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Tracking Growth and Evaluating Performance of Shared Equity Homeownership Programs During Housing Market Fluctuations

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Ruoniu Wang, Ph.D.
Grounded Solutions Network

Claire Cahen
City University of New York

Arthur Acolin, Ph.D.
University of Washington

Rebecca J. Walter, Ph.D.
University of Washington

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Abstract

This study of 58 shared equity homeownership programs and 4,108 properties over the past three decades explores growth in the shared equity housing stock, the characteristics of households owning shared equity homes, and the performance of these programs across the nation. Using administrative data derived from the HomeKeeper National Data Hub managed by Grounded Solutions Network, performance metrics are compared across four housing market periods: 1985–2000 (pre-housing bubble), 2001–2006 (housing boom), 2007–2012 (housing bust), and 2013–2018 (housing recovery). Findings from this study not only confirm that shared equity models provide affordable homeownership to lower income families generation after generation, but also establish that the sector provides financial security and mitigates risks for homeowners facing housing market turmoil. In effect, shared equity homeownership mitigates the risks of traditional homeownership, strengthens residential stability, and promotes equitable wealth building. Key findings include:

- The shared equity sector is increasingly serving people of color. The share of minority households has steadily increased from 13 percent in the pre-2001 period to 43 percent during the housing recovery period. During the housing recovery period, the racial composition of households in shared equity homes became similar to that of owners with the same income level and living in the same states.
- Ninety-five percent of shared equity homes are priced affordably for families earning 80 percent of area median income (AMI)[1] or below across all housing market periods. Overall, the median subsidy depth as a percentage of fair market price—including *property subsidy* that shared equity programs use to acquire a property and *buyer subsidy* that homebuyers use to purchase their homes—is 31 percent. In all housing market periods, the housing cost burden for a median income shared equity household is below 30 percent.[2]
- Affordability is achieved for both first purchases and resales of shared equity homes. All results around affordability measures are similar between first purchases and resales, including (1) the affordability level, calculated as the percentage of the AMI for households who could afford shared equity homes; (2) subsidy depth, calculated as a percentage of fair market price; and (3) housing costs, calculated as a percentage of household income.
- The median shared equity household accumulates approximately $14,000 through their participation in shared equity programs across housing market periods. By comparison, the median equity investment at purchase is $1,875. Risk associated with homeownership remains, as evidenced by negative net appreciation for a typical shared equity homeowner during the recovery period. However, once the equity accumulated through principal repayment is taken into account, sellers overwhelmingly experience an increase in wealth during all housing market periods.
- Shared equity models are effective in providing stable housing. The average annual move rate in the shared equity sample is 2.6 percent. By comparison, on average 6.9 percent of all homeowners and 14 percent of all households nationwide moved each year during the

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[1] Area median income (AMI) is the midpoint of a region's income distribution.
[2] Over 30 percent is the common metric for evaluating "cost burden."

same period. When shared equity households sold their homes and moved, the majority (58 percent) choose to purchase again.

- Public funding for shared equity programs, specifically state and federal dollars, substantially increased during the housing boom and bust periods, and significantly decreased during the housing recovery period. This trend aligns with the overall growth pattern in the shared equity stock.

- Shared equity homeownership programs of all types—and across all geographies and housing market periods—tend to serve families with similar characteristics. The majority of purchasers are first time homebuyers, low-income (51–80 percent AMI), female-headed household, in their late 30s, and employed in office, retail or service industries.

About the Authors

Ruoniu (Vince) Wang, Ph.D. is the Research Manager at Grounded Solutions Network, where he leads the effort of tracking the scope, trends, and impacts of shared equity homeownership programs. Previously, Vince worked at the Shimberg Center for Housing Studies at the University of Florida, where he received a Master and a Ph.D. in Urban and Regional Planning.

Claire Cahen is a Ph.D. student in Environmental Psychology at the Graduate Center at the City University of New York (CUNY). She is currently working on a National Science Foundation-funded grant NSF-funded grant comparing the life trajectories of community land trust homeowners with those of similar households served in the conventional market.

Arthur Acolin, Ph.D. is an Assistant Professor of Real Estate in the College of Built Environments at the University of Washington. His research focuses on socioeconomic and policy frictions that affect housing outcomes and how to remove them to improve household welfare. He received his Ph.D. in Urban Planning and Development from the Price School of Public Policy at the University of Southern California.

Rebecca J. Walter, Ph.D. is an Assistant Professor of Real Estate in the College of Built Environments at the University of Washington. Her primary area of research is assisted housing and her focus is on expanding affordable housing opportunities for low-income households and building safer communities in distressed neighborhoods. She received a Master's in Urban & Regional Planning and Ph.D. in Geosciences (Urban Geography) from Florida Atlantic University.

About Grounded Solutions Network

Grounded Solutions Network supports strong communities from the ground up. We are a national nonprofit membership organization consisting of community land trusts, inclusionary housing programs, and nonprofits that support affordable housing that lasts. We provide our members and cities with training, technical assistance, program design and management resources, research, and advocacy. Grounded Solutions Network champions evidence-based policies and strategies that work. We promote housing solutions that will stay affordable for generations, so communities can stabilize and strengthen their foundation, for good. We help our members, partners and elected officials use them to establish inclusive communities that have diverse housing options for a variety of incomes, offering choice and opportunity for all residents—both today and for future generations.

About the HomeKeeper National Data Hub

Grounded Solutions Network maintains the HomeKeeper National Data Hub, the sector-wide program performance reporting system for the HomeKeeper program. Built on the Salesforce.com platform, HomeKeeper is a web application of Grounded Solutions Network designed to help organizations manage their affordable homeownership and housing counseling programs. Participating organizations enter an array of program information—including property characteristics, funding sources, sales details, and household characteristics—as part of their day to day program management activities. A core set of inputs common to all participating programs is transferred to the Hub daily, so sector performance can be measured in real-time. Social impact dashboards based on the aggregated Hub data are shared publicly online and organizations have access to program benchmarking reports.

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Tracking Growth and Evaluating Performance of Shared Equity Homeownership Programs During Housing Market Fluctuations

Introduction

Since the start of the 21ˢᵗ century, the housing market in the United States has experienced extreme fluctuations, from an unsustainable upsurge in home values creating a housing bubble, to the Great Recession marked by a foreclosure crisis, to the present recovery spurring mounting concerns about housing affordability and stability. As a part of this housing market turmoil, homeownership rates sank to recent historical lows in 2016. Although homeownership rates declined across all income groups, lower-income households were particularly impacted. Lower-income homebuyers and owners often live in lower cost units and lower quality neighborhoods; they have lower amounts of cash savings to cover the costs of maintenance and repairs; and they are more vulnerable to budget and income shocks (Herbert and Belsky 2008). Due to policies and practices that resulted in segregated communities, the problems confronting low-income homeowners disproportionately affect people of color (Axel-Lute 2018). The result is that lower-income and minority homeowners are less likely to realize the financial and social benefits of owning homes (Herbert and Belsky 2008), which exacerbates wealth inequality. Nevertheless, homeownership, considered by many to be an essential part of the American Dream, remains a valuable wealth-building institution for the general population, even during periods of housing turmoil (Goodman and Mayer 2018).

Shared equity homeownership is a tool to preserve housing affordability, which can be part of the solution to closing the racial wealth gap. Shared equity homeownership programs make homes affordable to lower income families by investing public resources to reduce the initial prices, and then they keep the prices affordable to all future homebuyers through resale restrictions. The organization supports the residents to attain and sustain homeownership. In return, the homeowners agree to sell their homes at a resale-restricted and affordable price to other lower-income homebuyers in the future. Consequently, the homeowner can successfully own a home and build wealth, while the organization is able to preserve the public's investment in the affordable home permanently to help family after family. In practice, however, whether these models together hold their promise to provide stable and affordable homeownership to lower-income households in different housing market periods has not been empirically explored.

This study fills the gap in existing research by examining a national sample of 58 shared equity programs totaling 4,108 properties. The study marks the largest sample to date in evaluating shared equity homeownership. The primary data in this analysis was gathered from Grounded Solution Network's HomeKeeper National Data Hub ("the Hub"). It aggregates data from programs using HomeKeeper, a standardized homeownership program management tool, which was developed and continues to be maintained by Grounded Solutions Network. In this study, performance metrics were compared in four distinct housing market periods: the pre-housing bubble period (1985–2000), housing boom period (2001–2006), housing bust period (2007–2012), and housing recovery period (2013–2018). The findings were then contextualized through comparisons to renter and owner groups. Five main questions were addressed:

(1) *Growth and distribution*: How and where do shared equity programs grow in each housing market period?
(2) *Household characteristics*: Who is served by shared equity homes?
(3) *Affordability*: Do shared equity programs provide affordability— both at the first purchase and resales—regardless of housing market turbulence?
(4) *Wealth building*: How do lower-income families accumulate wealth in each housing market period by participating in shared equity programs? And how much wealth do they accumulate?
(5) *Residential mobility*: Are shared equity programs effective at ensuring residential stability and allowing residential mobility in all housing market periods?

Background

To many Americans, owning a home can be a rewarding achievement, leading to a range of gains associated with homeownership such as financial security, wealth accumulation, sense of community, and improved life outcomes for children. Yet the ability to afford homeownership— and to realize its full gains—varies widely across households of different income and racial-ethnic groups. Lower-income, minority households historically face greater risks in accessing and sustaining homeownership. This was especially true during recent housing market turmoil, when homeownership proved too often unsustainable and precipitated significant costs to these communities. Shared equity models, which share the rewards and risks of homeownership between individuals and the community, provide access to sustained homeownership for lower-income and minority households while preserving the affordability of homes. Shared equity homeownership enhances residential stability. It reduces economic and racial segregation by diversifying the housing stock in opportunity-rich neighborhoods through providing homes that remain affordable. It stabilizes communities by preserving affordable units and preventing displacement in gentrifying neighborhoods.

To keep homes affordable to families with the same income level over time, homes within shared equity programs are resale restricted. Setting the sales price of a shared equity home is achieved through a resale formula established in the program's legal documents (i.e., ground lease, deed covenant, shareholder agreement). Resale formulas vary widely across shared equity programs, and the way in which a resale formula is configured has a direct impact on the amount of equity that a homeowner may realize and how affordable the price is for the next income-qualified buyer. The variation of resale formulas can be summarized into three commonly used types (White 2011).[3]

(1) *Appraisal-based formulas*, which adjust the original purchase price by a percentage of market appreciation at resale.
(2) *Fixed-rate formulas*, which increase the price by a fixed annual percentage.

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[3] *The CLT Technical Manual* (White 2011) also includes *mortgage-based formulas*, which set the resale price based on the affordable amount of mortgage financing for an income-qualified homebuyer. This resale formula type is less practical. Additionally, *itemized formulas*, which count for factors that affect the value of the home, are often included as a further refinement to the basic formula price.

(3) *Indexed formulas*, which calculate the eventual resale price based on the percentage change of an outside index during the homeowning timeframe and apply this percentage change to the initial purchase price.[4]

Together, there are approximately 250,000 documented shared equity homes across the country (Thaden 2018). Shared equity homeownership takes many forms, and the three most commonly known models are community land trusts (CLTs), deed-restricted homes, and limited-equity cooperatives (Davis 2017). CLTs feature a dual ownership model, where the land is owned by a nonprofit corporation and the building is owned by homeowners. The first CLT in the United States emerged in Albany, Georgia in 1969. Nearly 50 years later, the field has grown to an estimated portfolio of 225 CLTs totaling approximately 12,000 homes (Thaden 2018). Deed-restricted homes specify resale requirements that are written into the homeowner's deed restricted covenant. Inclusionary housing policies applying to for-sale development typically use deed restrictions to deliver shared equity homeownership opportunities. Based on a recent survey of 265 inclusionary housing programs, 75 percent of these programs apply to for-sale development and together they have produced nearly 50,000 affordable owner-occupied units (Thaden and Wang 2017). It is estimated that currently over 1,300 inclusionary housing programs exist in the U.S. In a limited-equity cooperative, low- and moderate-income occupants own shares of a corporation, which owns the property (or properties) that they occupy. Resale restrictions are required by the corporation's bylaws, which are determined collectively by the occupants and recorded in share agreements with the residents. There are over 166,000 limited equity cooperative units in the nation, about 60 percent of which are located in New York City (Thaden 2018). While varying in characteristics and scale of unit production, these shared equity models form a "third sector" in housing that bridges the gap between rental housing and homeownership (Lubell 2013). The growth of the sector in the past and future requires additional public subsidy, access to financing, and political buy-in (Thaden 2018; Theodos et al. 2017).

Over the past two decades, access to homeownership has become harder to attain for all Americans, although interest in homeownership remains strong (Joint Center for Housing Studies of Harvard University 2018). As might be expected, in turbulent housing markets, families that are younger, lower income, and people of color have particular difficulty accessing homeownership opportunities (Simmons 2014). It is not yet clear whether shared equity homes are serving these vulnerable populations in proportions that reflect the demographic composition in the region where they are located. As part of an evaluation of nine shared equity homeownership programs, Theodos and his colleagues (2017) from Urban Institute examined the demographics of 689 shared equity applicants. They found that these applicants were older than the median age of all first-time homebuyers and were better educated than the overall population. These comparisons, however, were made to the entire nation rather than the nine housing markets where shared equity programs were located. A further comparison between shared equity home purchasers and non-purchasers within the region found that these two groups were similar in many sociodemographic aspects, including age, gender, marital status, race, employment, and income (Theodos et al. 2017).

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[4] Examples of commonly used indices are Consumer Price Index (CPI) and AMI.

Despite numerous promising features of shared equity models and mounting interest in shared equity homeownership among communities, nonprofits, policy makers, and scholars in recent years, evaluations on program performance is scarce. In 2009, the Champlain Housing Trust, the country's largest CLT, published a landmark report that used resale data to assess affordability preservation, wealth creation, and residential mobility from two perspectives: the individual homeowner and the community at large (Davis 2009). Although only focusing on one CLT, the 2009 report introduced an analytical framework that paved the way for future studies. In 2009, Grounded Solutions Network[5] engaged the Urban Institute to examine a combination of administrative records and survey data for seven shared equity programs—three CLTs, two deed-restricted programs, and two limited equity cooperatives. The resulting findings demonstrated that lower income homebuyers participating in shared equity programs accumulated wealth, maintained residential stability despite housing market turbulence, and moved in a way that was comparable to other homeowners. While performance varied among these seven programs, the researchers concluded that performance outcomes for shared equity homeownership had much more to do with specific resale requirements and local housing market conditions than the type of shared equity program (Temkin et al. 2010).

Because these earlier efforts demonstrated how hard it was for programs to gather data, Grounded Solutions Network developed the HomeKeeper National Data Hub and began collecting, aggregating, and sharing sector performance, first through social impact reports, and then through the HomeKeeper National Data Hub Dashboards, which were first published online in 2015.[6] These interactive, up-to-date dashboards present aggregated program data across seven topics—sample program summary, property portfolio, homebuyer demographics, affordability, community investment, resale performance, and security and mobility. The dataset contained 81 shared equity programs totaling 6,402 properties as of September 2018. Although programs contributing data to the HomeKeeper dashboards are not necessarily representative of all shared equity homeownership programs nationally, the dashboards begin to fill the data void that precludes empirical examinations (Ehlenz and Taylor 2018).

Several studies offer additional evidence that shared equity homeownership provides a safety net for its participants and nearby residents. In evaluating nine shared equity programs, Theodos et al. (2017) found that shared equity buyers paid less to purchase a home and had lower monthly housing cost than shared equity home applicants who purchased non-shared equity homes. Also, these shared equity buyers had much lower credit scores and revolving debt than comparable non-shared equity buyers. Using survey data from 62 CLTs, Thaden (2011) found that CLT loans significantly outperformed conventional loans in both serious delinquency rates and number of loans in foreclosure proceedings. A recent study concluded that CLTs were able to moderate the negative effects of neighborhood gentrification (Choi, Van Zandt, and Matarrita-Cascante 2017). In particular, the study revealed that the odds of gentrification were significantly lower in neighborhoods with CLT units than those without. In gentrifying neighborhoods, CLTs reduced the displacement of lower-income and less-educated residents (Choi et al. 2017).

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[5] Activities described prior to 2016 were undertaken by either Cornerstone Partnership, then a program of Capital Impact Partners, or National Community Land Trust Network. The two joined in 2016 and relaunched as Grounded Solutions Network.

[6] The HomeKeeper National Data Hub Dashboards are available here: https://myhomekeeper.org/why-homekeeper/the-homekeeper-national-data-hub/.

Davis (2017) articulated why shared equity homeownership should earn a place in both strong and weak markets. In strong markets, they provide an affordable option that works for prospective homebuyers, lenders, and funders, whereas in weak markets, they add residential diversity, protect wealth, increase social capital, and preserve affordability in the case of market upturns. Previous empirical studies on shared equity homeownership either applied data from one point in time or collectively analyzed data over time. How the shared equity sector fares during housing market fluctuations is not known. Furthermore, existing studies are based upon small samples and constrained in contextualizing the findings. This study addresses these gaps by undertaking a comprehensive analysis of program performance across four housing market periods using data from 58 programs, the largest sample size to date.

Data and Methods

This section first introduces the source of shared equity homeownership data utilized in this study. Next, the base sample is described, including how it was determined and distributed across housing market periods. Lastly, the use of secondary data to compute metrics for comparison groups is explained.

Shared Equity Homeownership Data

The main dataset on shared equity programs used in this study came from the Hub, which is the central data storage and program performance reporting system for the HomeKeeper program. Built on Salesforce.com as the technical platform, the HomeKeeper program is a web application of Grounded Solutions Network, which is designed to help organizations manage their affordable homeownership and housing counseling programs. Participating organizations enter a whole array of program information—including property characteristics, funding sources, purchase and sale details, and household characteristics—as part of their day-to-day program management activities. Data based on a core set of inputs common to all participating programs is transferred to the Hub daily so that sector-wide performance metrics can be computed and tracked. The data used in this study was obtained on July 9, 2018. Thus, this is a set of administrative data that accurately reflects the profile of shared equity programs in the Hub as of the date when it was retrieved.

The Base Sample

This administrative dataset includes a wealth of information about shared equity programs that joined HomeKeeper at various points in time, the majority of which are still HomeKeeper users. However, some are no longer actively sharing data. In addition, organizational changes and program requirement shifts have not been systematically tracked in HomeKeeper. Due to these dynamics and uncertainties, a program survey was conducted to examine data completeness and consistency and to help understand which HomeKeeper programs and properties meet the shared

equity homeownership definition according to the Duty to Serve program.[7] Only those programs and properties that meet the Duty to Serve definition were included in this study.

