.32	0.47	0.01	<0.001	1.60
High	0.09	0.00	<0.001	1.09	0.37	0.00	<0.001	1.45	0.46	0.00	<0.001	1.58
<u>Fin. Confidence</u>												
Log NH Debt	0.04	0.00	<0.001	1.04	-0.02	0.00	0.001	0.98	0.02	0.00	0.001	1.02
<u>Log of Income</u>												
Fin. Literacy (Very Low)	0.37	0.00	<0.001	1.45	0.62	0.02	<0.001	1.86	0.99	0.02	<0.001	2.69
<u>Low</u>												
Medium	-0.08	0.01	0.003	0.92	0.72	0.01	<0.001	2.05	0.64	0.01	<0.001	1.90
High	0.02	0.01	0.130	1.02	0.83	0.00	<0.001	2.29	0.85	0.01	<0.001	2.34
<u>Controls</u>												
<u>Education (<High Sc)</u>												
High School	0.29	0.01	<0.001	1.34	-0.27	0.02	<0.001	0.76	0.02	0.01	0.195	1.02
Some College	0.29	0.00	<0.001	1.34	-0.28	0.01	<0.001	0.76	0.005	0.01	0.656	1.01
Bachelor's	0.56	0.00	<0.001	1.75	-0.19	0.02	0.002	0.83	0.38	0.02	<0.001	1.46
<u>Gender (Male)</u>												
Female	-0.13	0.00	<0.001	0.88	0.16	0.01	<0.001	1.17	0.03	0.01	0.092	1.03

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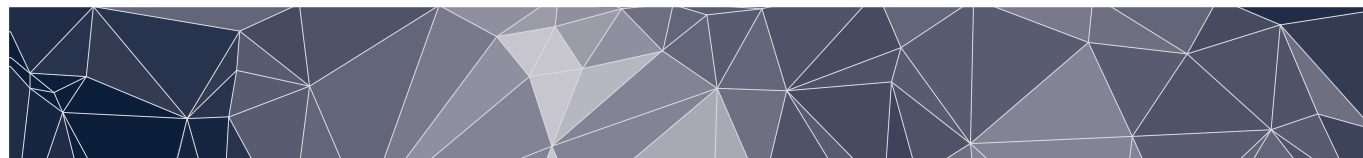


Table 3. Continued

Variable	None (Base) Versus One				One (Base) Versus Multiple				None (Base) Versus Multiple			
	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR
<u>Race (White)</u>												
Black	-0.79	0.00	<0.001	0.45	-0.03	0.02	0.260	0.97	-0.82	0.02	<0.001	0.44
Hispanic	-0.76	0.01	<0.001	0.47	0.28	0.01	<0.001	1.32	-0.48	0.01	<0.001	0.62
Other	-0.81	0.01	<0.001	0.44	0.18	0.01	0.002	1.2	-0.63	0.02	<0.001	0.53
Age	0.04	0.00	<0.001	1.04	0.02	0.00	<0.001	1.02	0.06	0.00	<0.001	1.06
<u>Marital Status (Married)</u>												
Partner	-0.72	0.00	<0.001	0.49	-0.27	0.02	0.001	0.76	-0.99	0.18	<0.001	0.37
Single Female	-0.86	0.00	<0.001	0.42	-0.54	0.01	<0.001	0.58	-1.39	0.15	<0.001	0.25
Single Male	-0.95	0.00	<0.001	0.39	-0.13	0.01	<0.001	0.88	-1.08	0.15	<0.001	0.34
<u>Number of Kids (0)</u>												
1 kid	0.51	0.00	<0.001	1.67	-0.16	0.01	<0.001	0.85	0.35	0.01	<0.001	1.42
2 kids	0.41	0.00	<0.001	1.51	-0.13	0.00	<0.001	0.88	0.28	0.01	<0.001	1.32
3 or more	0.27	0.00	<0.001	1.31	-0.1	0.01	0.002	0.9	0.17	0.01	<0.001	1.19
<u>Income Vol (Low)</u>												
Normal	-0.02	0.01	0.166	0.98	-0.17	0.01	<0.001	0.84	-0.18	0.01	<0.001	0.84
High	-0.19	0.01	0.001	0.83	0.02	0.02	0.271	1.02	-0.16	0.02	0.002	0.85
Intercept	-7.94	0.02	<0.001	-	-10.4	0.25	<0.001	-	-18.3	0.26	<0.001	-
<u>Model Fit</u>												
F 58, 175.9												
p < .001												

Note. Results are weighted using all five imputations and the Repeated Imputation Inference (RII) technique. Relative risk ratios (RRRs) greater than 1 indicate a higher relative risk of the outcome relative to the reference category, whereas RRRs less than 1 indicate a lower relative risk.



Education was positively associated with owning one property (compared with not owning property). The relative risk of owning one property (relative to not owning any property) was expected to decrease by 0.45 among Black respondents compared with White respondents. The relative risk ratio was similar for Hispanic respondents ($RRR = 0.47$). For respondents of other races, the relative risk of owning one property relative to no property was expected to decrease by a factor of 0.44 compared with White respondents. As respondents age, their relative risk of owning one property increases. Living in a married household and having children were associated with a higher relative risk of owning a single property. Compared with those who expected low-income volatility, the relative risk of owning one property versus no property for those who expected high-income volatility was expected to decrease by 0.83.