An email survey was administered between April and May of 2018, and when necessary, follow-up phone calls were conducted to obtain missing information. Ten questions were asked in the survey, which addressed:

(1) *Program eligibility*: whether the program established resale restrictions with affordability terms of at least 30 years;
(2) *Property completeness*: whether properties in the Hub reflected the actual number of properties at the time of the survey; and
(3) *Program change*: whether program evolution affected property composition and performance.

Out of the 48 organizations with at least one property that were contacted, 43 (90 percent) responded to the survey. Organizations that did not complete the survey were excluded from this study. Three programs in three organizations were further excluded. One excluded program had a significant data backlog that resulted in a large discrepancy between the number of properties recorded in the Hub and the actual number of properties in the program. The second excluded program had duplicate properties reported in another HomeKeeper program due to administrative overlap in the organization. The third excluded program had a buyout option that caused uncertainty about lasting affordability for all properties in the program. As a result, 58 shared equity programs in 40 organizations constitute the base sample for this study. For organizations that have more than one program, some are due to mergers, while others choose to have a diversified portfolio of programs to enhance organizational sustainability in certain contexts. Table 1 lists all programs. Altogether, 4,108 properties from these programs are included in this study.

The base sample includes all primary shared equity homeownership models, although the most prevalent model is the CLT. Of the 32 CLTs totaling 2,997 properties (or 73 percent of all properties in the base sample), the oldest and largest program is Champlain Housing Trust (n = 612). Also, the base sample consists of some newer (established after 2000) and smaller CLTs with less than 20 properties, such as Crescent City Community Land Trust, Inc. and Springfield Community Land Trust. The sample includes 15 deed-restricted programs with 597 properties, many of which are part of Habitat for Humanity organizations. Habitat for Humanity Greater San Francisco has 220 homes included in the study, the largest in this category, partly because of a recent merger with another organization. Two other organizations with a large number of reported homes in their portfolios, Austin Habitat for Humanity and Hello Housing, likewise experienced mergers. Missing data prior to these mergers is the main reason for the considerable discrepancy between what is recorded in the Hub and the reported number of homes in their

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[7] The Federal Housing Finance Agency's Duty to Serve program enacted federal law that requires Fannie Mae and Freddie Mac (the Enterprises) to increase access to financing for lower-income families in underserved markets. "Shared equity homeownership" was included as a part of the "affordable housing preservation" underserved market, and the final rule provided a definition of "shared equity homeownership" that is used in this study. For more information, refer to this Shelterforce article: https://shelterforce.org/2018/01/30/duty-serve-boon-shared-equity-homeownership/.

portfolios. In addition, there are limited-equity cooperative programs in three organizations—City First Homes, Northern California Land Trust, and San Francisco Community Land Trust—as well as shared appreciation loan programs in two organizations: City First Homes and The Housing Fund. Finally, six programs with a mix of shared equity models were broadly put in the "shared equity homeownership" category in Table 1.

Table 1: Programs and Number of Properties in the Base Sample

Organization Name	Service Area	Program Name	Program Type	Reported Number of Properties	Number of Properties in the Sample
Athens Land Trust, Inc.	Clarke County, GA	Homeowner	Community Land Trust	48	30
Austin Habitat for Humanity	Travis County, TX	Habitat	Deed-Restricted Program	460	216
		HomeBase	Deed-Restricted Program		1
Champlain Housing Trust	Chittenden and Franklin Counties, VT	CHT Shared Equity Program	Community Land Trust	613	612
Chicago Community Land Trust	Cook County, IL	Chicago Community Land Trust	Community Land Trust	79	78
City First Homes	District of Columbia	Cooperative with Share Loan	Limited-Equity Cooperative	4	4
		Shared Equity Homeownership	Shared Appreciation Loan Program	47	47
City of Lakes Community Land Trust	Hennepin County, MN	City of Lakes Community Land Trust	Community Land Trust	244	244
Colorado Community Land Trust	Denver County, CO	Land Trust	Community Land Trust	189	181
Community Land Trust of Palm Beach County	Palm Beach County, FL	Ownership	Community Land Trust	52	20
Coulee Community Land Trust, a part of Couleecap, Inc.	La Crosse County, WI	Coulee Community Land Trust	Community Land Trust	22	13
Crescent City Community Land Trust, Inc.	St Tammany, LA	Northshore Housing Initiative	Community Land Trust	14	8
Downstreet Housing & Community Development	Orange and Washington Counties, VT	Downstreet Shared Equity Program	Shared Equity Homeownership	161	161
Habitat for Humanity Greater San Francisco	San Mateo and San Francisco Counties, CA	Homeownership	Deed-Restricted Program	246	220
Habitat for Humanity Seattle-King County	King County, WA	Homeownership Program	Shared Equity Homeownership	149	142
Heartfelt Florida Housing South Palm Beach Community Land Trust	Palm Beach County, FL	Habitat For Humanity South Palm Beach County	Community Land Trust	40	20
		Heartfelt CLT	Community Land Trust	162	6
Hello Housing	Marin County, CA	City of Novato Administration	Deed-Restricted Program	409	66
Homes Within Reach	Hennepin County, MN	Homes Within Reach	Community Land Trust	140	134
Housing Land Trust of Sonoma County	Sonoma County, CA	HLTSC Single Family Home	Community Land Trust	60	37
Housing Resources Bainbridge	Kitsap County, WA	Homeownership Program	Shared Equity Homeownership	42	29

Island Housing Trust	Hancock County, ME	IHT Deed Restricted	Deed-Restricted Program	30	20
Kulshan Community Land Trust	Whatcom County, WA	HBD	Community Land Trust	127	95
Lopez Community Land Trust	San Juan County, WA	Cooperative Housing Program	Community Land Trust	45	37
Mountainlands Community Housing Trust	Summit County, UT	MCHT	Community Land Trust	114	67
Newtown Community Development Corporation	Maricopa County, AZ	CLT Program	Community Land Trust	130	122
		Deed Restricted	Deed-Restricted Program	3	3
Northern California Land Trust	Alameda County, CA	BACLT Limited Equity Co-op	Limited-Equity Cooperative	3	3
Northwest Montana Community Land Trust, Inc.	Flathead County, MT	City of Kalispell NSP	Community Land Trust	51	28
One Roof Community Housing	St. Louis County, MN	Community Land Trust	Community Land Trust	279	279
OPAL Community Land Trust (OPAL)	San Juan County, WA	Homeownership Program	Community Land Trust	103	103
Pima County Community Land Trust	Pima County, AZ	PCCLT	Community Land Trust	89	8
Pinellas Community Housing Foundation Inc.	Pinellas County, FL	Pinellas Community Land Trust Program	Community Land Trust	67	60
Proud Ground	Multnomah County, OR	CCLT Homeownership Program	Community Land Trust	N/A	19
	Clackamas and Multnomah Counties, OR and Clark County, WA	Proud Ground Homeownership Program	Community Land Trust	N/A	236
Rochester Area Foundation / First Homes.	Omsted, Goodhue, Mower, and Wabasha Counties, MN	CLT	Community Land Trust	360	217
		Condo Deed Restriction	Deed-Restricted Program	5	5
San Francisco Community Land Trust	Alameda, San Francisco, Sonoma, and Mendocino Counties, CA	SFCLT Limited Equity Co-op	Limited-Equity Cooperative	21	21
San Juan Community HomeTrust	San Juan County, WA	SJHT Homeownership	Community Land Trust	38	33
Sawmill Community Land Trust	Bernalillo County, NM	Sawmill CLT market rate program	Community Land Trust	16	11
		Sawmill CLT subsidized program	Community Land Trust	84	84
SHARE Community Land Trust - Upper Valley MEND	Chelan County, WA	SHARE CLT	Community Land Trust	20	20
Springfield Community Land Trust	Greene County, MO	Community Land Trust	Community Land Trust	17	13
The Housing Fund - Nashville, TN	Davidson County, TN	Our House	Shared Appreciation Loan Program	43	19
Twin Pines Housing Trust	Grafton, Windsor and Orange Counties, VT	TPHT Shared Equity NH	Community Land Trust	10	10
		TPHT Shared Equity VT	Community Land Trust	37	37

Vermont Housing and Conservation Board	Addison County, VT	Addison County Community Trust	Shared Equity Homeownership	64	57
	Bennington County, VT	Bennington Area Habitat for Humanity	Deed-Restricted Program	18	16
	Orange and Washington Counties, VT	Central VT Habitat	Deed-Restricted Program	9	8
	Chittenden County, VT	Green Mountain Habitat for Humanity	Deed-Restricted Program	34	24
	Addison County, VT	Habitat for Humanity of Addison County	Deed-Restricted Program	8	7
	Bennington and Rutland Counties, VT	Neighborworks of Western Vermont	Shared Equity Homeownership	49	29
	Orleans County, VT	Rural Edge	Deed-Restricted Program	3	2
	Bennington County, VT	Shires Housing	Shared Equity Homeownership	9	2
	Windsor County, VT	Springfield Habitat	Deed-Restricted Program	2	2
	Windham County, VT	Upper Valley Habitat	Deed-Restricted Program	5	3
	Windsor County, VT	West River Habitat	Deed-Restricted Program	4	4
Windham & Windsor Housing Trust	Windham and Windsor Counties, VT	WWHT Shared Equity Program	Community Land Trust	135	135
			Grand Total	**5,213**	**4,108**

Notes: 1. Programs are categorized as general "shared equity program" if there is a mix of shared equity models. 2. Two CLT Programs (i.e., Kulshan Community Land Trust, Mountainlands Community Housing Trust) that include both ground leases and deed covenants are treated as community land trusts. 3. Reported number of properties came from a survey conducted between April and May of 2018.

Descriptions of resale formulas are available for 28 programs (48 percent) in the sample. The majority of programs have appraisal-based formulas (n = 15). There are six programs using indexed-based formulas and four programs using fixed-rate formulas. In addition, three programs in the sample use the lessor value after applying two formula types to determine the resale price limit, also known as the "purchase option price" (Table 2).

Table 2: Program Count by Resale Formula Type (n = 28)

Formula Type	Program Count
Appraisal-based	15
Indexed	6
Fixed-rate	4
Lesser of appraisal-based or indexed	2
Lesser of appraisal-based or mortgage-based	1

Note: There are 10 programs (six using appraisal-based formulas, two using indexed formulas, and two using fixed-rate formulas) that include capital improvements as a separate factor to determine the resale price limit.

This sample is not a representative sample of the entire shared equity program population. Even though there are 32 CLTs in the data, they represent roughly 20 percent of all CLTs that have units in the nation. Other shared equity models in the data have even smaller sample sizes and represent smaller proportions of the entire population. Selection biases also exist. CLTs that are more established with larger portfolios are more likely to be using HomeKeeper as their program management tool, while shared equity programs that are under-resourced and cannot afford to join HomeKeeper are not represented. As Table 1 shows, for some programs there is a discrepancy between reported number of homes and the number analyzed in this study. Reasons for this discrepancy include data input backlogs that exclude newer homes from the base sample and organization mergers that may exclude older homes lacking information. There were seven organizations (totaling 5 percent of properties included in this study) that left HomeKeeper at various points in time, resulting in the absence of more recent program growth and resales. These limitations need to be kept in mind when interpreting the results of this study.

To examine how shared equity programs fare across housing market periods, the sample of properties is grouped into four time periods: pre-2001 and every 6-year period starting in 2001. This corresponds to the housing boom, bust, and recovery phases respectively. The number of properties, first purchases, and resale transactions in the dataset is shown in Table 3. There are fewer first purchases than properties, because only complete first purchase records are included to provide a basis for the affordability analysis. Table 3 also shows the sample size of resales used to calculate wealth building by housing market period. It should be noted that the program sample sizes change due to multiple factors. In each period after 2000, some of the properties added to the Hub came from existing programs that were established prior to the target period, and the rest came from new programs that were established during the target period. Many of the new programs were added to new housing markets. Therefore, the performance of shared equity programs in each period reflects the combined effect of new properties in existing programs and new programs, as well as conditions of added markets where new programs are located.

Table 3: Distribution of Shared Equity Homes, First Purchases, Resale Transactions, and Sample Size for Wealth Calculation by Housing Market Period

Market Period	Properties[1]	First Purchases	Resales	Sample Size for Wealth Calculation[2]
1985–2000	580	297	82	-
2001–2006	1,175	796	145	124
2007–2012	1,515	1,026	373	282
2013–2018	832	634	459	332
Total	**4,102**	**2,754**	**1,059**	**738**

Notes: [1] For six properties, the date placed in program is unknown. These six properties were excluded from the analyses where comparisons were made across housing market period but were included in other analyses where housing market phase does not apply. [2] The wealth calculation is based on cash flow during the holding period, so the properties were grouped in a market period based on the resale date.

Secondary Data

Secondary data is used in this study to contextualize the results and help understand how households living in shared equity models fare compared to households living in market-rate housing. For the neighborhood analysis, we employed a series of indices developed by HUD for the Affirmative Furthering Fair Housing (AFFH) rule. These indices are used to help inform communities about segregation and disparities in accessing opportunity. Seven indices were used in this study to evaluate access to opportunity based on the location of the shared equity homeownership properties: job proximity index, school proficiency, low poverty, labor market engagement, environmental health, low transportation cost, and transit trips.[8] Each index value was standardized into a percentile ranking score ranging from 0 to 100. The higher the score, the better access to opportunity in a neighborhood. It is important to note that the basic unit of analysis and the reference group for which the percentile ranking is based are not the same for all indices (see Table 4). This variation means that job proximity and school proficiency scores that are assigned to shared equity homes should be interpreted differently from the scores of the other five AFFH indices. For example, a median school proficiency score of 60 means that the typical *census block group* in which shared equity homes are located scores higher than 60 percent of all census block groups *in the same state*. While a median transit trip score of 60 means that the typical *census tract* in which shared equity homes are located scores higher than 60 percent of all census tracts *in the nation*.

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[8] Detailed descriptions of the methodology for each of the indices are available from HUD at: https://www.hudexchange.info/resources/documents/AFFH-T-Data-Documentation-AFFHT0004-November-2017.pdf.

Table 4: Variations of HUD AFFH Index Scores

Index	Unit of Analysis	Reference Group	Data Source
Job proximity	Census block group	Census based statistical area	Longitudinal Employer-Household Dynamics (LEHD) data, 2014
School proficiency	Census block group	State	Great Schools (proficiency data, 2013–14); Common Core of Data (4 th grade school addresses and enrollment, 2013–14); Maponics (attendance boundaries, 2016)
Low poverty	Census tract	Nation	American Community Survey (ACS), 2009–2013
Labor market engagement	Census tract	Nation	ACS, 2006–2010
Environmental health	Census tract	Nation	National Air Toxics Assessment (NATA) data, 2011
Low transportation cost	Census tract	Nation	Location Affordability Index (LAI) data, 2008–2012
Transit trips	Census tract	Nation	Location Affordability Index (LAI) data, 2008–2012

The weighted average AFFH neighborhood scores for shared equity homes were compared with the weighted average neighborhood scores for two housing groups: the comparable owner- and renter-occupied units. In this analysis, a "comparable owner-occupied unit" refers to all homeownership units occupied by households with annual income between 40 percent and 80 percent of area median income (AMI) and the same thresholds were used for "comparable renter-occupied units." The numbers were derived from HUD's latest Comprehensive Housing Affordability Strategy (CHAS) data. The household income level for comparison groups was chosen because it corresponds to the CHAS data income bracket thresholds that closely tie to the 25 percentile and 75 percentile income level of shared equity homeowners in the sample (36 percent and 89 percent of AMI, respectively). This analysis included all census tracts within Census Based Statistical Areas (CBSAs) where there was one or more shared equity home, as well as all tracts that fell outside CBSA boundaries and had at least one shared equity home. For example, we first computed the weighted average low-poverty score for all census tracts, weighted by the number of shared equity homes. In comparison, we then calculated the average low-poverty score of all census tracts in CBSAs where there is at least one shared equity home, plus those tracts with at least one shared equity home but fall outside CBSA boundaries. This average low-poverty score was weighted by the number of units occupied by owner (or renter) households earning 40 to 80 percent of AMI in each tract.

Next, the sociodemographic characteristics of shared equity households were contextualized by comparing them to those of general renters and owners at the same income level and living in the same states as shared equity homeowners during the same market periods. It must be noted that sociodemographic characteristics for shared equity households were recorded in HomeKeeper when they entered the shared equity programs, as opposed to using a point in time (or a period of

time) data collection approach that most surveys employ. The metrics for the comparison groups were derived from the American Community Survey Public Use Microdata Sample. For the comparison groups, the average of 17-year estimates (from 2000 to 2016) was computed for each characteristic. This analysis only included states with at least one shared equity home. Also, only households with annual income between $28,121 and $57,844 were included. This range represents one standard deviation above and below the average annual income of shared equity families ($41,207 in 2018 dollars).

For the wealth building analysis, changes in the Federal Housing Finance Agency (FHFA) House Price Indices (HPI) during the participants holding period were used to compare home price appreciation for program participants to the average market return for properties in their ZIP codes. The HPI estimated market appreciation, based on repeat sales of the same properties, is available on an annual basis for most ZIP codes. The time of change corresponds to the same period as each household's length of stay in the program.

Finally, reasons for moving by the comparison group come from the American Housing Survey. This analysis included households in states with at least one shared equity program. Table 5 lists all secondary data sources.

Table 5: List of Secondary Data

| Variables	Data Source	Year
Property Growth and Distribution		
Neighborhood opportunity metrics	HUD Affirmatively Furthering Fair Housing data	Multiple data sources from different years
Comparison groups for location outcome	Comprehensive Housing Affordability Strategy data	2015 5-year average
Household Characteristics		
Comparison groups for household size, type, education, occupation, race, age, and gender	American Community Survey Public Use Microdata Sample	2000–2016 average
Wealth Building		
Market house price appreciation	Five-digit ZIP Code annual House Price Index, Federal Housing Finance Agency	1985–2017
Residential Mobility		
Reasons for moving	American Housing Survey	2017

Results

Growth and Distribution
The objective of this section is to examine the growth and distribution patterns of shared equity homes in the sample. In addition, home acquisition type and funding streams are compared across housing market periods.

Property Distribution

Shared equity homes in the sample are located in 264 cities across 20 states and Washington D.C. As shown in Figure 6, there are noticeable clusters of properties in several states including Vermont (n = 1,086), Minnesota (n = 879), Washington (n = 463), California (n = 340), Oregon (n = 246), and Texas (n = 217). In addition, four smaller maps in Figure 5 show the breakdown of property locations entering the program by housing market period. Properties were marked in red if they entered a shared equity program during the same market phase as their corresponding program was established; whereas those in blue entered a shared equity program that already existed in a previous market period. The trend shown in Figure 1 suggests that much of the market expansion for shared equity homes took place during the housing boom (primarily in Midwest and West regions) and housing bust (primarily in Midwest and Southeast regions) periods.

Figure 1: Locations of Shared Equity Homes by Housing Market Period (n = 4,108)
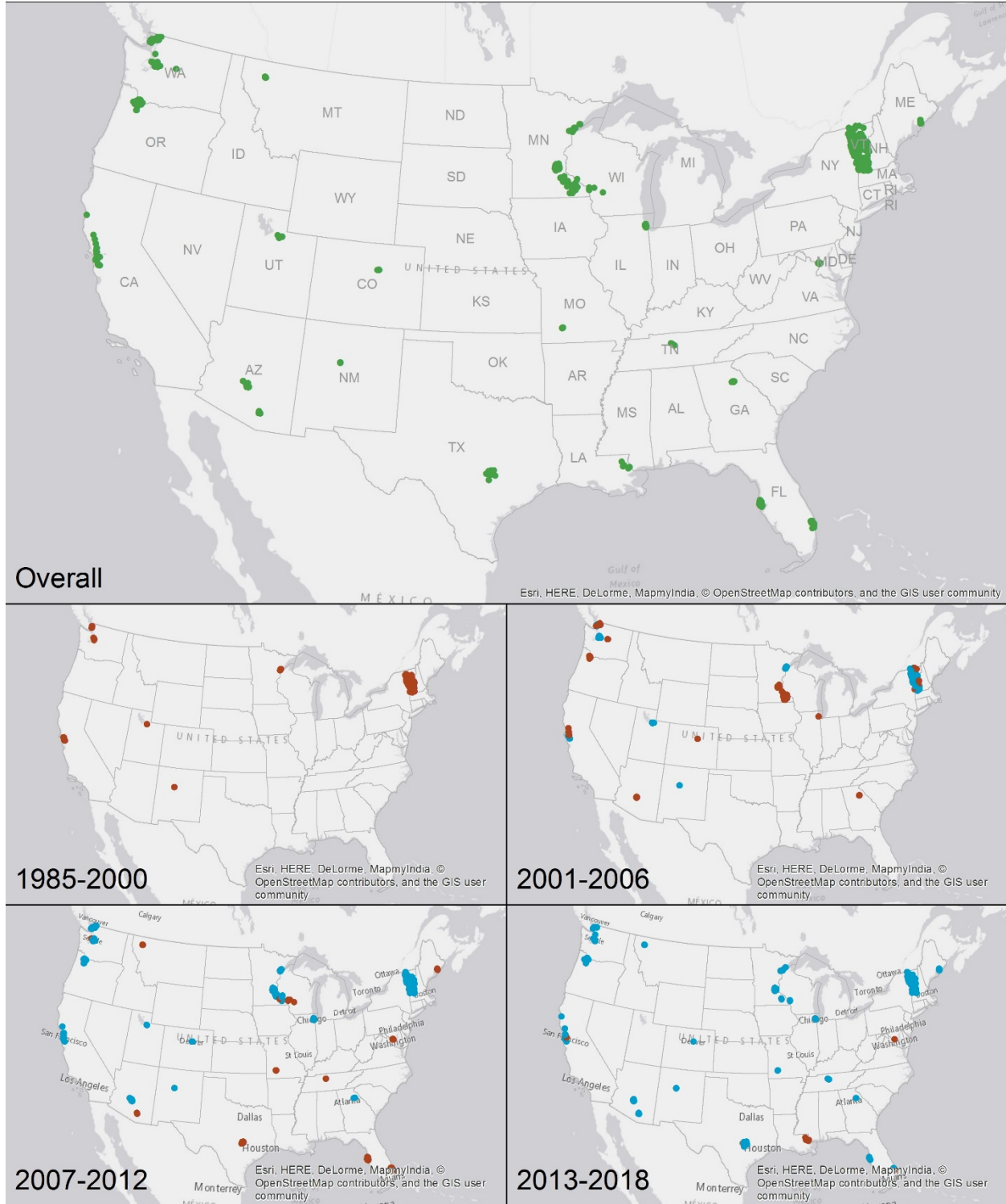
Overall, 85 percent of shared equity homes are located in urbanized areas as defined by the 2017 U.S. Census. Although a slightly higher share of shared equity homes (about one in four) were in rural areas prior to 2001, in large part shared equity models are serving urban populations. Even if we applied 2000 Census-defined urbanized area boundary to control for urbanization influence, this conclusion remains unchanged.

Figure 2: Percentage Distribution of Properties in Urban and Rural Areas by Housing Market Period (n = 4,102)

Urban | Rural
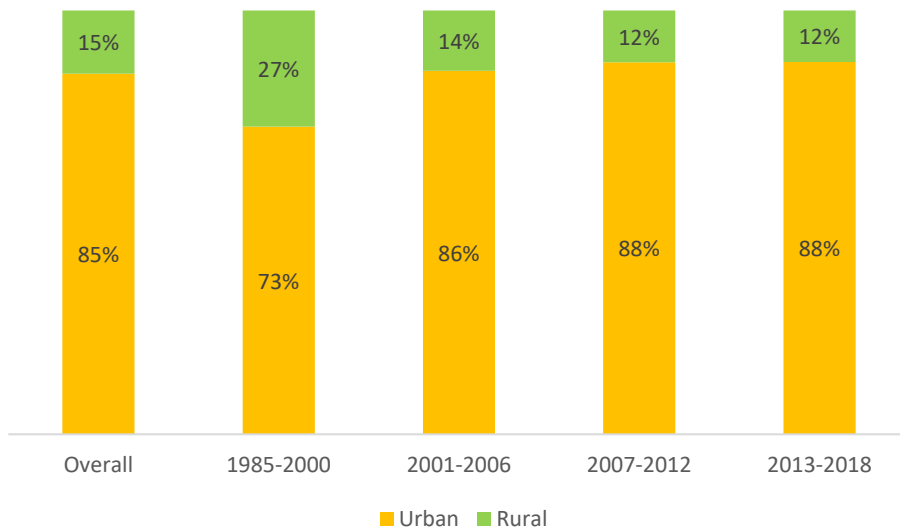
Portfolio Growth

The growth pattern of sample shared equity homes varies in each housing market period.[9] The number of new homes added each year remained low prior to 2001. A significant increase of annual production occurred during the housing boom period (2001–2006) and high production lasted throughout the housing bust period until the beginning of the housing recovery (2007–2013). In 2014, home growth plummeted and continued decreasing thereafter (Figure 3). Most of the annual growth in number of properties took place in existing shared equity programs as opposed to new ones. While there is growing interest in shared equity models, the portfolio growth pattern—especially for CLTs, which are the dominant model in the sample—largely responds to funding availability. For instance, during the housing bust period many programs obtained funding through the federal Neighborhood Stabilization Program (NSP), which also likely explains the increase in production in 2012 and 2013. The declining annual production during the housing recovery period is in part explained by: (1) shrinking funding from federal programs (e.g., NSP, HOME, SHOP, and CDBG), (2) lack of support from state and local

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[9] The growth trends in each market period of larger, older programs that have sizeable portfolios (i.e., programs of Champlain Housing Trust, Downstreet Housing & Community Development, Habitat for Humanity Greater San Francisco, Windham & Windsor Housing Trust) is similar to all sample programs. This comparison corroborates that added programs in more recent market periods are not the driver of the growth pattern of all sample programs.

governments, and/or (3) a shift of funding away from homeownership and towards affordable rental housing (Thaden 2018).

Figure 3: Annual Growth of Shared Equity Homes (n = 4,102)

Legend: ■ Number of Properties Added to Existing Programs   ■ Number of Properties Added to New Programs
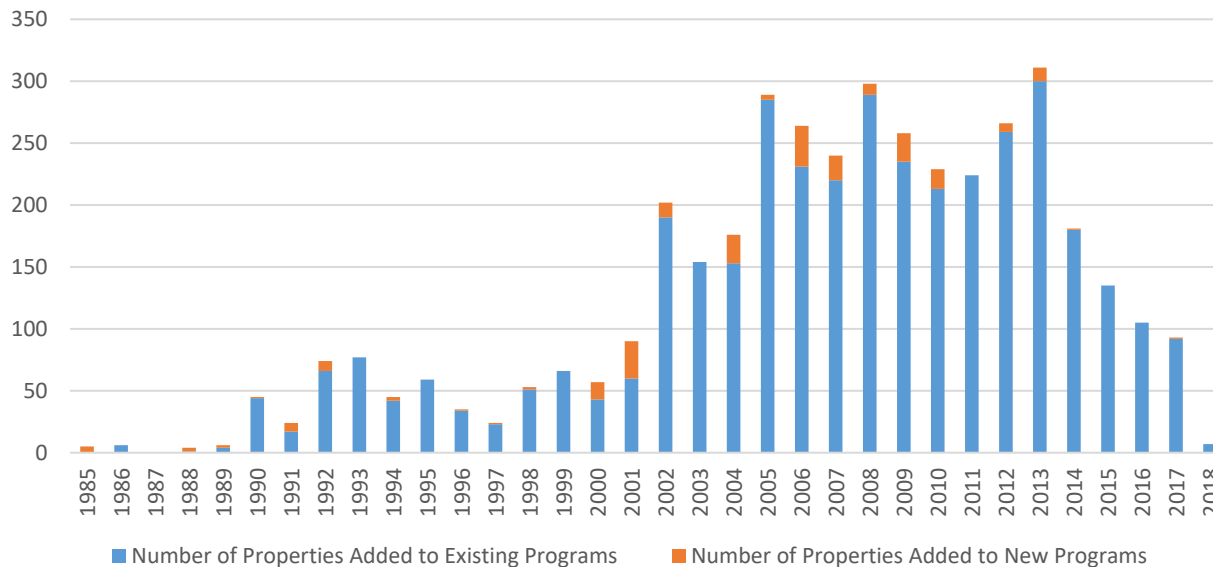
<u>Acquisition Type</u>

There are generally three forms of property acquisition for shared equity homeownership programs. *New construction* means that vacant land is acquired and then housing is built on that land. *Acquisition/rehab* means that land is purchased with an existing structure, and extensive repairs are made to that structure prior to its being resold. *Buyer-initiated* means that pre-approved homebuyers select homes on the open market within a certain community that meet the program's property eligibility requirements. Overall, nearly half of the properties entered shared equity homeownership programs through new construction, and the proportion of acquisition/rehab and buyer-initiated properties was approximately the same (23 percent and 27 percent, respectively).

Variation in the proportion of acquisition types exists across housing market periods. As shown in Figure 4, new construction dominated the housing boom and bust periods, reflecting strong market conditions during the housing boom period and the influx of funding support during the housing bust period. Meanwhile, the share of acquisitions/rehabs increased from one tenth to one third during and after the housing bust. While nearly half of the properties were buyer initiated prior to 2001, their share dropped significantly in the following three housing phases. Overall, shared equity homes became more balanced across the three main acquisition types over time, and only 17 percent of the organizations reported just one acquisition type. Although these shifts may be attributable to external forces such as market conditions and funding availability, they indicate that shared equity programs in the sample gained experience in building portfolios through different mechanisms. As market conditions change, shared equity programs need to be nimble and open to different types of opportunities.

18

Figure 4: Percent Distribution of Acquisition Type (n = 3,603)
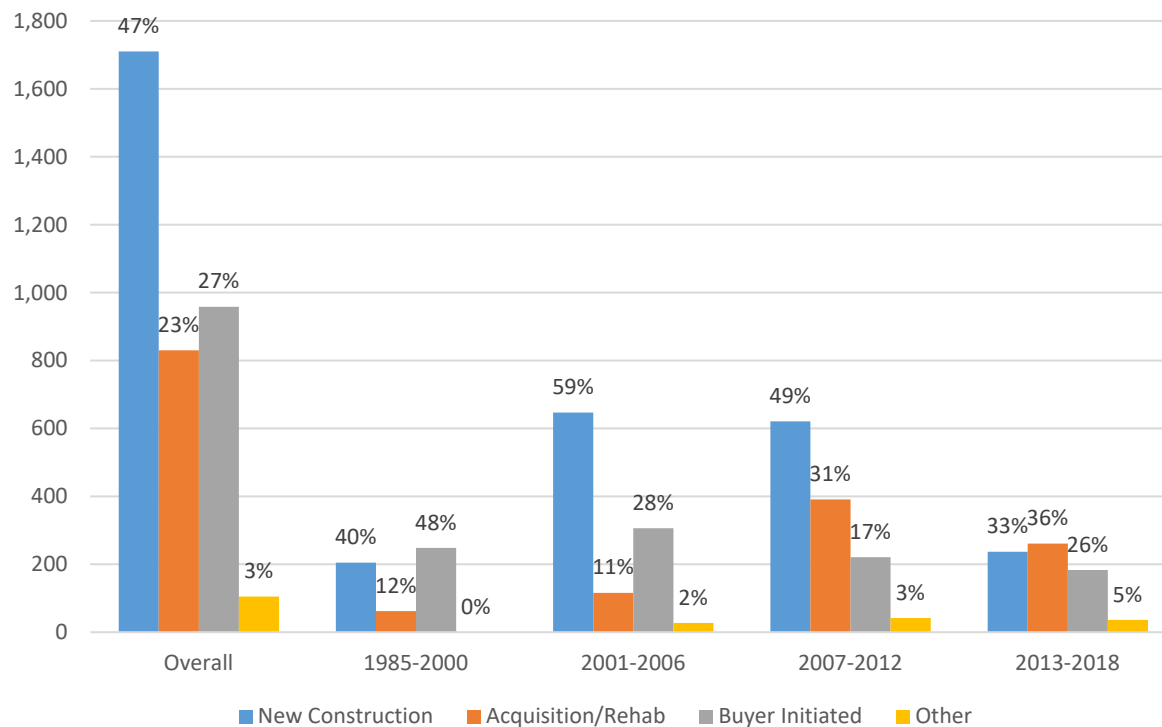

Property Funding Sources

How shared equity homes are funded is an important consideration for program growth and scalability. The Hub includes information about the type and amount of all funding sources that were used for each purchase of the shared equity homes. Commensurate to property growth, the aggregated amount of all funding sources used for purchases in each time period in the sample (mainly loans, grants, buyer's cash, and cash credits) increased from $90 million in the pre-2001 period to $236 million in the housing boom period (in 2018 dollars). It peaked at $369 million during the housing bust period and declined to $304 million during the housing recovery period. The total funding amount for all shared equity homes in the sample was $859 million.

There is a wide range of funding source types across shared equity programs. They can be grouped into two main categories: *public sources of funding* that come from government agencies mostly in the form of grants and development loans[10] and *private sources of funding* that include everything else, such as buyer's savings, conventional loans from financial institutions, individual donations, and foundation grants. Overall, 61 percent of property development funding came from public sources and 39 percent from private sources. As shown in Figure 5, the total amount of public funding over time changed in tandem with shared equity home production, suggesting that public funding is an important driver of program growth. Public funding as a percentage of total funding decreased significantly, from 56 percent in pre-2001 period to only 29 percent in the housing recovery period. This finding is consistent with

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[10] Development loans are effectively paid back upon sale.

anecdotal evidence from the field. Dwindling public funding requires programs to innovatively seek private market funding and at times, cut necessary program costs to maintain the program.

Figure 5: Total Funding Amount (2018 dollars) by Type (n = 4,102)
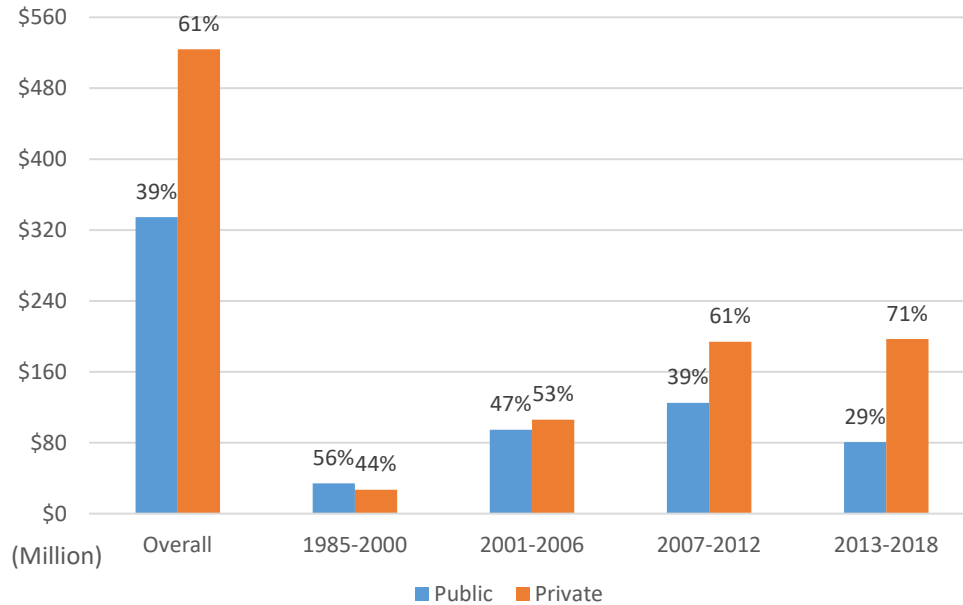
Another way that programs make homes affordable to lower income buyers is by providing buyer subsidies. In HomeKeeper, buyer subsidies refer to all funding sources that are either a grant or a loan to the buyer, with no payments in the first five years. Buyer subsidies include one-time funding sources for current homebuyers only, as well as those assumable by future buyers. As shown in Figure 6, the overall median buyer subsidy amount is slightly over $57,000. The median buyer subsidy amount varies across housing market periods: it increased substantially from $20,000 prior to 2011 to $53,000 during the housing boom period, peaked at $61,000 during the housing bust period, and decreased back to $53,000 during the housing recovery period.