When comparing respondents who own one property to those who own multiple properties, those who do not spend more than their income have approximately 1.7 times the relative risk of owning multiple properties than those who spend more than their income. Respondents who are not planning to move in the next two years have approximately 39% lower relative risk of owning multiple properties than those planning to move within the next two years. For respondents with medium risk tolerance, the relative risk of owning multiple properties relative to owning one property was expected to increase by a factor of 1.3 relative to those with low risk tolerance. The results were similar for respondents with high risk tolerances ($RRR = 1.45$). Respondents with medium financial literacy have approximately 2.29 times the relative risk of owning multiple properties compared with those with very low financial literacy. Those with high levels of financial literacy have approximately 2.48 times the relative risk of owning multiple properties compared with owning one.

Education was negatively associated with owning multiple properties relative to owning one property. Hispanic respondents and respondents of other races had a higher relative risk of owning multiple properties compared to one property than White respondents. Age is positively associated with owning multiple properties rather than a single property. Living in a married household is associated with a higher relative risk of owning multiple properties than owning one, compared with living in a cohabiting or single household. Those with children had a lower relative risk of owning multiple properties than households without children. A 10% increase in income is associated with a 6.1 percentage-point increase in the respondent's likelihood of owning multiple properties rather than owning one.

When comparing respondents who do not own any properties to respondents who own multiple properties, respondents who do not spend more than their income, not planning to move in the next two years, and with medium or high-risk tolerances had a higher relative risk of owning multiple properties rather than not owning any, compared to their respective reference groups. Again, financial confidence, non-housing debt, income, and financial literacy are positively associated with owning multiple properties, compared with not owning any. Furthermore, respondents with a bachelor's degree or higher have 1.46 times the relative risk of owning multiple properties compared with those who did not complete high school. Compared with White respondents, Black, Hispanic, and other-race respondents had lower relative risks of owning multiple properties than owning no properties. Age is positively related to owning multiple properties. Living in a married household is associated with a higher relative risk of owning multiple properties compared with owning no properties. Having children increases the relative risk of owning multiple properties compared to owning none.



Table 4. Multinomial Logistic Regression of Property Ownership 2022 Survey of Consumer Finances.

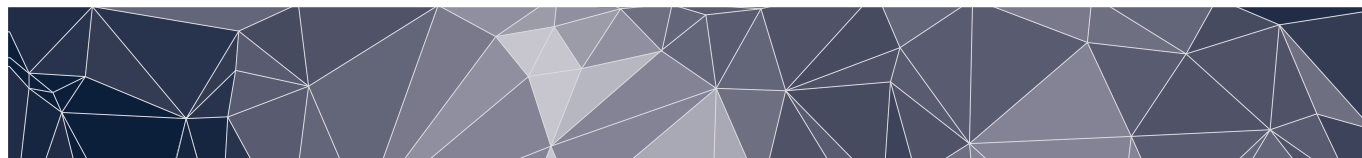
Variable	None (Base) Versus One				One (Base) Versus Multiple				None (Base) Versus Multiple			
	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR
<i>Predictors</i>												
<u>Spending (Yes)</u>												
No	0.35	0.02	0.001	1.41	0.44	0.03	0.001	1.55	0.79	0.04	<0.001	2.20
<u>Moving (100%)</u>												
High	0.06	0.02	0.06	1.06	0.49	0.11	0.021	1.62	0.55	0.11	0.017	1.73
Medium	0.69	0.03	<0.001	2.00	0.37	0.17	0.117	1.42	1.06	0.15	0.006	2.85
Low	1.52	0.01	<0.001	4.56	0.23	0.13	0.175	1.25	1.75	0.13	0.001	5.69
100% Staying	2.2	0.01	<0.001	8.97	0.21	0.14	0.236	1.22	2.4	0.13	<0.001	10.92
<u>Risk Tol (Low)</u>												
Medium	0.43	0.003	<0.001	1.54	0.12	0.01	0.003	1.13	0.55	0.02	<0.001	1.74
High	0.43	0.01	<0.001	1.54	0.39	0.02	<0.001	1.48	0.82	0.03	<0.001	2.27
<u>Fin. Confidence</u>												
Log NH Debt	0.05	0.003	0.001	1.05	0.07	0.01	0.006	1.07	0.11	0.01	0.001	1.12
Log of Income	0.003	0.001	0.163	1	-0.01	0.003	0.061	0.99	-0.01	0.004	0.197	0.99
Fin. Literacy (Very Low)	0.2	0.01	<0.001	1.22	0.54	0.01	<0.001	1.73	0.74	0.02	<0.001	2.1
<u>Fin. Literacy (Very Low)</u>												
Low	0.21	0.02	0.001	1.24	0.5	0.04	0.001	1.64	0.71	0.05	0.001	2.04
Medium	0.58	0.02	<0.001	1.8	0.67	0.02	<0.001	1.95	1.25	0.02	<0.001	3.51
High	0.92	0.02	<0.001	2.51	0.78	0.03	<0.001	2.17	1.69	0.03	<0.001	5.45
<i>Controls</i>												
<u>Education (<High Sc)</u>												
High School	0.24	0.02	<0.001	1.27	0.39	0.04	<0.001	1.47	0.63	0.04	<0.001	1.87
Some College	0.28	0.03	<0.001	1.32	0.46	0.03	0.002	1.58	0.75	0.03	<0.001	2.09
Bachelor's	0.42	0.03	<0.001	1.52	0.47	0.01	0.385	1.6	0.89	0.01	<0.001	2.42