Figure 6: Median Buyer Subsidy Amount (2018 dollars) by Housing Market Period (n = 5,269)
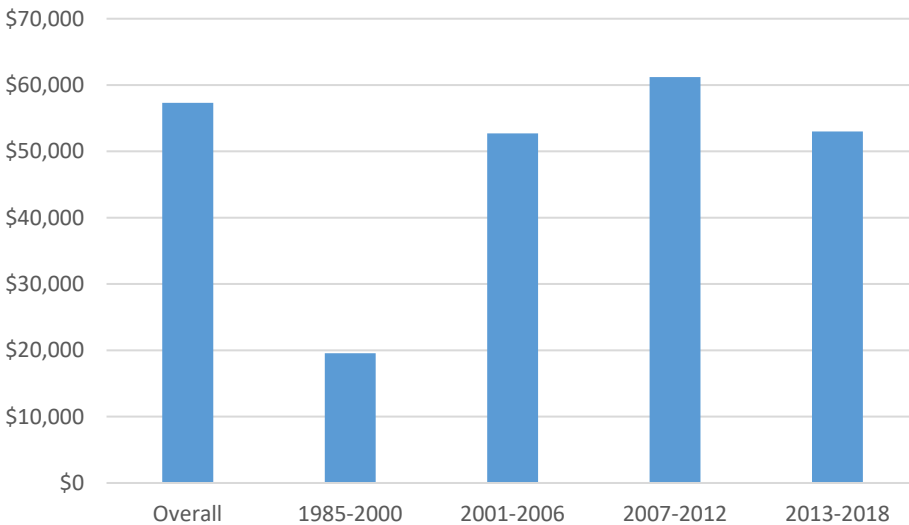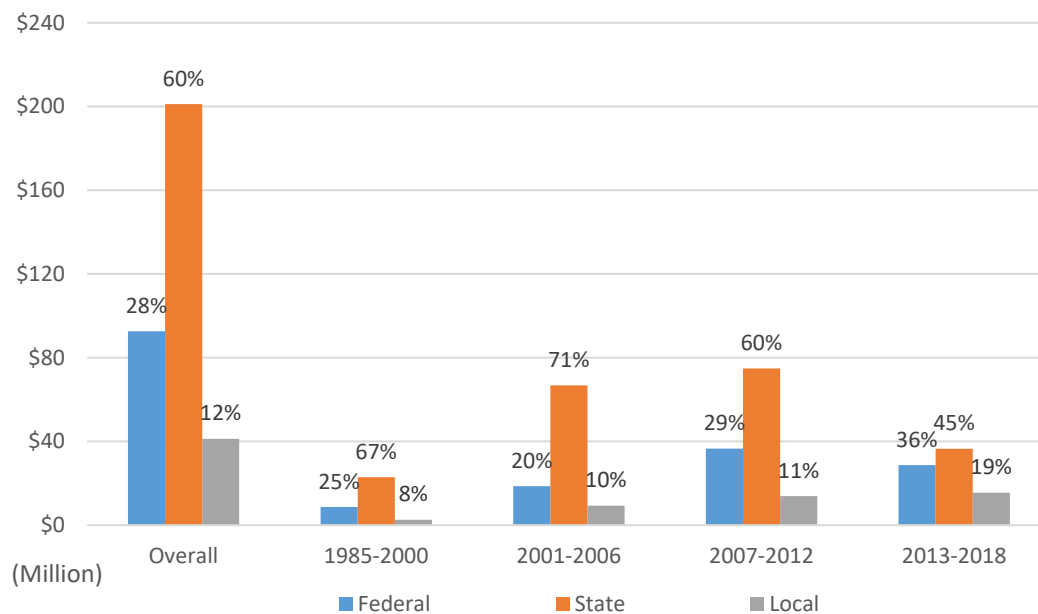

Public sources of funding can come from any level of government—federal, state, or local. Figure 7 shows public funding by government level. Funding from the federal level increased significantly during the housing boom and bust periods but decreased by about $8 million during the housing recovery phase. Federal funding comprises 20 to 36 percent of public funding across housing market phases and 28 percent overall.

Funding from state governments, primarily from state housing finance agencies, has always represented a large share of public funding. This share accounted for 60 to 71 percent of public funding prior to the housing recovery phase. During the housing recovery period, however, state funding was cut to less than half compared to that of the housing boom, and the proportion plummeted from 60 percent to only 45 percent. State funding comprises 60 percent of public funding overall.

With both federal and state funding sources dwindling, shared equity programs turned to municipal and county governments. As shown in Figure 7, local funding has grown steadily from 8 percent in the pre-2001 period to 19 percent in the housing recovery period. Nonetheless, it remains the smallest share compared to federal and state level funding sources, representing 12 percent overall.

Figure 7: Public Funding Amount (2018 dollars) by Government Level and Housing Market Period (n = 4,102)


Chart data:

	Federal	State	Local
Overall	28% (~$93M)	60% ($201M)	12% (~$41M)
1985-2000	25%	67%	8%
2001-2006	20%	71%	10%
2007-2012	29%	60%	11%
2013-2018	36%	45%	19%

(Million)

Federal ▪ State ▪ Local

Access to Opportunity Neighborhoods

Place matters. More and more studies have revealed that a family's health, educational outcomes, and economic well-being are influenced by where their home is located (Chetty and Hendren 2015; Ellen and Turner 1997). In light of this, it is important to understand whether shared equity programs provide access to neighborhoods of opportunity for low- and moderate-income homeowners. As introduced in the method section, this part of analysis employs AFFH indices developed by HUD to assess to what extent shared equity homes access neighborhood opportunity.

Figure 8 shows that five out of seven median AFFH index scores for neighborhoods with at least one shared equity home are higher than the 50-percentile line of all neighborhoods in the corresponding reference groups.[11] In particular, a typical shared equity home is located in neighborhoods with relatively high labor market engagement, low transportation cost, and more transit trips (outscoring over 60 percent of neighborhoods in the reference group), and below-average school proficiency and poverty concentration. These neighborhoods, characterized by better job opportunity and transportation access on the one hand, and less desirable school performance and poverty level on the other hand, are often found in inner urban areas. It is also important to understand that shared equity homes are located in neighborhoods with a wide range

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[11] Each index value was standardized into a percentile ranking score ranging from 0 to 100. The higher the score, the better access to opportunity in a neighborhood. Refer to Table 4 for the reference group of each AFFH index.

of scores, as indicated by large interquartile ranges (IQRs, or the difference between 75th and 25th percentiles) in Figure 8 that measure the dispersion of AFFH scores for each index.

**Figure 8: Median and Interquartile Range of AFFH Index Scores for Shared Equity Homes (n = 4,108)**
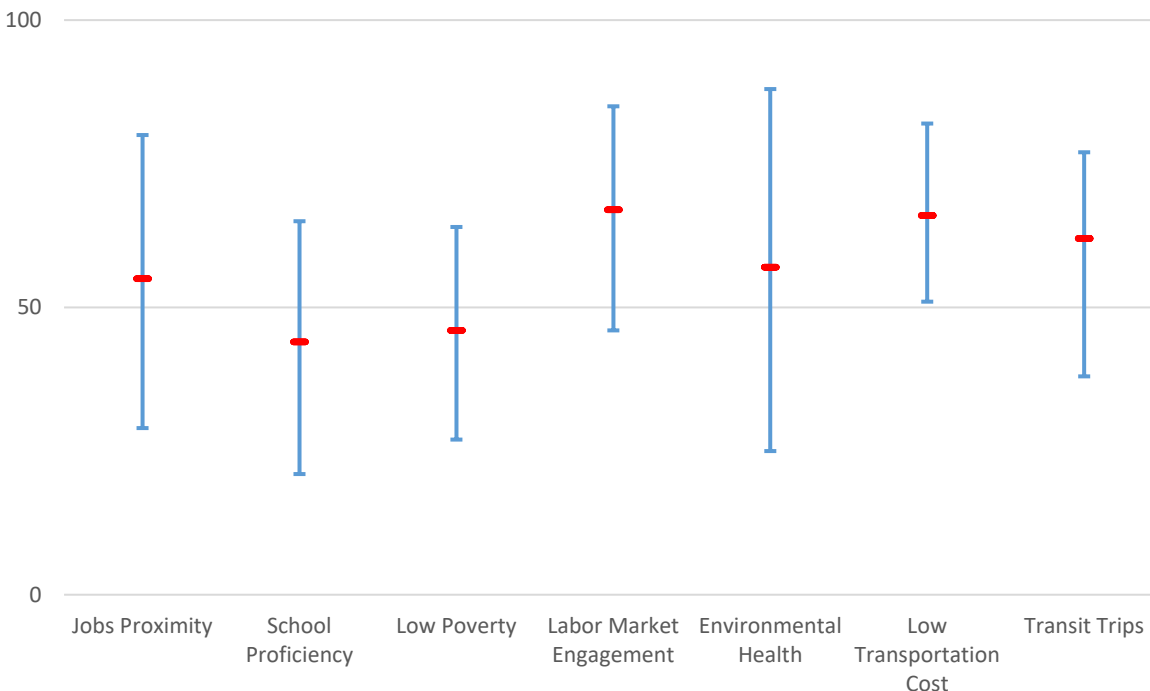
We next compared the locational outcome of shared equity homes with that of comparable owner- and renter-occupied units, respectively. As shown in Figure 9, on average the neighborhoods where shared equity homes are located score significantly better in labor market engagement and environmental health than the neighborhoods of either comparison group.[12] The finding that shared equity families are more likely to live in neighborhoods with high labor market engagement supports the premise that shared equity models are often designed for income-qualified families with stable earnings through employment.

In terms of neighborhood poverty, the average score of neighborhoods with shared equity homes is very close to that of neighborhoods with comparable renter-occupied units and is substantially lower than the score of neighborhoods with comparable owner-occupied units. This finding might be explained by the theory that the federal funding that many shared equity programs rely on (e.g. NSP, CDBG) has driven investment in disinvested neighborhoods. Finally, there are mixed results for transportation-related indices. While neighborhoods with shared equity homes

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[12] As specified in the Data and Methods section, "comparison groups" refer to all homeownership and rental units occupied by households with annual income between 40 percent and 80 percent of AMI. These units were chosen from all census tracts within Census Based Statistical Areas (CBSAs) where there is at least one shared equity home, as well as all tracts that fall outside CBSA boundaries and have at least one shared equity home.

fare in the middle in terms of transportation cost, scoring lower than neighborhoods with comparable renter units but higher than neighborhoods with comparable owner units, they score lower than both comparison groups in terms of transit trips.[13]

Figure 9: Comparison of the Average AFFH Index Scores of Shared Equity Homes, Comparable Renter-Occupied Units, and Comparable Owner-Occupied Units
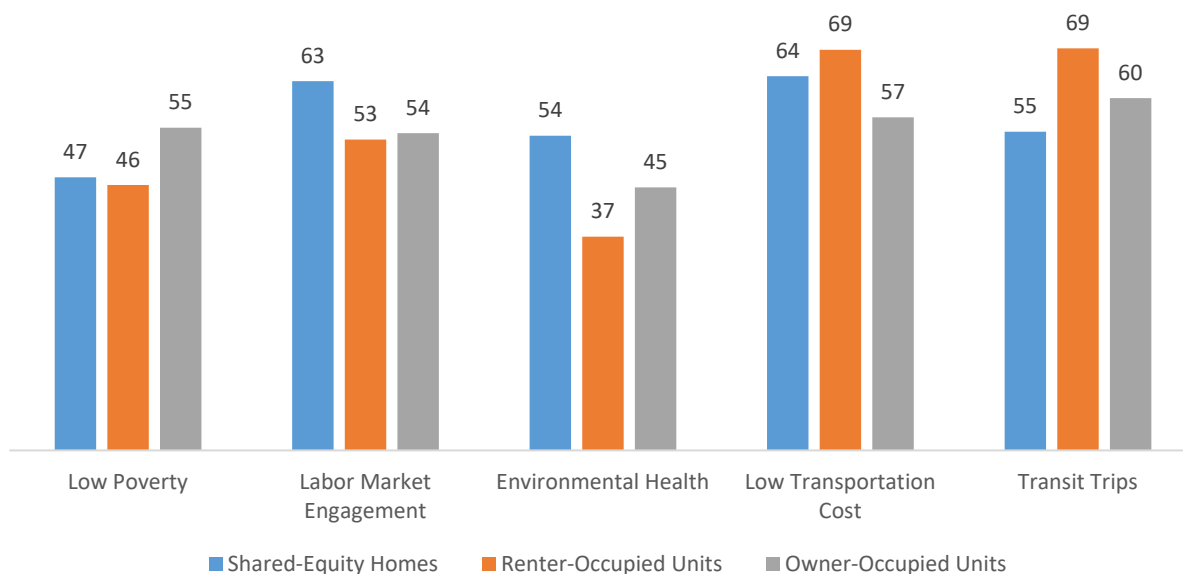
Household Characteristics

This section aims to examine who is being served by shared equity programs. It also aims to uncover whether and how shared equity households at the time of program entry differ in household characteristics from general households (renters and owners) at the same income level and living in states with at least one shared equity property.
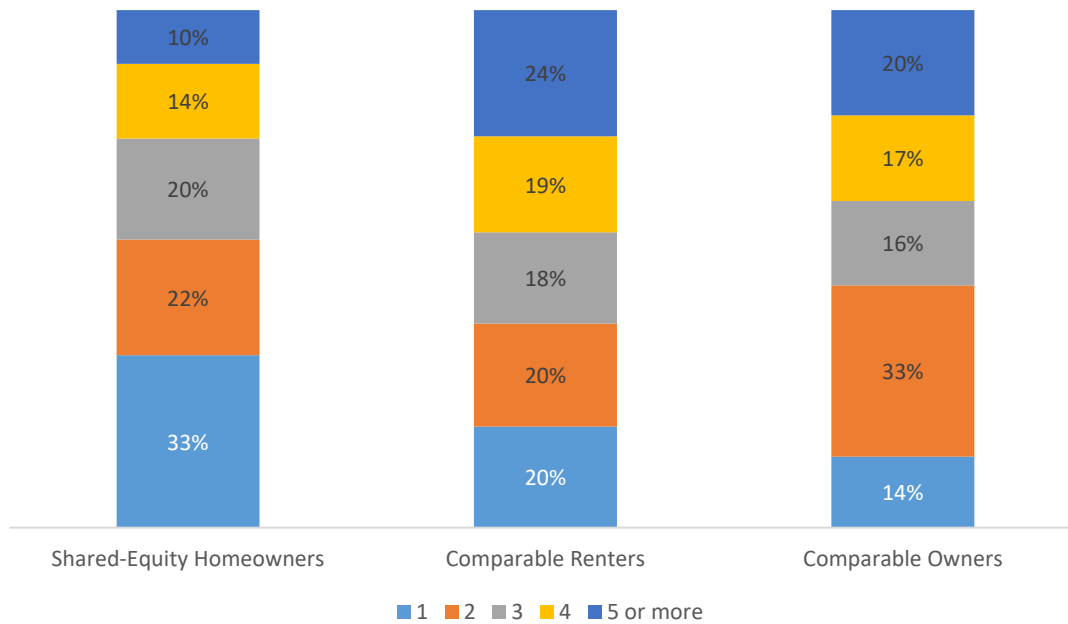
Household Size

The average household size of shared equity homes is 2.6. One third of households have only one member, and 10 percent of households have five or more members. The percentage distribution of household size stays consistent across housing market phases. Compared to both renters and owners at the same income level, those residing in shared equity homes have a significantly higher share of one-member families and a lower share of large-size families (four or more members), as shown in Figure 10. The high share of smaller families reflects the large stock of small-sized homes in shared equity programs. In fact, the average bedroom size for

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[13] Job proximity and school proficiency indices were excluded from this analysis because AFFH data for these two indices is at census block-group level while the lowest unit of geographic level for CHAS data (from which the numbers of comparable renter- and owner-occupied units were derived) is census tract.

shared equity homes is 2.7, significantly lower than the bedroom size of 3.7 for all families in the country at the same income level.

Figure 10: Percentage Distribution of Household Size for Shared Equity Homeowners (n = 5,303), Comparable Renters, and Comparable Owners


Household Type

Overall, 46 percent of shared equity homes are occupied by families with children, with this level remaining consistent across all housing market periods (Figure 11). This is higher than the share of comparable owner households (34 percent) while close to that of comparable renter households (42 percent). The share of senior households and the share of families with a disabled member are only 6 percent and 4 percent, respectively. These percentages are substantially lower than those for all households in the nation (25 percent for senior households and 18 percent for families with disabilities). One noticeable trend is that the share of senior families increased significantly from 2 percent in the pre-2001 period to 9 percent during the housing recovery phase.[14] It is unknown what factors are driving these results, future research should explore whether patterns of household type for shared equity households are related to program targeting (e.g., focus on first time homebuyers), building design (e.g., lack of accessibility features), program marketing, and/or demand.

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[14] Further analysis suggests that the increase in share of senior families is not the result of a few senior focused projects within a limited number of programs.

Figure 11: Percentage of Households by Household Type by Housing Market Period (n = 5,490)
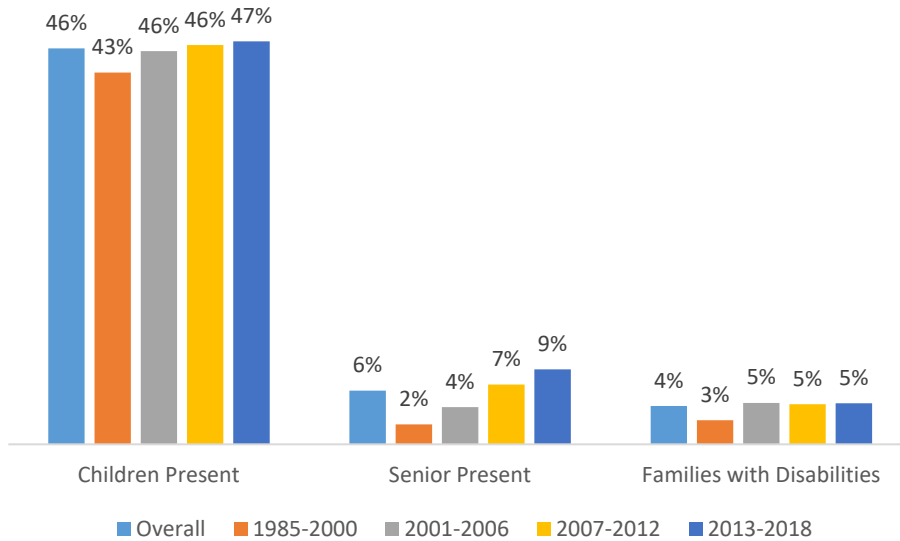
Race and Ethnicity

Overall, the racial and ethnic distribution of shared equity homeowners in the sample is closer to that of comparable owners than comparable renters. Notably, shared equity homes serve a significantly higher proportion of white, non-Hispanic families and a lower proportion of Hispanic and "other" families than the comparable renter group and owner group with the same income level in the same state (Figure 12). These results may be bias introduced by the proportion of households in the sample (about 20 percent) from Champlain Housing Trust, which serves an area that is highly white, non-Hispanic (over 80 percent). Another factor that may partially explain these results is the lack of access to Federal Housing Administration (FHA)-insured mortgages for buyers in shared equity homeownership programs. FHA serves the vast majority of first-time homebuyers of color (Stromberg and Stromberg 2013), but FHA regulations are incompatible with most shared equity resale restrictions.