(Continued)

Table 4. Continued

Variable	None (Base) Versus One				One (Base) Versus Multiple				None (Base) Versus Multiple			
	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR	Coef.	S.E.	p	RRR
<u>Gender (Male)</u>												
Female	0.09	0.01	0.008	1.09	0.23	0.03	0.003	1.26	0.32	0.01	0.092	1.38
<u>Race (White)</u>												
Black	-0.68	0.04	0.001	0.51	0.11	0.02	0.014	1.11	-0.57	0.04	0.001	0.56
Hispanic	-0.56	0.02	<0.001	0.57	-0.07	0.08	0.471	0.94	-0.63	0.07	0.003	0.54
Other	-0.36	0.02	0.001	0.7	0.15	0.03	0.019	1.16	-0.22	0.03	0.008	0.81
<u>Age</u>	0.03	0	<0.001	1.03	0.03	0	0.002	1.03	0.06	0.001	<0.001	1.07
<u>Marital Status (Married)</u>												
Partner	-0.75	0.01	<0.001	0.47	0.17	0.01	<0.001	1.18	-0.58	0.02	<0.001	0.56
Single Female	-1.13	0.003	<0.001	0.32	-0.29	0.03	0.002	0.75	-1.42	0.03	<0.001	0.24
Single Male	-1.12	0.02	<0.001	0.33	-0.03	0.01	0.385	0.97	-1.15	0.03	<0.001	0.32
<u>Number of Kids (0)</u>												
1 kid	0.51	0.01	<0.001	1.66	-0.01	0.01	0.396	0.98	0.5	0.02	<0.001	1.63
2 kids	0.7	0.01	<0.001	2.01	-0.21	0.02	0.002	0.81	0.49	0.02	<0.001	1.62
3 or more	0.36	0.01	<0.001	1.43	0.23	0.02	0.002	1.27	0.59	0.02	<0.001	1.81
<u>Income Vol (Low)</u>												
Normal	0.19	0.02	0.002	1.21	-0.35	0.01	<0.001	0.71	-0.16	0.01	<0.001	0.86
High	-0.06	0.02	0.085	0.94	-0.26	0.03	0.002	0.77	-0.32	0.01	<0.001	0.72
Intercept	-6.4	0.08	<0.001	-	-11.46	0.14	<0.001	-	-17.86	0.15	<0.001	-
<u>Model Fit</u>												
F 58, 174.4												
p < .001												

Note. Results are weighted using all five imputates and the Repeated Imputation Inference (RII) technique. Relative risk ratios (RRR) greater than 1 indicate a higher relative risk of the outcome relative to the reference category, whereas RRRs less than 1 indicate lower relative risk.



2022 multinomial logistic regression results: not own vs. own one vs. own multiple properties

The results from the 2022 SCF data are generally consistent with the 2019 findings. However, there are a few notable differences. Only results that differ from 2019 are reported in the text, but the full results are available in Table 4. In the 2022 data, 100% of moving and a high probability of moving in the next year were not significantly different in the relative risk of owning one property compared to owning no property. In the 2019 data, individuals with a high probability of moving in the next year had a higher relative risk of owning one property than none, compared with those who were 100% certain of moving in the next year. Similarly, in the relationship between the probability of moving and the relative risk of owning multiple properties relative to owning one, this variable was not significant. The only exception was that those who reported a high probability of moving compared to those with a 100% chance of moving had 1.62 times the relative risk of owning multiple properties rather than one. In 2019, these respondents had a lower relative risk of MPO.

In 2022, non-housing debt was not significantly related to MPO, unlike in 2019, when it was significantly related to MPO among individuals with no property ownership. In 2022, respondents with more education had a higher relative risk of owning multiple properties compared to owning one property. In 2019, education was negatively related to MPO compared to owning one property. For females relative to males, the relative risk of owning one property relative to no property was expected to increase by 1.09 in 2022, whereas in 2019 it was lower. When examining race/ethnicity, Black respondents had 1.11 times the relative risk of owning multiple properties in 2022 compared with owning one property, whereas White respondents had 1.03 times the relative risk. Respondents of other races had 1.03 times the relative risk.

Having one child, compared with respondents with no children, was no longer significantly associated with MPO, whereas owning one property in 2022 remained significantly associated with MPO. However, respondents with three or more children had a relative risk of owning multiple properties compared with owning one that was 1.27 times that of respondents with no children. There was a negative association between having three or more children and MPO in 2019. Furthermore, a normal amount of income volatility compared to a low amount of expected income volatility in 2022 was associated with a lower relative risk of owning one property compared to no property. Similarly, greater expected income volatility was negatively related to multiple property ownership relative to owning one property in 2022.

Discussion

The results of this study indicate that financial attitudes and behaviours, attitudes toward future relocation, and financial variables and demographics are important considerations when owning one or multiple properties. Spending habits were significantly associated with single- and multiple-property ownership in 2019 and 2022, supporting H1 and H8, which predict that spending less than one's income each year will be positively associated with single- and multiple-property ownership. Households that spend more than their income on housing may be unable to afford to enter the housing market or buy an additional property. High rent costs, for example, may prevent especially young would-be homeowners from saving



enough for a downpayment (Airgood-Obrycki et al. 2022). Housing affordability challenges, including zoning restrictions, may constrain MPO opportunities (Garcia & Alameldin 2023).

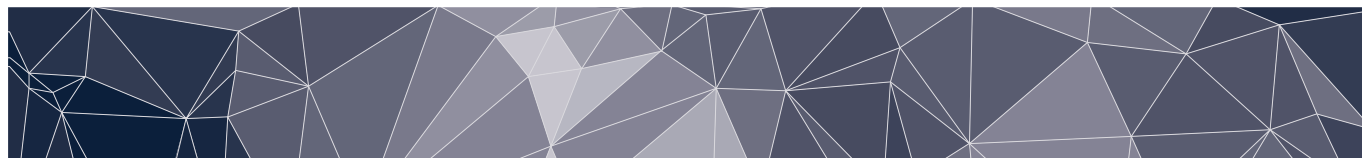
H2 was not supported, as residential mobility was associated with a higher likelihood of single-property ownership than no ownership in 2019 and 2022. It may be that those who were planning to move intended to move into a new home. Longitudinal data would be crucial in fully understanding these trends. H9 was partially supported. On the one hand, those who are more certain about staying in their current residence are less likely to own multiple properties compared to owning one property in 2019. In 2022, individuals with a high likelihood of moving were more likely to own multiple properties than none, providing some support for H9. It may be that before the pandemic, people were less inclined to buy a second property and would end up moving. However, the positive association between a high likelihood of moving and MPO in 2022 may suggest that the pandemic and the subsequent favourable home-buying conditions encouraged MPO (Gallent et al. 2023).

Risk tolerance and financial confidence are also important. H3 was supported, as higher risk tolerances were significantly and positively associated with single property ownership in 2019 and 2022, and H10 was supported as risk tolerance was associated with MPO in both years as well. Similarly, H4 and H11 were supported as financial confidence was significantly and positively associated with single and multiple property ownership in both time periods. Owning multiple properties inherently entails additional risk, and those with higher risk tolerance may be better able to endure uncertainty in the real estate market. When purchasing real estate, confidence in one's financial knowledge is critical for successfully navigating available financing options and maintaining an adequate long-term personal budget.

Not surprisingly, H5 and H12 were supported, suggesting that higher incomes are associated with higher property ownership than lower incomes. Financial literacy is an important determinant of property ownership. In general, H6 and H13 were supported, as higher levels of financial literacy were associated with a higher relative risk of single- and multiple-property ownership. Financial literacy may be especially critical when a household seeks to own additional properties. Managing additional properties requires literacy in budgeting, maintenance, taxes, insurance, and cash flow.

With respect to non-housing debt, H7 was not supported, as non-housing debt was positively, not negatively, associated with single-property ownership in 2019. When comparing MPO to single ownership, non-housing debt was negatively associated, which partially supports H14. However, when comparing MPO with those who had no properties, non-housing debt was positively associated. These relationships for single and multiple property ownership were not significant after COVID-19. These findings may reflect liquidity and credit-building effects in 2019. The shift in 2022 may reflect declining affordability, leaving many households unable to sustain ownership of multiple homes (Joint Center for Housing Studies 2024). Homeowners may be financially constrained and unable to maintain one or more homes through alternative financing.

When examining racial and ethnic patterns, it is essential to distinguish between initial homeownership acquisition (the transition from renter to owner) and multiple-property ownership among existing homeowners. Our study examines the latter, but these findings must be contextualised within persistent, structural barriers to homeownership that Black and



Hispanic households face. Black and Hispanic households entered the COVID-19 pandemic with substantial homeownership shortfalls relative to non-Hispanic White households, with Black homeownership rates in the mid-40s per cent compared to mid-70s per cent for White households (Gerardi et al. 2021). These gaps reflect long-standing structural policies and market practices that shape differential access to mortgage credit. During the pandemic, Black and Hispanic mortgage borrowers exhibited higher rates of payment distress. They were significantly less likely to refinance into lower rates during 2020-2021, reducing their ability to capture interest-rate benefits (Gerardi et al. 2021). Research shows that only a small share of Black renter households could afford a median-priced home in 2021, with affordability declining further by 2022 (Joint Center for Housing Studies 2024).

Within this context of persistent gaps in initial homeownership, our findings regarding multiple property ownership among existing homeowners reveal nuanced patterns. In 2019, Hispanic households that already owned property were more likely to own multiple properties compared to non-Hispanic White property owners. This finding does not indicate closing of the fundamental homeownership gap; instead, it suggests that among the subset of Hispanic households who had achieved homeownership, some were positioned to acquire additional properties during favourable market conditions. Research indicates that some Hispanic buyers were particularly attuned to the rapidly changing housing market in 2020-2021 and entered multiple property ownership before rates and prices increased substantially (Smeraski et al. 2022). However, this relationship was no longer significant in 2022, possibly indicating that Hispanic households no longer perceived the same market opportunities as affordability deteriorated.