Figure 12: Percentage Distribution of Racial and Ethnic Groups for Shared Equity Homeowners (n = 4,830), Comparable Renters and Comparable Owners
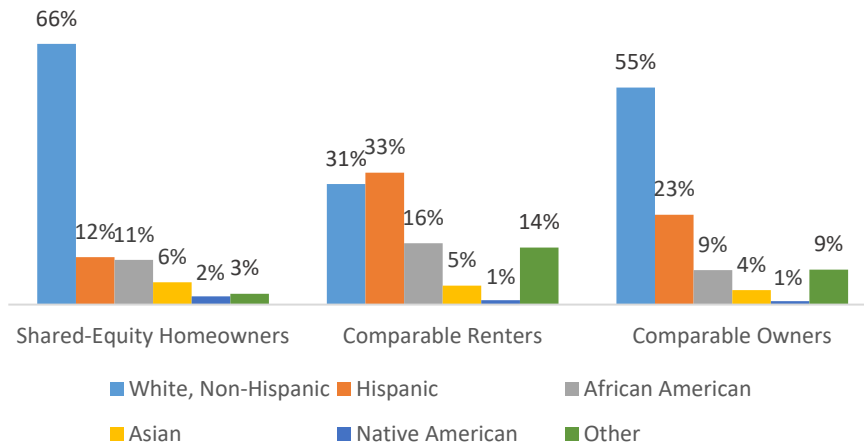

As shown in Figure 13, racial-ethnic diversity among shared equity homeowners is increasing over time. Specifically, the share of white, non-Hispanic families has steadily dropped from 87 percent in the pre-2001 period to 57 percent during the housing recovery period, accompanied by increases in proportional shares of other racial and ethnic groups. Notably, shares of families headed by African American or Asian individuals increased steadily. The share of Hispanic families also increased significantly from only 6 percent in the pre-2001 period to 15 percent during the housing bust period and remained at that level thereafter. In the most recent housing recovery period, racial-ethnic composition among shared equity homeowners is similar to comparable owners in the nation.

Several forces may be driving this promising trend of increased racial-ethnic diversity.[15] Shared equity homeownership programs may be evolving with national demographics, which are becoming more diversified. New shared equity programs are also being added to markets where a higher share of people of color are present. In particular, in recent housing market periods, shared equity homes were often developed in distressed neighborhoods with higher percentages of people of color. Finally, growing familiarity with shared equity models as a strategy to stabilize communities of color, as well as increased awareness of serving people of color among affordable housing practitioners, may also be driving the change in racial-ethnic composition.

[15] In order to test whether this result was unduly influenced by the addition of new programs to the sample, we ran the analysis for a subsample of programs with enough records in each housing period. The trend of racial/ethnic composition for this subsample is similar to that of the entire sample, indicating that the trend shown in Figure 13 is not the sole result of additional programs added to the sample in recent housing periods.

Figure 13: Percentage Distribution of Racial and Ethnic Groups for Shared Equity Homeowners by Housing Market Period (n = 4,830)
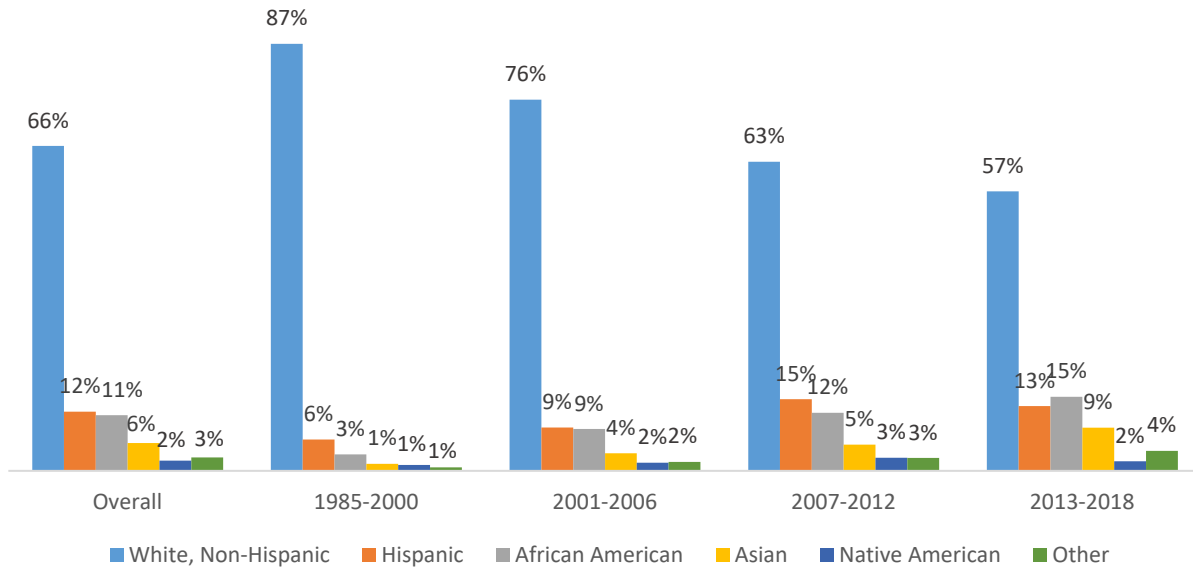
Occupation

The study of occupational sorting in shared equity housing was confined to a subsample of homeowners (n=2,624) for whom 1) occupation was known and identified by the shared equity program at time of application to the program; and 2) occupation could be grouped into one of the census-defined occupation categories.[16] Figure 14 compares the distribution of occupations held by shared equity homeowners, comparable renters, and comparable owners. Shared equity residents are found to have higher proportions than these comparison groups in the occupations of teaching/social services, healthcare, and service industries (e.g. hospitality, food service, etc.). However, the proportion of shared equity residents in professional occupations and trades is lower than for both comparison groups with similar incomes in the same state. The largest share of shared equity homeowners is employed in office/retail work, at levels equivalent to both comparison groups.

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[16] The subsample of homeowners is found in all sample organizations. However, the extent to which occupation data is missing varies substantially across organizations. About one in five sample organizations had at least 50 percent of their occupation data missing. Thus, the findings of occupation are not generalizable to the study sample.

Figure 14: Percentage Distribution of Occupation Types for Shared Equity Homeowners (n = 2,624), Comparable Renters and Comparable Owners
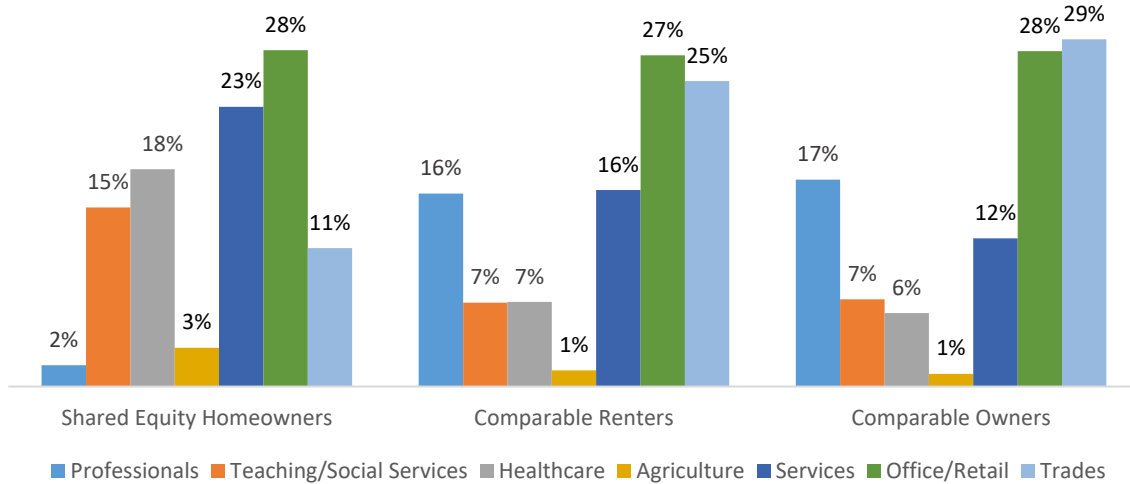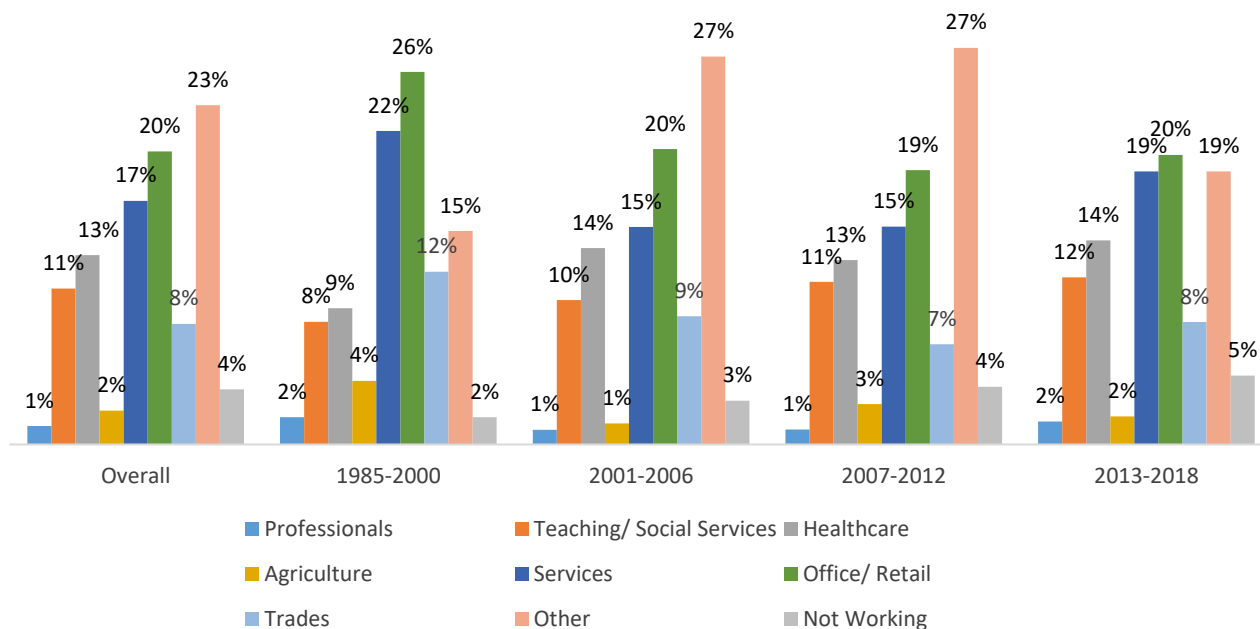

Figure 15 includes all shared equity homeowners in the sample who reported employment status and occupation type and compares the percentage distribution across housing market periods. The share of healthcare workers increased by 5 percentage points during the housing boom period, leveling out at 13-14 percent for the subsequent periods. The share of residents working in services, office/retail and trades decreased in both the housing boom and bust periods and increased slightly in the housing recovery period. Unemployment remained low for shared equity homeowners, despite a slight increase in share from the pre-2001 period (2 percent) to the housing recovery period (5 percent). It should be noted that a relatively high percentage of families fall into the "other" job type category, reflecting the challenge of grouping jobs based on non-standard job type descriptions.

Figure 15: Percentage Distribution of Occupation Types for Shared Equity Homeowners by Housing Market Period (n = 3,605)

Legend:
- Professionals
- Teaching/ Social Services
- Healthcare
- Agriculture
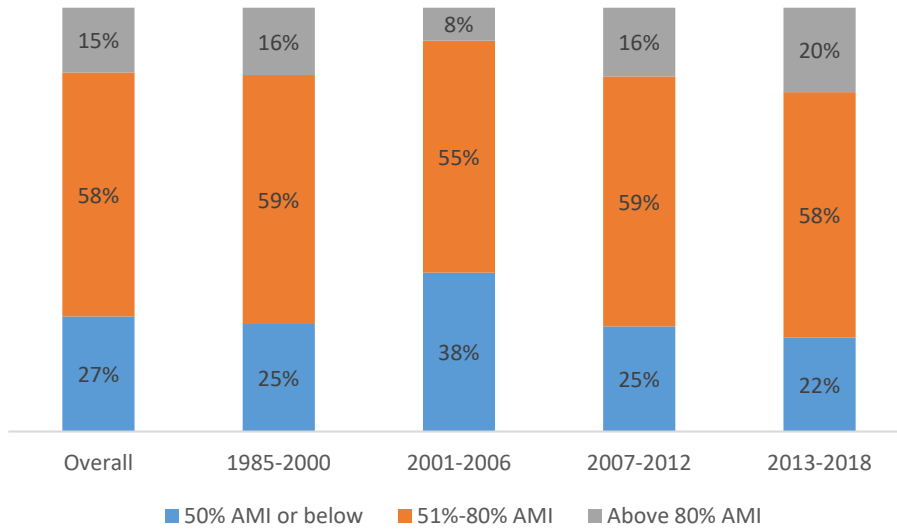- Services
- Office/ Retail
- Trades
- Other
- Not Working

Gross Annual Income

Overall, the average household income of shared equity homeowners is $41,207 in 2018 dollars, or 63 percent of AMI, at the time of application to the program or purchase of the home. The average annual income as a percentage of AMI was lowest during the 2001–2006 period (56 percent) and increased to 66 percent during the housing recovery period. Despite this slight uptick in average annual incomes in recent years, shared equity programs continue to serve families at low- and moderate-income levels. A closer look at the income distribution (Figure 16) reveals that the share of families with annual incomes between 51 and 80 percent of AMI held relatively consistent in each period. However, after the housing bust, the share of families with annual incomes at or below 50 percent of AMI became smaller, while the share of families with annual incomes above 80 percent of AMI became higher.[17] This trend can be explained by a tightening of credit after the foreclosure crisis, which has made it much harder for lower income families to access mortgage financing than prior to the housing bust period.

Importantly, the change in household income levels over time seems to correspond to the pattern of subsidy level as shown in Figure 4. Namely, lower subsidy amounts appear to be associated with program participants having higher incomes and vice versa. It is logical that smaller subsidies result in programs serving higher income levels.

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[17] In order to test whether this result was unduly influenced by the addition of new programs to the sample, we ran the analysis for a subsample of programs with enough records in each housing period. The trend of income level for this subsample is similar to that of the entire sample, indicating that the trend shown in Figure 16 is not the result of additional programs added to the sample in recent housing periods.

Figure 16: Percentage Distribution of Families by Income Level and by Housing Market Period (n = 5,199)

	50% AMI or below	51%-80% AMI	Above 80% AMI
Overall	27%	58%	15%
1985-2000	25%	59%	16%
2001-2006	38%	55%	8%
2007-2012	25%	59%	16%
2013-2018	22%	58%	20%

Gender

The majority of shared equity homes (62 percent) are headed by women, with this level remaining relatively consistent across housing market phases (58 percent to 65 percent as shown in Figure 17). To put this into perspective, only 46 percent of comparable owner-occupied homes and half of renter-occupied homes are headed by women. Further analysis revealed that out of the 46 percent of families with children (as shown in Figure 11), 58 percent were headed by a single mother.

Figure 17: Percentage of Household Heads by Gender across Housing Market Period (n = 4,922)
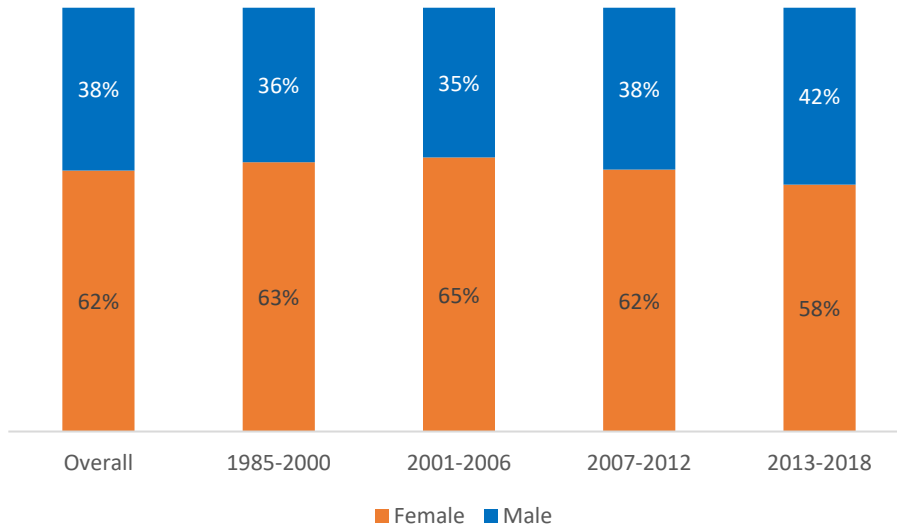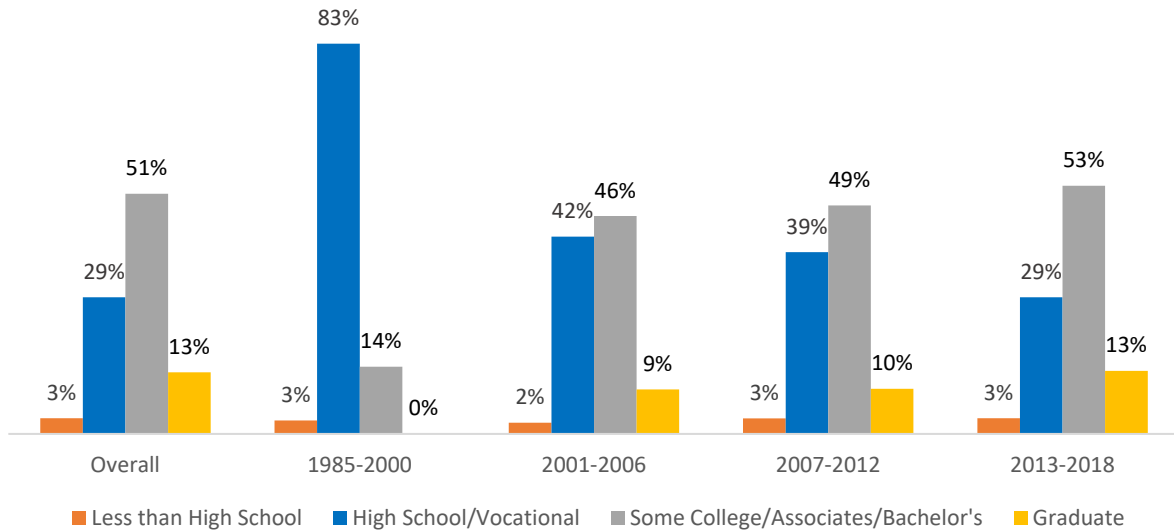

Education

Overall, 64 percent of shared equity homes are headed by people who had some post-secondary education at the time of application or purchase (Figure 18). Less than half of the owners and renters in the comparison groups have the same level of educational attainment. The proportion of shared equity homeowners who had at least some college experience has increased substantially over time. Prior to 2001, most (83 percent) shared equity homes were headed by people with a high school diploma. This percentage dropped to 29 percent during the housing recovery period. In contrast, people who had college experience or earned a bachelor's degree increased dramatically, from only 14 percent during the pre-2001 period to 53 percent during the housing recovery period. Also heads of household with an advanced degree rose from none prior to 2001 to 13 percent during the housing recovery phase, which is significantly higher than both comparable homeowners and renters (5 percent and 4 percent, respectively).