Similarly, in 2022, Black households that already owned property had a higher relative risk of owning multiple properties than White households—a finding that applies only to the subset of Black households that had already overcome initial homeownership barriers. This result should not be interpreted as evidence that fundamental racial disparities in homeownership have closed. Instead, it may reflect that among Black homeowners with sufficient resources and access to credit, some leveraged favourable pandemic-era conditions to acquire additional properties. These findings underscore that different mechanisms drive barriers to initial homeownership and patterns of property accumulation among existing owners. Policy interventions focused solely on supporting existing homeowners do not automatically expand access to first-time home purchases; targeted affordability programs and credit access initiatives are needed to address gaps across both margins (Gerardi et al. 2021; Hayes 2020).

Understanding coefficient changes in macroeconomic context

The observed shifts in coefficients between 2019 and 2022 must be understood in the context of the dramatic macroeconomic changes during the COVID-19 pandemic. The Federal Reserve's monetary easing in 2020 reduced mortgage rates to historic lows, while large fiscal transfers boosted household liquidity, together driving rapid house price appreciation through 2021 (Diamond et al. 2022). This was followed by sharp policy tightening in 2022 that began to cool housing markets. Research shows that real interest rate declines during the pandemic were associated with significant house price increases (Yiu 2021), creating distinct market conditions across our two study periods.



The reversal in the education coefficient—where higher education shifted from a negative association with multiple property ownership in 2019 to a positive association in 2022—likely reflects changing affordability constraints. In 2019, highly educated households may have been more cautious about leveraging into multiple properties relative to owning one property. However, during the low-rate environment of 2020–2021, these households—characterised by stronger incomes and better credit access—were well positioned to acquire additional properties. As rates rose and affordability deteriorated in 2022, less-educated households faced binding constraints that limited new purchases or forced divestment, while highly educated households were better able to sustain or expand multiple-property holdings. This aligns with research documenting a “pricing-out” phenomenon in which rising purchase prices disproportionately affect households with less financial flexibility (Zhao 2023).

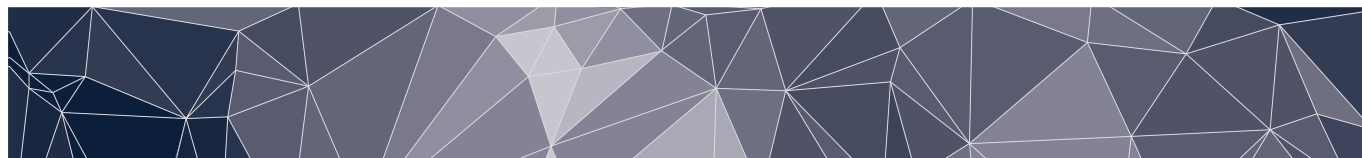
The decline in the significance of non-housing debt in 2022 relative to 2019 reflects pandemic-era policy interventions. Federal student loan payment moratoria beginning in March 2020 suspended payments and interest accrual through the 2022 survey period. Simultaneously, stimulus payments and expanded unemployment insurance provided liquidity, enabling some households to pay down consumer debt or build savings (Diamond et al. 2022). These policies temporarily relaxed the constraint that non-housing debt typically imposes on property ownership, which explains why this variable lost statistical significance in our 2022 models.

These macroeconomic shifts underscore that our findings are embedded within specific historical contexts. The relationships we observe between behavioural factors and property ownership are conditional on the prevailing interest rate environment, inflation regime, and policy supports.

Implications

Our findings offer several considerations for financial planning professionals. Financial planning professionals working with clients navigating homeownership decisions may benefit from assessing clients’ financial confidence, literacy, and risk tolerance, as these traits have been consistently associated with multiple property ownership. Simple assessment tools and targeted educational efforts may help clients develop the financial literacy necessary to evaluate the potential risks and responsibilities associated with owning additional properties. Financial planners can also help their clients develop a home-buying plan and provide education or resources to improve their clients’ financial confidence and literacy related to home purchases. Clients may also benefit from discussing how relocation intentions and current spending habits align with their broader housing goals. For example, a household anticipating future moves may be better served by delaying the purchase of an additional property or considering more flexible housing options. Similarly, clients who spend more than their income may need assistance managing cash flow before taking on the additional expenses associated with owning multiple homes.

Financial planners may also wish to help clients understand how income volatility or household composition could affect their housing decisions and long-term financial stability. Finally, because this study found variation in property ownership by race and education, financial practitioners may be well positioned to provide more targeted outreach or support to help historically underserved populations navigate the home-buying process. Guiding budgeting,



financing options, and local homeownership programs can be particularly useful in this context (DeVaney et al. 2007; Hayes 2020; Seay et al. 2018).

For financial planners, these results underscore the importance of integrating behavioural assessments into practice. Simple screening tools to measure clients' financial literacy, confidence, and risk tolerance can help determine readiness for additional property ownership and guide whether households are better served by consolidating resources, delaying purchases, or diversifying investments. Embedding these behavioural insights into financial planning conversations enhances client outcomes and aligns with the profession's broader goal of supporting long-term financial well-being.

Limitations and future research

This study provides insight into the factors associated with multiple property ownership in the U.S. and compares how these associations may have shifted from 2019 to 2022. However, several limitations should be noted. The SCF data do not include geographic identifiers or regional housing market characteristics that may influence MPO through differences in affordability, market opportunities, or local policies. Future research could explore how regional variation affects MPO trends. Another limitation is the lack of information on the specific motivations for owning multiple properties. The SCF does not distinguish between second homes for personal use, rental properties for income, or properties purchased for family members. Future studies could benefit from data that indicate these ownership types or from interviews or surveys that explore them.

The SCF employs a dual-frame sampling design that oversamples wealthy households to ensure adequate representation across the wealth distribution (Bricker et al. 2016). While this design improves the measurement of high-wealth families, it may introduce bias toward higher-income populations and limit generalizability to lower-income households. Additionally, wealthy households historically exhibit lower response rates, which may produce nonrandom patterns of nonresponse even after weighting adjustments (Bricker et al. 2016). Although we used population weights and multiple imputations to account for the complex sampling structure, residual bias may affect our estimates. Future research using datasets with alternative sampling designs could provide complementary evidence on property ownership determinants across the full income distribution.

The SCF does not capture how financial behaviours evolve over time; longitudinal data could address this gap. This may also help address potential concerns with endogeneity between behavioural factors, such as financial literacy and confidence, and MPO. For example, experience with MPO may lead to greater financial awareness, as households must engage with complex financial situations. This may result in increased financial confidence or literacy. Longitudinal data would help researchers determine whether behavioural factors drive MPO or whether MPO is a catalyst for increased financial understanding. While this precludes causal claims, the study establishes an important link between property ownership and financial and behavioural determinants. This highlights the need for further research to elucidate these associations.



Finally, the SCF does not capture cultural or intergenerational influences on property ownership. These factors may play a key role in shaping homeownership decisions, particularly among Hispanic, Black, and immigrant households. Additional research exploring these dimensions could provide a more comprehensive understanding of what drives MPO. Positioning MPO decisions within a financial planning framework helps practitioners turn data into strategies that support households' property and financial goals.

References

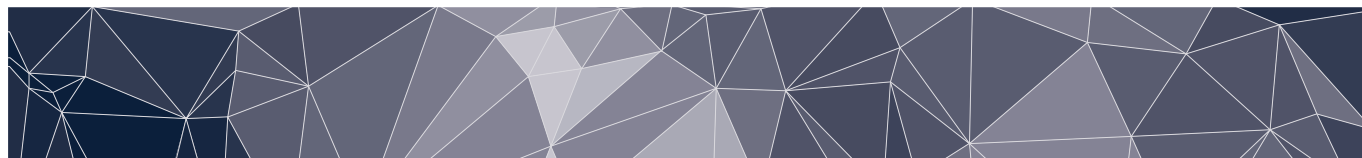
- Aalbers, M 2016, *The financialisation of housing: A political economy approach*. New York: Routledge.
- Agbonlahor, O 2025, 'Delayed dreams: how student loan debt shapes family formation and homeownership among liberal arts graduates.' *International Journal of Education*, 10(5), 254-273. <https://doi.org/10.11648/j.ijecs.20251005.12>
- Airgood-Obrycki, W, Hermann, A, & Wedeen, S 2022, "'The rent eats first': Rental housing unaffordability in the United States.' *Housing Policy Debate*, 1–21. <https://doi.org/10.1080/10511482.2021.2020866>
- Beck, RH, & Petry, M 2023, *How did COVID affect the housing market?* Bankrate. <https://www.bankrate.com/real-estate/covid-impact-on-the-housing-market/>
- Belsky, ES, Di Zhu, X, & McCue, D 2006, *Multiple-home ownership and the income elasticity of housing demand*. Working paper 06-5. Joint Center for Housing Studies, Harvard University. <https://www.jchs.harvard.edu/sites/default/files/w06-5.pdf>
- Belsky, E 2009, 'Demographics, markets, and the future of housing demand.' *Journal of Housing Research*, 18(2), 99–119. <https://doi.org/10.1080/10835547.2009.12092006>
- Begley, J 2019, 'Parent housing, wealth, credit constraints, and homeownership transitions.' *Journal of Housing Research*, 28(1), 51–79. <https://doi.org/10.1080/10835547.2019.12092158>
- Biehl, A 2018, 'The first-time homebuyer tax incentives: Did they work?' *Journal of Housing Research* 27(1), 1–15, <https://doi.org/10.1080/10835547.2018.12092138>
- Boelhouwer, P 2011, 'Neo-classical economic theory on housing markets and behavioural sciences: Ally or opponent?', *Housing, Theory and Society*, 28(3), 276-280, <https://doi.org/10.1080/14036096.2011.599173>
- Board of Governors of the Federal Reserve System. 2019 Survey of Consumer Finances (SCF).
- Botsch, MJ & Morris, SD 2021, 'Job loss risk, expected mobility, and home ownership.' *Journal of Housing Economics*, 53, 101733. <https://doi.org/10.1016/j.jhe.2020.101733>
- Bricker, J, Henriques, AM, Krimmel, J, & Sabelhaus, J 2016, 'Measuring income and wealth at the top using administrative and survey data.' *Brookings Papers on Economic Activity*, 2016(1), 261-331. <https://doi.org/10.1353/ECA.2016.0016>
- Carliner, M 2002, 'Second homes: A growing market.' *Housing Economics*, 50(7), 7–12.