It is not clear why people with higher educational attainment have been purchasing shared equity homes in recent years.[18] We suggest several potential explanations. First, this trend may reflect that in general, the U.S. population has become more educated. Second, given the correlation between income and education and the fact that housing affordability issues have expanded to higher income groups, this may demonstrate that the pressure of owning a home has penetrated into more highly educated populations. Third, shared equity programs may intentionally and unintentionally serve more highly educated groups, as this demographic group is more likely to

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[18] In order to test whether this result was unduly influenced by the addition of new programs to the sample, we ran the analysis for a subsample of programs with enough records in each housing period. The trend of educational attainment for this subsample is similar to that of the entire sample, indicating that the trend shown in Figure 18 is not the result of additional programs added to the sample in recent housing periods.

understand these programs and have stable income streams that enable them to obtain loans and succeed at homeownership.

Figure 18: Percentage of Household Heads by Educational Attainment across Housing Market Period (n = 1,522)

Bar chart showing percentages by educational attainment category (Less than High School, High School/Vocational, Some College/Associates/Bachelor's, Graduate) across housing market periods:

- **Overall:** Less than High School 3%, High School/Vocational 29%, Some College/Associates/Bachelor's 51%, Graduate 13%
- **1985-2000:** Less than High School 3%, High School/Vocational 83%, Some College/Associates/Bachelor's 14%, Graduate 0%
- **2001-2006:** Less than High School 2%, High School/Vocational 42%, Some College/Associates/Bachelor's 46%, Graduate 9%
- **2007-2012:** Less than High School 3%, High School/Vocational 39%, Some College/Associates/Bachelor's 49%, Graduate 10%
- **2013-2018:** Less than High School 3%, High School/Vocational 29%, Some College/Associates/Bachelor's 53%, Graduate 13%

■ Less than High School ■ High School/Vocational ■ Some College/Associates/Bachelor's ■ Graduate

<u>Age</u>

The median age of the shared equity household heads at the time of application or purchase is 39, which is the same age as comparable renters (39) and significantly younger than comparable homeowners (59). The median age for shared equity homeowners increased slightly over time. The interquartile range (the difference between 75 percentile and 25 percentile) in each period is relatively small (11 to 18 years), suggesting that the age distribution for household heads in the sample is not widely dispersed.

Figure 19: Age of Household Heads (Median, 25th-Percentile, and 75th-Percentile) by Housing Market Period (n = 5,361)
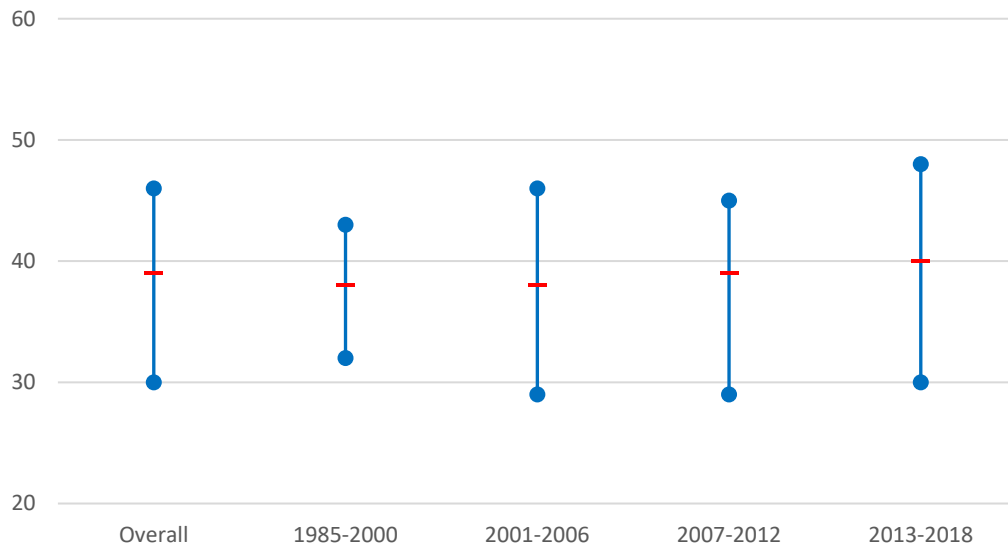
First-Time Homebuyers

Shared equity models are often considered to function as a transition from renting to home owning. Many programs either give preference to applicants who are first-time homebuyers or only accept first-time homebuyers to comply with funding requirements. In the sample, we find that 69 percent of families are first-time homebuyers (Figure 20). The share of first-time homebuyers significantly increased from only 41 percent prior to 2001 and, since then, has remained around 70 percent.

Figure 20: Percentage of First-Time Homebuyers by Housing Market Period (n = 5,490)
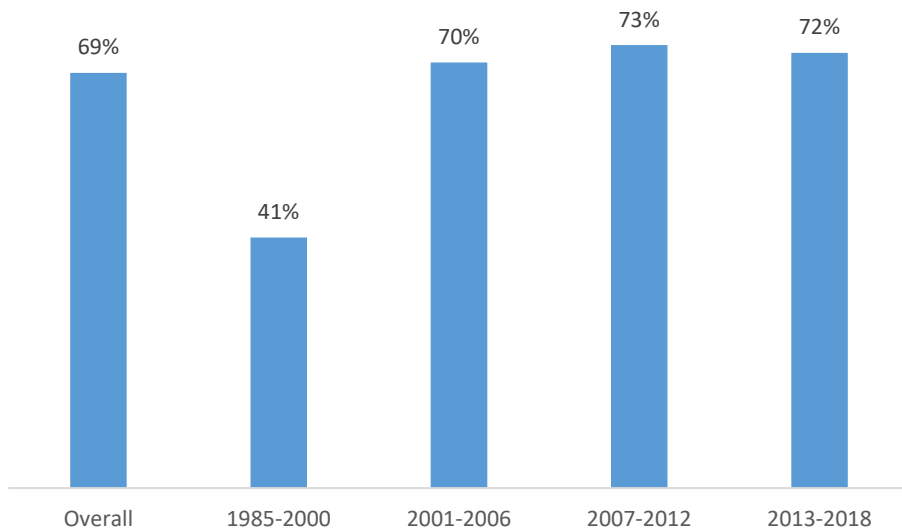
Affordability

This section assesses the effectiveness of shared equity programs in providing affordable housing. An affordable dwelling is defined by HUD as one that a household can obtain for 30 percent or less of its income. This section provides information on the first transaction of a given property as well as all resales. The initial sale of a home from the program to a buyer recorded in HomeKeeper is considered the *first purchase*, and all subsequent recorded transactions for that home are considered *resales*. The sample size for first transactions is 2,754 and 1,059 for all resales.[19]

Affordability of Shared Equity Homes

Figure 21 provides information on the income levels of households for which shared equity programs provide homeownership opportunities. A home is determined to be affordable to households at a given percent of AMI if a theoretical household's total monthly housing costs don't exceed HUD's 30 percent affordability threshold, based on HUD income limits adjusted for household size.[20] For example, a home could be affordable at 80 percent of AMI if purchased by a household of three and affordable at 60 percent of AMI if purchased by a household of four. The monthly cost of a shared equity home in the dataset includes two parts. One part is the *actual* non-mortgage housing costs for which a shared equity homebuyer pays, including but not limited to property tax liability, homeowner's insurance, program fees, and HOA/condo dues. The other part is a *theoretical* monthly mortgage payment, assuming a 5 percent down payment and a 30-year fixed rate mortgage at the 30-year conventional mortgage rate at the time of purchase.[21] The Hub uses this theoretical monthly mortgage payment in the calculation, because in this way, it is comparable to the estimated monthly mortgage payment of the fair market value of the same shared equity home, using the same assumptions and mortgage rate. Eventually, this helps to compare the affordability of a shared equity home (with property subsidy) to the affordability of its fair market value. It is important to note that this affordability measure only captures the cost of living. Costs that are associated with home purchase, such as closing costs and realtor fees, are not part of the calculation and can make homes less affordable. On the other hand, this measure also does not take into account any buyer subsidy, which can make homes more affordable.

Overall, shared equity programs make homeownership possible for low income households, defined as those that have incomes below 80 percent of AMI.[22] This trend is consistent over each market period. In addition, nearly half of the shared equity homes are affordable to *very low-*

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[19] The 2,754 first purchases come from 35 different organizations in the sample for initial transactions and the 1,059 resales come from 25 different organizations for resales. Champlain Housing Trust contributes to 19 percent of the first purchases and 40 percent of the resales.

[20] The AMI adjusted to household size, the denominator of the calculation, was obtained from HUD's income limits report (https://www.huduser.gov/portal/datasets/il.html#null) and corresponded to the same year of purchase. Household size was determined by the number of members of the household who purchased the shared equity home.

[21] The 30-year conventional mortgage rates were obtained from the Federal Reserve Bank of St. Louis: https://fred.stlouisfed.org/series/MORTGAGE30US#0.

[22] The median household income in the United States in 2017 was $60,336. This means that shared equity programs, in general, make homeownership possible for households earning below $48,269 annually. This national figure was gathered from the most recent 2017 ACS 1-year estimates.

income households who have incomes below 50 percent of AMI. The resale formulas these programs use continue to make homeownership possible for low- and very low-income households. There are no resales prior to 2007 and only 3 percent of resales since 2007 that are unaffordable to households below 80 percent of AMI (Figure 21).

Figure 21: Affordable to Percentage of AMI for Shared Equity Homes by Housing Market Period
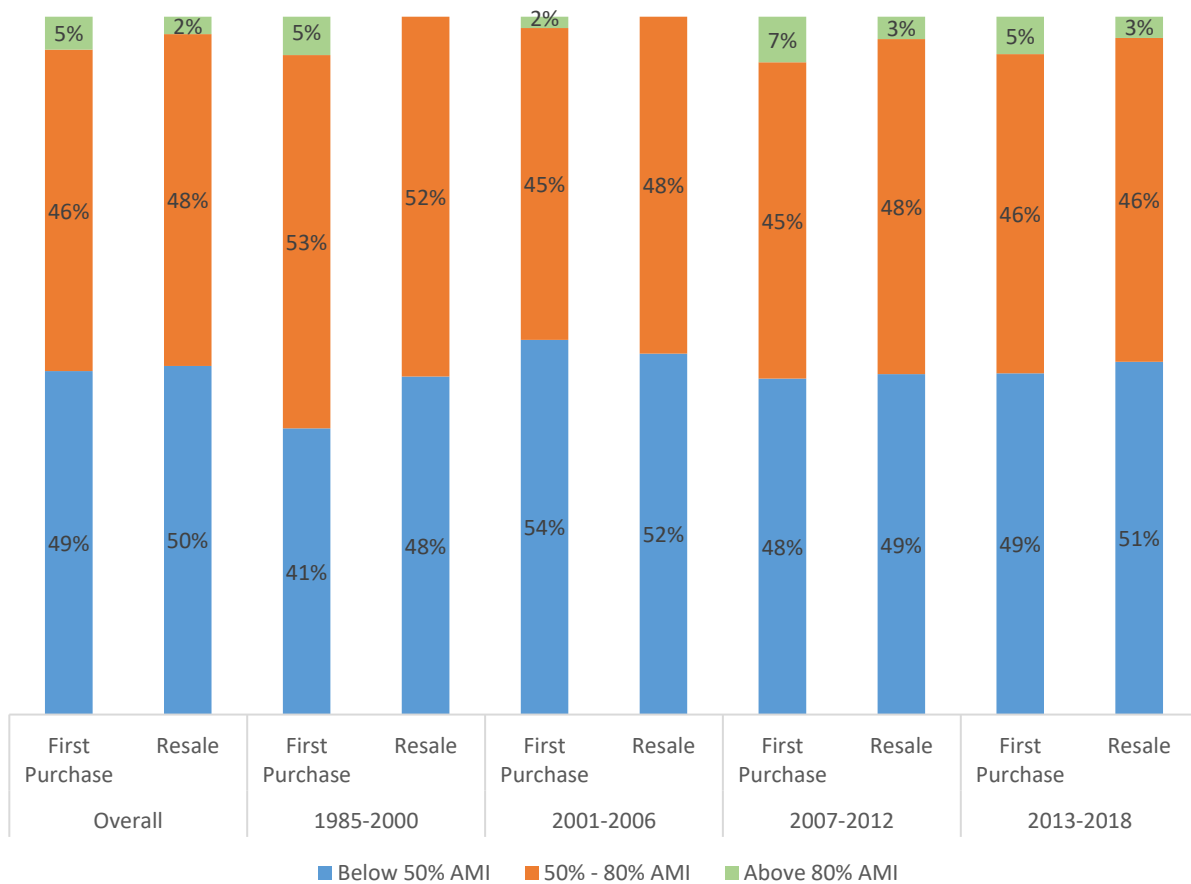

Figure 22 presents the household income levels that these same properties would serve if they were not part of shared equity programs and instead sold at market value (the appraised unrestricted value of these properties without any subsidies or discounts). The calculation process of this measure is almost the same as that for Figure 21, except that appraised unrestricted market values were used to estimate monthly mortgage payments. As shown in Figure 22, the properties would be much less affordable if they were sold at market value and not as part of a shared equity program. Only a small portion of these housing units would be affordable to very low-income households. A share of these housing units (ranging from 25 percent during the housing recovery period to as much as 40 percent during the housing bust period) would not be affordable to low-income households upon first purchase. If shared equity homes did not use resale restrictions upon subsequent sales and the properties were sold at market value, substantial affordability would also be lost. There would be only a small

proportion of homes available to very-low income households upon resale across all housing market periods, especially prior to 2007. A portion of homes, ranging from 17 percent before 2001 to 31 percent during the housing bust period, would not even be affordable to low-income households at resale.

Figure 22: Affordable to Percentage of AMI for Market Value of Homes by Housing Market Period
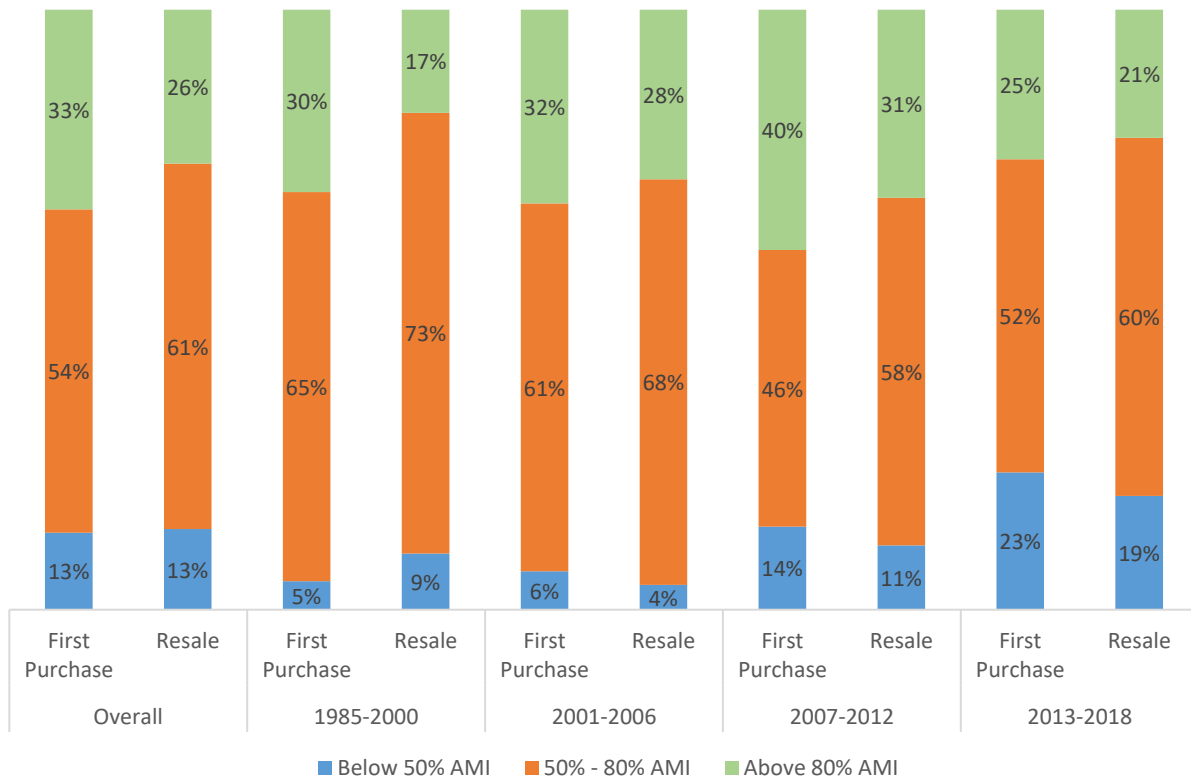

It is apparent from the analyses above that shared equity programs expand the supply of affordable units available to the lowest income households. This is essential given that homeownership rates have been much lower for lower income households compared to those earning above 80 percent of AMI over the last several decades. In 2001, only 50 percent of very low-income households and 63 percent of low-income households were homeowners, compared to 86 percent of those earning over 120 percent of AMI (Herbert et al. 2005).

Subsidy Depth

Depending on the program design, the total subsidy that a household benefits from by living in a shared equity home could include one or both of the following two components: property subsidy that shared equity programs use to acquire a property and buyer subsidy that homebuyers use to purchase their homes. Figure 23 presents the total subsidy as a percentage of the appraised market value of the property, or *subsidy depth*. Overall, the median subsidy depth for sample shared equity homes is 31 percent for both first purchases and resales. The subsidy depth varies

by housing market period: the median subsidy depth was lowest prior to 2001 (21–24 percent), peaked at 36 percent in the housing boom, and decreased in both the housing bust (33–34 percent) and housing recovery (30 percent) periods. Despite of this variation across housing market periods, subsidy depth remains substantial and stays at the same level between first purchases and resales within the same housing market period.