- Carswell, A 2024, 'Mine!: How the hidden rules of ownership control our lives.' *Housing and Society*. <https://doi.org/10.1080/08882746.2024.2309066>
- DeSilver, D 2021, *As the national eviction ban expires, a look at who rents and who owns in the U.S.* Pew Research Center. <https://www.pewresearch.org/fact-tank/2021/08/02/as-national-eviction-ban-expires-a-look-at-who-rents-and-who-owns-in-the-u-s/>
- DeVaney, SA, Anong, ST, & Yang, Y 2007, 'Asset ownership by Black and White Families.' *Journal of Financial Planning and Counseling*, 18(1), 33–37.
- Despard, MR, Friedline, T, & Martin-West, S 2020, 'Why do households lack emergency savings? The role of financial capability.' *Journal of Family and Economic Issues*, 41(3), 542–557. <https://doi.org/10.1007/s10834-020-09679-8>
- Di, ZX, McArdle, N, & Masnick, GS 2001, *Second homes: What, how many, where, and who.* Working paper 01-2. Joint Center for Housing Studies, Harvard University.
- Diamond, WD, Landvoigt, T, & Sánchez, G 2022, 'Printing away the mortgages: Fiscal inflation and the post-Covid housing boom.' *NBER Working Paper*. <https://doi.org/10.2139/ssrn.4283119>
- Drew, RB 2014, 'Believing in homeownership: Behavioral drivers of housing tenure decisions.' *Joint Center for Housing Studies*. https://www.jchs.harvard.edu/sites/default/files/w14-3_drew.pdf
- Fernandez, R, Hofman, A, & Aalbers, MB 2016, 'London and New York as a safe deposit box for the transnational wealth elite.' *Environment and Planning A: Economy and Space*, 48(12), 2443–2461.
- Forrest, R & Hirayama, Y 2018, 'Late home ownership and social re-stratification.' *Economy and Society*, 47(2), 257–279. <https://doi.org/10.1080/03085147.2018.1459368>
- Gallent, N, Stirling, P, & Hamiduddin, I 2023, 'Pandemic mobility, second homes and housing market change in a rural amenity area during COVID-19 – The Brecon Beacons National Park, Wales.' *Progress in Planning*, 172, 100731. <https://doi.org/10.1016/j.progress.2022.100731>
- Gallent, N & Madeddu, M 2021, 'Covid-19 and London's decentralising housing market – What are the planning implications?' *Planning Practice & Research*, 36(5), 567–577. <https://doi.org/10.1080/02697459.2021.1964782>
- García, D 2021, 'Second-home buying and the housing boom and bust.' *Real Estate Economics*, 50(1), 33–58. <https://doi.org/10.1111/1540-6229.12343>
- Garcia, D & Alameldin, M 2023, *California's HOME Act turns one: Data and insights from the first year of Senate Bill 9.* Turner Center for Housing Innovation. <https://turnercenter.berkeley.edu/research-and-policy/sb-9-turns-one-applications/>
- Gathergood, J & Weber, J 2017, 'Financial literacy: A barrier to home ownership for the young?' *Journal of Urban Economics*, 99, 62–78. <https://doi.org/10.1016/j.jue.2017.02.001>
- Gerardi, K, Lambie-Hanson, L, & Willen, PS 2021, 'Racial differences in mortgage refinancing, distress, and housing wealth accumulation during COVID-19.' *Federal Reserve Bank of Philadelphia Discussion Paper*, DP 21-02. <https://doi.org/10.21799/FRBP.DP.2021.02>
- Goodman, L, Pendall, R, & Zhu, J 2015, *Headship and homeownership: what does the future hold?* Washington, DC: Urban Institute. (June 2015), 1–67. <https://policycommons.net/artifacts/632366/headship-and-homeownership/1613703/>