Figure 23: Subsidy Depth (Median, 25th-Percentile, and 75th-Percentile) by Housing Market Period
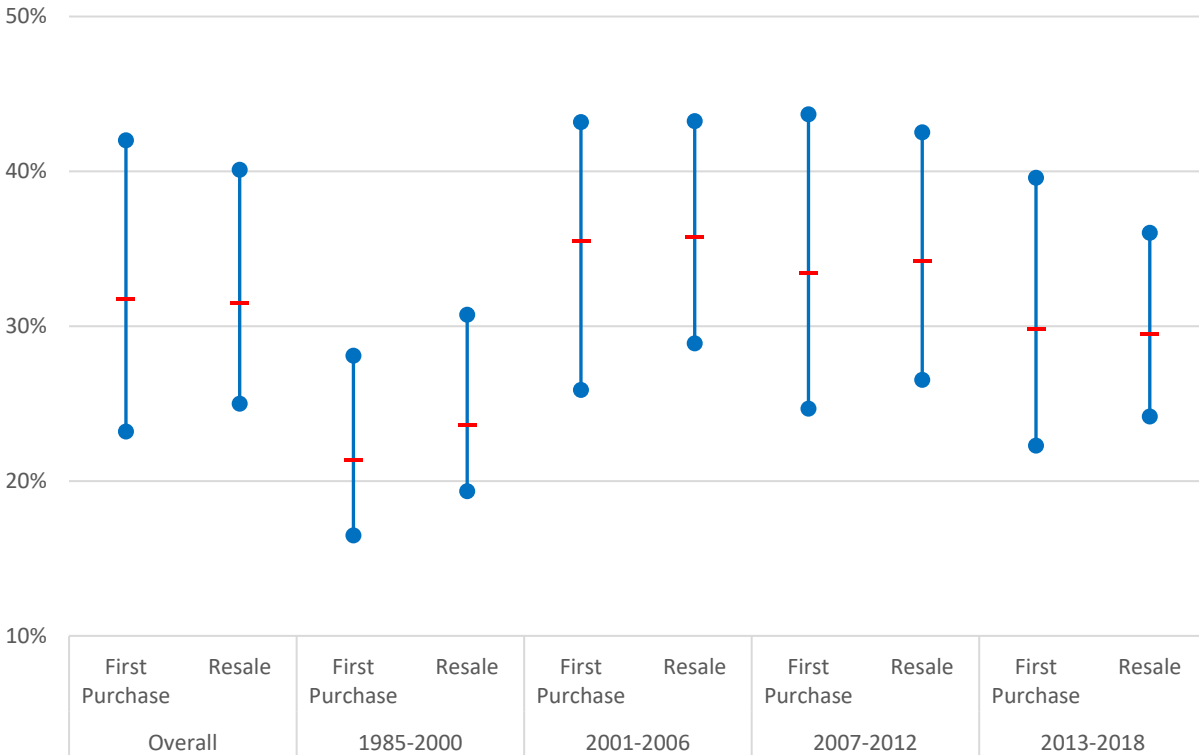

Housing Cost Burden of Shared Equity Homeowners

Another commonly used approach to assess housing affordability is to look at housing cost as a percentage of income. We calculated this percentage using the actual monthly housing costs of shared equity homebuyers, including mortgage payments and non-mortgage housing costs, divided by the actual gross monthly income (gross annual income divided by 12) reported at the time of home purchase. In the United States, households that pay 30 percent or more of their income on housing costs are often considered to be *cost burdened* (Schwartz and Wilson 2007).[23] Using the 30-percent-of-income standard, the majority of shared equity homeowners are not cost burdened. Shared equity programs help stabilize affordability in different market

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[23] The conventional 30 percent standard is deemed a rule of thumb and is not adopted consistently, as evidenced by various debt-to-income ratios in underwriting standards used by lenders and federal programs. The use of no more than 30 percent of income spent on housing costs as an indicator of a housing affordability is more appropriate for those households at the bottom rungs of the income ladder than those with higher incomes, who might still have enough income left over to meet their non-housing expenses were they to exceed this standard.

conditions. Housing cost as a percentage of income is under 30 percent for all market periods for the first purchase, as well as for resales (Figure 24).

Figure 24: Housing Cost Burden (the Median, 25th-Percentile, and 75th-Percentile of Total Housing Cost as Percent of Income), by Housing Market Period
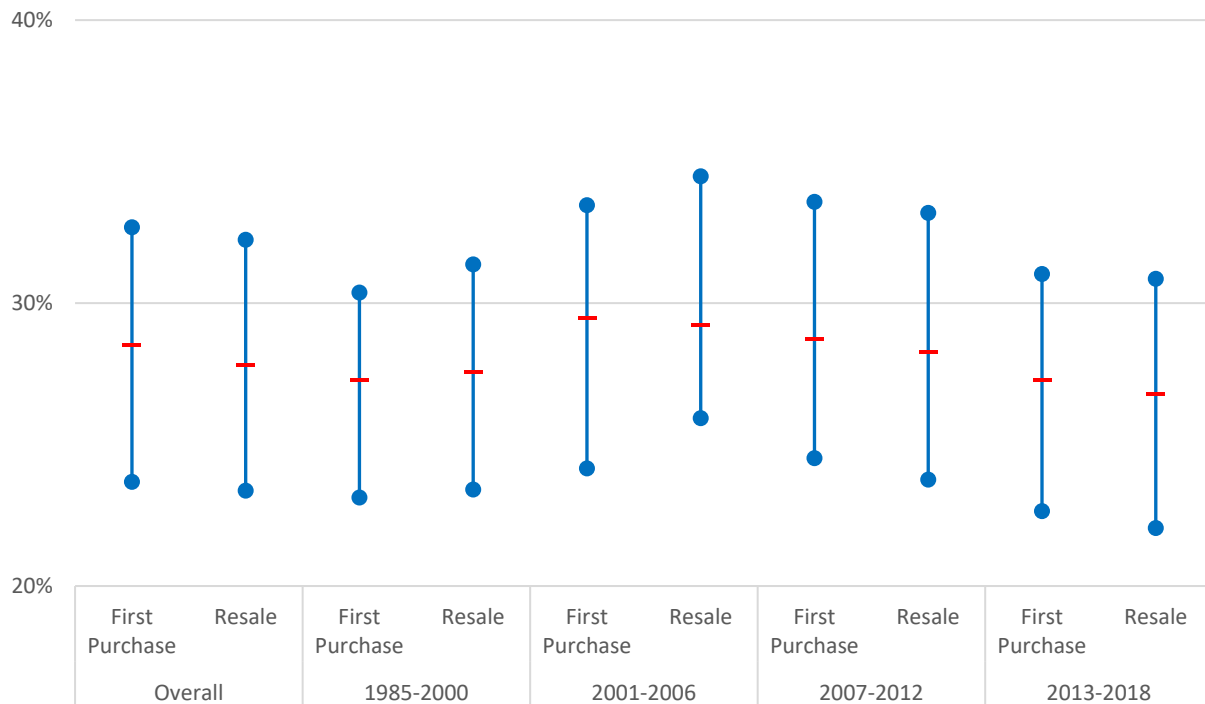
Wealth Building

For the vast majority of homeowners, especially lower-income households and people of color, their home is their main source of wealth. An argument used to support policies and programs in favor of access to homeownership for low- and moderate-income households is that homeownership is a powerful wealth building mechanism (Dietz and Haurin 2003). The median net worth of homeowners was $231,000 in 2016 compared to $5,000 for renters (Federal Reserve Bank 2017), and differences in wealth remain even after controlling for observable characteristics (Dietz and Haurin 2003). For low-income households, programs that enable sustainable access to homeownership have the potential to bring them out of poverty and accumulate assets (Herbert et al. 2013). Homeownership contributes to wealth accumulation through forced savings, which is embedded in fully amortizing mortgages where a portion of the monthly payment goes towards the principal (Dietz and Hauring 2003). However, there is also evidence that low- and moderate-income households experience less property value appreciation and are more likely to have negative equity or lose their homes in foreclosure than higher income households (Herbert et al. 2013; Mayock and Malacrida 2018; Van Zandt and Rohe 2011).

This wealth building section aims to assess to what extent shared equity program participants accumulate wealth as homeowners. Shared equity programs are designed to balance wealth building with lasting affordability. The goal of this section is to estimate the wealth accrued by

participants between their initial purchase and the resale of their property and to establish whether and how wealth accumulation changed across market periods. Due to the design of shared equity programs, participants are expected to experience moderate and steady home value appreciation relative to owners of unrestricted properties. Results are not reported for sales that took place prior to 2001 due to the limited number of resales during that period (n = 40). The results are based on a sample of 738 transactions, with 124 taking place between 2001 and 2006, 282 between 2007 and 2012, and 332 between 2013 and 2018.[24] The wealth calculation is based on cash flow during the holding period, so the properties were grouped in a market period based on the resale date. Results of this section are not adjusted for inflation; in other words, they are reported in nominal terms.
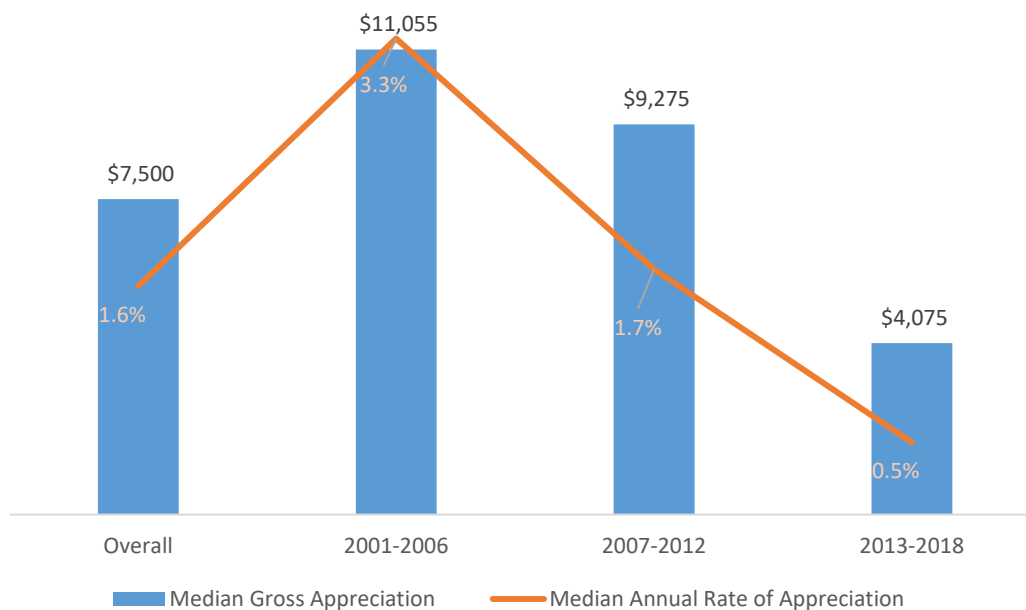
Gross Appreciation

The first step of calculating wealth building for homeownership is to measure the home's *gross appreciation*, which is an increase in the value of the property between purchase and sale. For market-rate owner-occupied units, calculating the gross appreciation is straightforward: it is the sales price of the home minus the purchase price. However, calculating the gross appreciation of a shared equity homes, especially across various shared equity programs that apply different resale formulas, is rather challenging. This challenge is solved in the Hub by introducing a measure called *Purchase Option Price*. This measure includes: 1) the maximum allowable sales price after applying a program's resale formula, but before any credits for improvements are applied; 2) the credits for allowable improvements as stipulated in the program's resale formula; and 3) other adjustments, such as ground lease reissuance fees for CLTs and property transfer fees. The gross appreciation is then calculated by subtracting the *Effective Purchase Price*, which is the market value of the home minus total subsidy (property subsidy and buyer subsidy), from the Purchase Option Price. It is important to note that the Purchase Option Price is a theoretical value, not necessarily the actual amount that a homeowner walks away with after selling the property. Because the resale formula sets the ceiling for the resale price but not the bottom, using this maximum allowable sales price to calculate gross appreciation might overestimate the amount of equity a shared equity homeowner realizes.

As shown in Figure 25, the value of the shared equity homes increases substantially during the holding period of the median household in all three market periods. Homeowners who sold between 2001 and 2018 experienced a median gross appreciation of $7,500. The median gross appreciation decreased from $11,055 during the housing boom period to $9,275 during the housing bust period, and to $4,075 during the housing recovery period. The median original purchase price varied from $80,000 for households who sold during the housing boom period to $109,000 for those who sold during the housing bust period and to $118,000 for those who sold during the housing recovery period. Even for households who sold during the housing bust period, the median seller experienced an increase in property value (in nominal terms).

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[24] The 738 transactions with valid wealth building information come from 21 organizations in the sample. Three organizations, Champlain Housing Trust, First Home Properties, and One Roof Community Housing, together make up 67 percent of the responses. Notably, 306 (41 percent) transactions for this section of analysis came from Champlain Housing Trust.

Figure 25: Median Gross Appreciation (in Nominal Dollars) and Median Annual Rate of Appreciation by Housing Market Period

The gross appreciation reported in Figure 25 translates into a median annual rate of appreciation of 3.3 percent for households who sold during the housing boom period. It decreases to 1.7 percent for those who sold during the housing bust period and to 0.5 percent for those who sold during the housing recovery period. The median annual rate of appreciation drops at a faster rate across market periods compared to median gross appreciation in absolute amounts (as shown in Figure 25). This pattern reflects in part longer holding periods among households who sold during the later periods (median holding period of four years during the boom period compared to five and seven for those selling during the bust and recovery periods, respectively) and lower purchase prices in earlier periods. The positive gains for sellers during the housing bust period might partly reflect selection bias: households whose current resale value was below the amount they owed on their mortgages would be less likely to sell relative to those who had positive equity.[25]
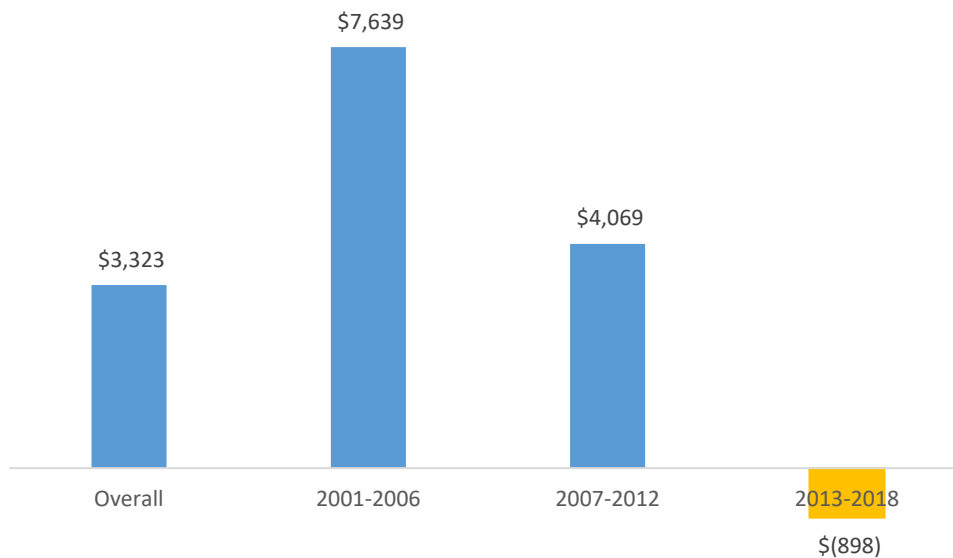
Net Appreciation

The gross appreciation includes two type of costs that are not counted towards wealth building for households. The first type is transaction costs, which include mortgage fees, closing costs, property transfer fees, and real estate agent fees. Transactions costs are substantial and can amount to 8 to 10 percent, or more, of the value of a home (Herbert and Belsky 2008). As a general rule of thumb, households need to stay in their homes at least 5 years to recoup these transaction costs, which is the case for many participants in shared equity programs as discussed

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[25] These results are consistent with findings from the general population showing a decline in mobility following the housing bust, particularly among underwater borrowers (Ferreira et al. 2011).

in the next part of the analysis. The second type of costs is capital expenditures, which include investments made to maintain and improve a home. Figure 26 shows net appreciation once deductions are made for purchase and resale transaction costs as well as capital expenditures.[26]

When transaction costs and capital expenditures are subtracted, the level of appreciation decreases substantially. Net appreciation decreased consecutively during the housing bust and recovery periods relative to the boom period. Notably, median net appreciation is negative for sales that took place during the recovery period.
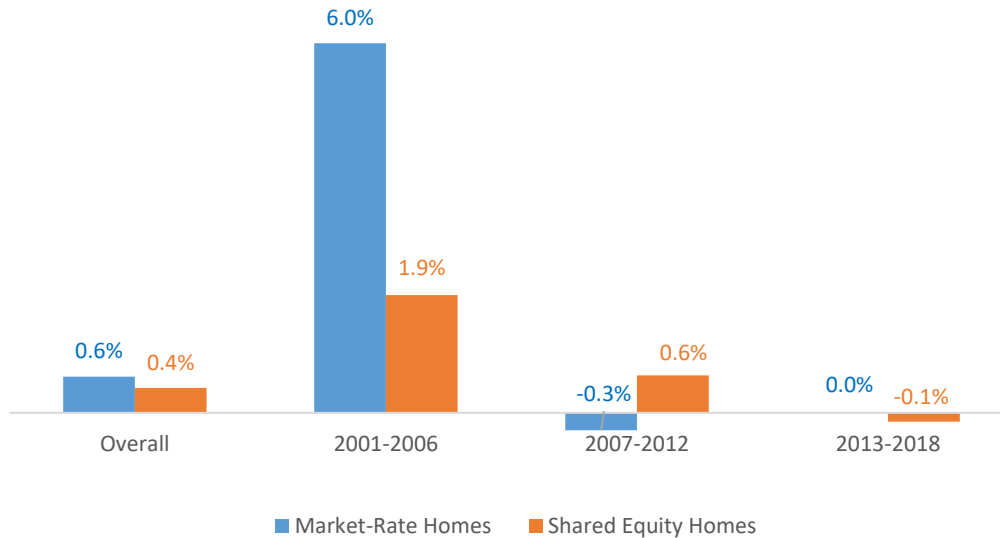
Figure 26: Median Net Appreciation (in Nominal Dollars) by Housing Market Period

Median annual net appreciation varies from 1.9 percent for the housing boom period to 0.6 percent in the bust period and -0.1 percent in the recovery period, reflecting lower appreciation along with substantial transaction costs. The amount of annual appreciation received during the boom phase is substantially lower than the appreciation shared equity homeowners would have received if they had purchased a house in the same neighborhood (ZIP Code) that did not have resale restrictions (1.9 percent annually vs. 6.0 percent annually). However, during the bust and recovery phases, the appreciation they receive is comparable (or even slightly higher during the bust phase) (Figure 27). This finding suggests that the resale formulas and their implementation are effective in capping price increases during market increases while providing increased stability during periods of market decreases. The resale restrictions effectively limit the effects of market fluctuations on household wealth, which has important benefits during down cycles.