- Goodman, L. S & Mayer, C 2018, 'Homeownership and the American Dream.' *Journal of Economic Perspectives*, 32(1), 31–58. <https://doi.org/10.1257/jep.32.1.31>
- Hayes, S 2020, 'Special Purpose Credit Programs.' *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3749610>
- Hiltunen, MJ & Rehunen, A 2014, 'Second home mobility in Finland: Patterns, practices and relations of leisure oriented mobile lifestyle.' *Fennia – International Journal of Geography*, 192(1), 1–22. <https://fennia.journal.fi/article/view/8384>
- Houle, JN & Berger, L 2015, 'Is student loan debt discouraging homeownership among young adults?' *Social Service Review*, 89(4), 589–621. <https://doi.org/10.1086/684587>
- Joint Center for Housing Studies of Harvard University 2024, *The state of the nation's housing 2024*. <https://www.jchs.harvard.edu/state-nations-housing-2024>
- Kadi, J, Hochstenbach, C, & Lennartz, C 2020, 'Multiple property ownership in times of late homeownership: A new conceptual vocabulary.' *International Journal of Housing Policy*, 20(1), 6–24.
- Kemp, PA 2020, 'Commentary on multiple property ownership,' *International Journal of Housing Policy*, 20(1), 144–155. <https://doi.org/10.1080/19491247.2019.1697522>
- Kim, H & Kim, JH 2025, 'Sources of rising student debt in the US: college costs, wage inequality, and delinquency.' *Review of Economic Dynamics*. <https://doi.org/10.1016/j.red.2025.101318>
- Lardiés-Bosque, R 2017, 'Residential mobility, second homes and quality of life: Consequences of moving out from the city of Madrid.' *Bulletin of Geography. Socio-economic Series*, 37, 51–62. <https://doi.org/10.1515/bog-2017-0024>
- Le, VC 2018, *The Relationship between Household's Risk Preference and the Homeownership Decisions among Young Adults in Changing Housing Market Conditions* (Publication No. 10809923) [Doctoral dissertation, Kansas State University]. ProQuest Dissertations & Theses Global.
- Letkiewicz, JC & Heckman, SJ 2018, 'Homeownership among young Americans: a look at student loan debt and behavioral factors.' *Journal of Consumer Affairs*, 52(1), 88–114. <https://doi.org/10.1111/joca.12143>
- Lindamood, S, Hanna, SD, & Bi, L 2007, 'Using the Survey of Consumer Finances: Some methodological considerations and issues.' *Journal of Consumer Affairs*, 41(2), 195–222.
- Lusardi, A, & Mitchell, OS 2011, 'Financial literacy around the world: An overview.' *Journal of Pension Economics & Finance*, 10(4), 497–508. <https://doi.org/10.1017/S1474747211000448>
- Megbolugbe, I, Marks, A, & Schwartz, M 1991, 'The economic theory of housing demand: a critical review.' *Journal of Real Estate Research*, 6(3), 381–393. <https://doi.org/10.1080/10835547.1991.12090650>
- Mountain, TP, Cao, X, Kim, N, & Gutter, MS 2020, 'Millennials' future homeownership and the role of student loan debt.' *Family and Consumer Sciences Research Journal*, 49(1), 5–23. <https://doi.org/10.1111/fcsr.12374>
- Ong ViforJ, R, Hewton, J, & Phelps, C 2025, 'Barriers to homeownership among young people in Australia: unpacking competing hypotheses.' *Population, Space and Place*, 31(2), e70004. <https://doi.org/10.1002/psp.70004>



Pires, ASC, Ferreira, AF, Jalali, MS, & Chang, H 2018, 'Barriers to real estate investments for residential rental purposes: Mapping out the problem.' *International Journal of Strategic Property Management*, 22(3), 168–178. <https://doi.org/10.3846/ijspm.2018.1541>

Ryan-Collins, J 2018, *Why can't you afford a home?* Cambridge (UK), Polity Press.

Seay, MC., Anderson, SG., Carswell, AT., & Nielsen, RB 2018, 'Characteristics of rental real estate investors during the 2000s.' *Journal of Financial Counseling and Planning*, 29(2), 369–382. <https://doi.org/10.1891/1052-3073.29.2.369>

Seay, M, Carswell, A, Nielsen, R, & Palmer, L 2013, 'Rental real estate ownership prior to the Great Recession.' *Family and Consumer Sciences Research Journal*, 41(4), 363-374. <https://doi.org/10.1111/fcsr.12024>

Shapiro, T, Meschede, T, & Osoro, S 2013, *The roots of the widening racial wealth gap: Exploring the Black-White economic divide*. Institute on Assets and Social Policy. <https://drum.lib.umd.edu/bitstream/handle/1903/24590/racialwealthgapbrief.pdf>

Shin, SH, & Hanna, SD 2017, 'Accounting for complex sample designs in analyses of the Survey of Consumer Finances.' *Journal of Consumer Affairs*, 51(2), 433–447. <https://doi.org/10.1111/joca.12106>

Smeraski, J, Aguilar, J, Becerra, A, Talbot, K, Ferguson, A, & Campos, J 2022, *State of Hispanic homeownership report*. National Association of Hispanic Real Estate Professionals. <https://nahrep.org/downloads/2022-state-of-hispanic-homeownership-report.pdf>

Stiman, M 2020, 'Second homes in the city and the country: a reappraisal of vacation homes in the twenty-first century.' *International Journal of Housing Policy*, 20(1), 53–74. <https://doi.org/10.1080/19491247.2019.1627842>

Torrado, JM, Duque-Calvache, R, & Palomares-Linares, I 2020, 'The demand-side determinants of multiple property ownership in Spain.' *International Journal of Housing Policy* 20(1), 120–143. <https://doi.org/10.1080/19491247.2019.1662974>

van Ooijen, R & van Rooij, MCJ 2016, 'Mortgage risks, debt literacy and financial advice.' *Journal of Banking & Finance*, 72, 201–217. <https://doi.org/10.1016/j.jbankfin.2016.05.001>

Xu, Y, Johnson, C, Bartholomae, S, O'Neill, B, & Gutter, MS 2015, 'Homeownership among millennials: The deferred American dream?' *Family and Consumer Sciences Research Journal*, 44(2), 201–212. <https://doi.org/10.1111/fcsr.12136>

Yiu, CY, 2021, 'Why house prices increase in the COVID-19 recession: A five-country empirical study on the real interest rate hypothesis.' *Urban Science*, 5(4), 77. <https://doi.org/10.3390/URBANSI5040077>

Zhao, Y 2023, 'The pricing-out phenomenon in the U.S. housing market.' *IMF Working Papers*, 2023/217. <https://doi.org/10.5089/9798400229039.001>

Zhao, N 2024, *The Nation's Stock of Second Homes*. National Association of Home Builders. <https://eyeonhousing.org/2024/09/the-nations-stock-of-second-homes-2/#:~:text=In%202022%2C%20the%20total%20count,homes%20stood%20at%207.15%20million.>