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[26] There are only 52 observations in the sample reporting positive amounts of capital expenditures. This might reflect the fact that in some programs, participants receive credit for these expenditures but not in others; or that these expenditures are not reported reliably for all programs.

Figure 27: Comparison of Median Annual Percentage of Net Appreciation between Shared Equity Homes and Market-Rate Homes, by Housing Market Period

Chart data:

Period	Market-Rate Homes	Shared Equity Homes
Overall	0.6%	0.4%
2001-2006	6.0%	1.9%
2007-2012	-0.3%	0.6%
2013-2018	0.0%	-0.1%

■ Market-Rate Homes ■ Shared Equity Homes

Mortgage Principal Gains: Forced Savings

Shared equity programs often cite a number of benefits of homeownership for families relative to renting, such as stabilized housing costs, freedom from fear of eviction, pride of ownership, and greater control. One of these expected benefits is that homeownership serves as a forced savings mechanism. The amount of principal repaid as part of a family's monthly mortgage payment contributes to the family's assets. This amount is generally higher than what a family would save independently (and they would get no equity if paying the same amount in rent) and is an important component of the wealth building benefits of homeownership.

The median amount of principal repaid by the time households sell their home is $8,500, ranging from $3,642 during the housing boom period to $12,546 during the housing recovery period (again, reflecting longer holding periods and larger mortgages in recent years) (Figure 28). By comparison, the median equity investment at purchase is $1,875.

Figure 28: Median Principal Repayment (in Nominal Dollars) by Housing Market Period
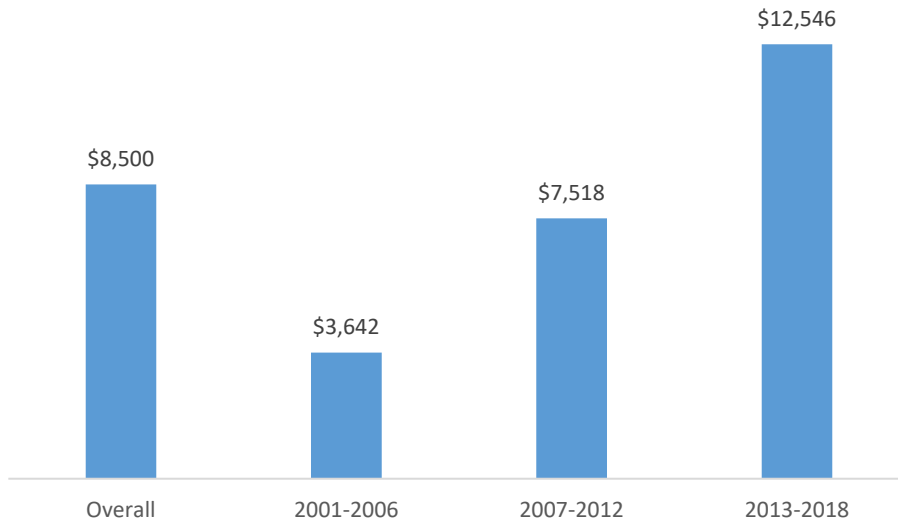
Total Wealth Accumulation

When combining the effects of property appreciation and principal repayment, the median participant in shared equity programs accumulates a substantial amount of wealth across all market periods. Over the course of homeownership, households accumulate thousands of dollars in home equity. For the median household, the combined wealth accumulation is approximately $14,000, with small variations across periods. The amount of wealth accumulated is somewhat lower for sales that took place during the housing bust and recovery periods but remains substantial (Figure 29).[27]

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[27] Wealth building is defined as the sum of the net appreciation (gross appreciation – transaction costs – capital expenditures) and the amount of principal repaid during the holding period.

Figure 29: Median Wealth Built from Appreciation and Principal Repayment (in Nominal Dollars) by Housing Market Period

Overall, the median household accumulated substantial wealth (in nominal terms) through their participation in shared equity programs. These homeownership opportunities generated wealth across all market conditions. The increase in assets occurs from the appreciation of the properties along with the forced savings associated with repaying principal through monthly mortgage payments. For shared equity programs, the financial risk associated with homeownership remains but is attenuated by lower price volatility. Over a quarter of households who sold during the bust and recovery periods experienced negative net appreciation (in nominal terms let alone in real terms). However, once the equity accumulated through principal repayment is taken into account, sellers overwhelmingly experienced an increase in wealth during all phases. Notably, shared equity sellers are accumulating wealth during all periods and are experiencing smaller decreases in home values than market rate sellers during the housing bust period. These findings are particularly encouraging given the population served by these program and the existing literature findings that lower income homeowners experience lower appreciation and higher likelihood of negative equity during market downturns.

Residential Mobility

The objective of this section is to examine the frequency with, distance to, and reasons for which shared equity homeowners move. The purpose of this analysis is to see if shared equity homeownership is effective in providing stable housing for families.

<u>Move Rate</u>

The rate at which shared equity homeowners change residences is significantly lower than the national figure derived from the Current Population Survey. From 1995 to 2017 where sample data is large enough, the average annual move rate in the shared equity sample is 2.6 percent. By comparison, 14 percent of households nationwide moved on average each year. Given that

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residential instability is more pronounced in lower income families, it is reasonable to expect that the discrepancy would be even greater for households at the same income level as shared equity homeowners. Knowing that the move rate varies substantially by tenure, it is notable that the overall move rate for shared equity homeowners is much lower than the average move rate for all homeowners in the nation (2.6 percent vs. 6.9 percent). The lower move rate for shared equity homeowners reinforces the idea that shared equity programs provide stable housing for lower-income families.

In addition, a breakdown of the move rate by housing market period (Figure 30) shows a slight increase for shared equity homeowners from 2.4 percent to 3.1 percent. To put this trend into perspective, for both national renters and homeowners, move rates declined over time. The national trend for the population may be due to several social, economic, and demographic factors including increased tendency for adult children to live with their parents, rising student loan debt, growing number of older households and two-earner households, and a shrinking stock of lower-cost rentals (Joint Center for Housing Studies of Harvard University 2018). In this context, the rising move rate for shared equity homeowners reflects relatively stable families of similar characteristics whom the programs are serving, and more importantly, suggests that these families continue to have housing choices during a period of heated housing markets and relatively stagnant incomes.

Figure 30: Average Annual Move Rate for Shared Equity Homeowners (n = 4,102), National Owners, and National Renters by Housing Market Period
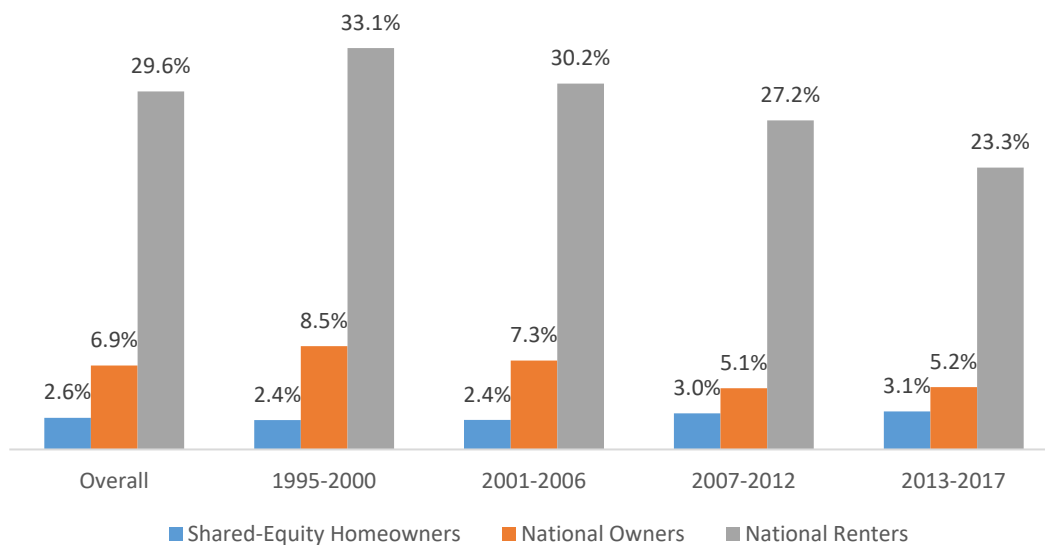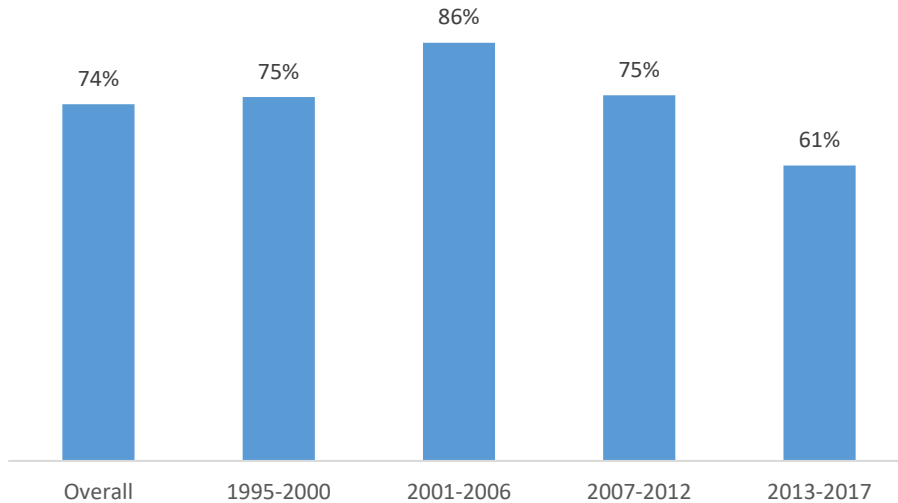

Length of Tenure

Another way to examine residential mobility is to see how long a household has stayed in the same home before moving. To make the first period comparable with the following three 6-year periods, the last 6 years in the pre-2001 period were included in this part of analysis. In each period as shown in Figure 31, the percentage of families that stayed in the same home for the entire 6-year period reached a peak of 86 percent during the housing boom period and declined

thereafter to 61 percent during the housing recovery period. Overall, 74 percent of shared equity homeowners stayed in the same home for at least six years.

Figure 31: Percentage of Shared Equity Homeowners Staying in the Same Home for at least Six Years by Housing Market Period (n = 5,247)


For those who have moved, the overall average length of tenure was 6 years. Breaking it down by housing market period, the average length of tenure increased over time from 4.7 years to 7.3 years (Figure 32). In comparison, the average length of tenure for a typical American family was 6 years prior to 2008 and 9 years after 2008. Considering shared equity homeowners in general move more often over time, the longer tenure for movers suggests that these homeowners tended to hold off selling their homes in the aftermath of the housing bust until home prices bounced back.

Figure 32: Average Length of Tenure (Year) by Housing Market Period (n = 1,386)
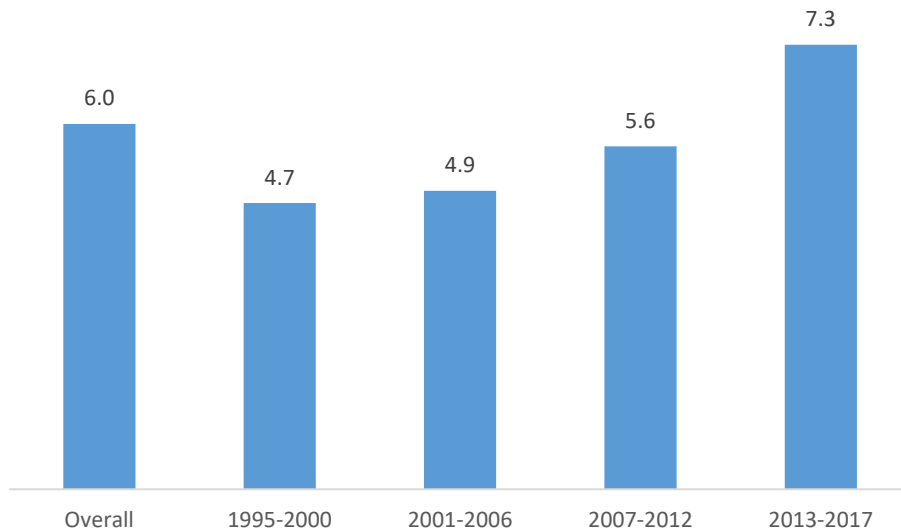
The majority of movers (58 percent overall) purchased a new home after selling their shared equity home, regardless of the housing market period. Less than one in three movers (28 percent) moved into the rental market, with this proportion remaining consistent across market periods. After 2000, there is an upward trend of movers in the "other living conditions" category, which includes various temporary living arrangements due to social- or employment-based life events (e.g. moving into a family or friend's home and not paying rent, or relocating for work and living in temporary accommodations).

Figure 33: Percentage Distribution of Tenure Decision for Movers by Housing Market Period (n = 930)

■ Percent of movers who purchased again
■ Percent of movers who rented
■ Percent of movers in other living condition
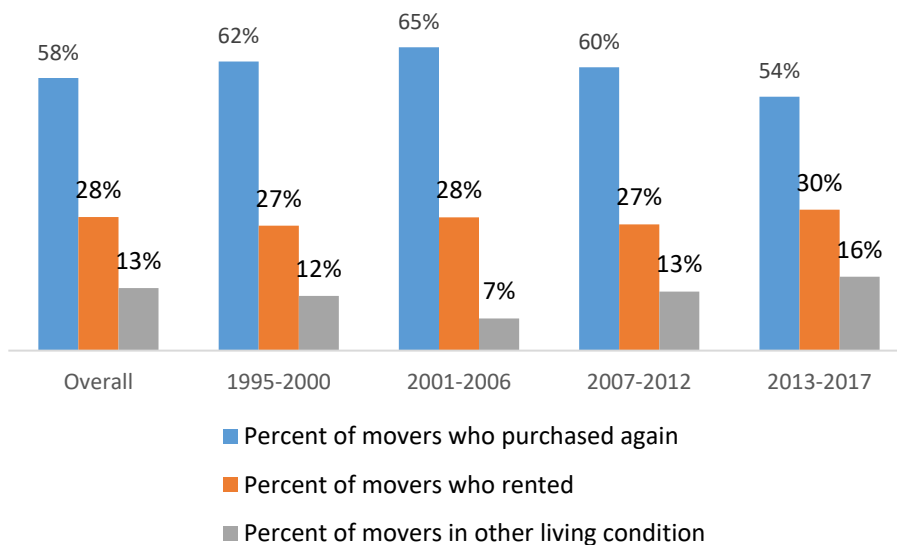
<u>Reasons for Moving</u>

Program participants were asked about their primary reason for moving when they sold their shared equity home. Of the 985 families who provided an answer,[28] the most common reason (42 percent overall) was a change in household members, including marriage, divorce, and childbirth. It remains the primary reason in each housing market period. The share of families who moved because of employment or commuting reasons has been on the rise since the housing boom. Overall, nearly one in five moves was driven by employment or commuting. The effect of the housing bust on moving decisions can be seen in the rising share of moves due to financial constraint in the housing bust period, as well as a declining share of moves to purchase a market rate home after the housing crisis (Figure 34).[29]

**Figure 34: Primary Reasons for Moving by Housing Market Period (n = 985)**
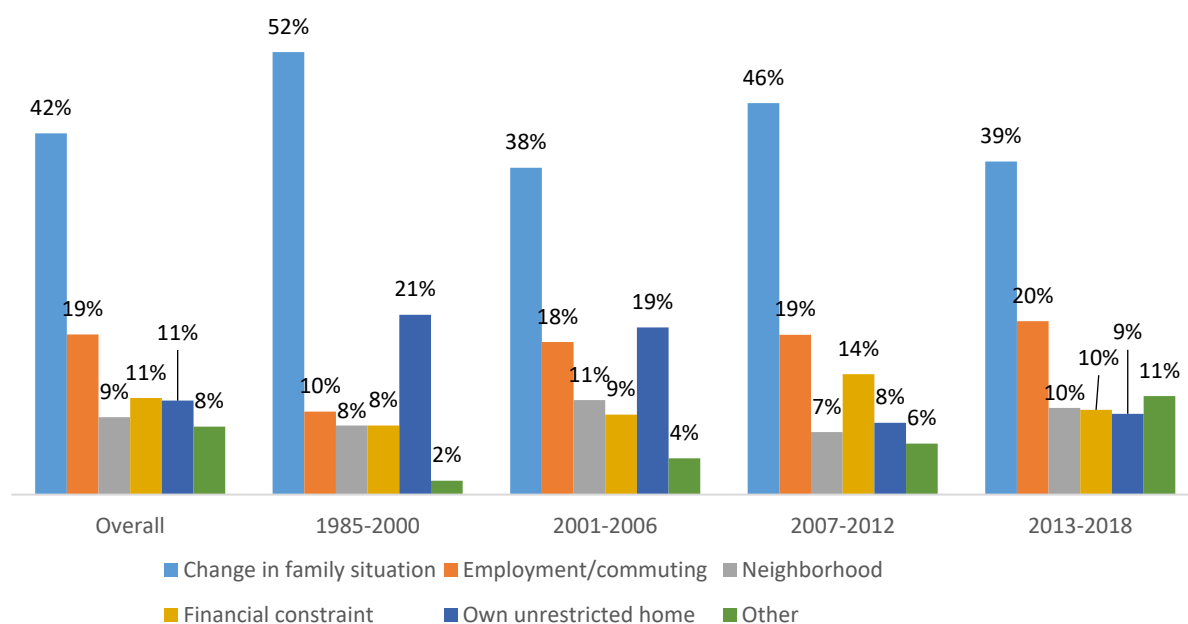
Compared to all residents in the same states, shared equity homeowners are more likely to move because of changes in family situation and employment or commuting reasons. On the other hand, a smaller share of shared equity homeowners moved because of location or neighborhood reasons. None reported relocation because of seeking a better-quality home or being forced to move (Figure 35). This is consistent with share equity homeowners experiencing overall satisfaction with their housing condition.

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[28] The 985 responses come from 24 organizations in the sample, although the percentage of missing responses in each organization varies widely. Three organizations, Champlain Housing Trust, Colorado Community Land Trust, and One Roof Community Housing, together make up 65 percent of the responses.

[29] More research is needed on this front to investigate if shared equity programs help provide stable housing to families when the market is getting less affordable.

Figure 35: Comparison of Move Reasons between Shared Equity Homeowners (n = 985), Renters, and Owners

Legend: Shared Equity Homeowners, Owners, Renters
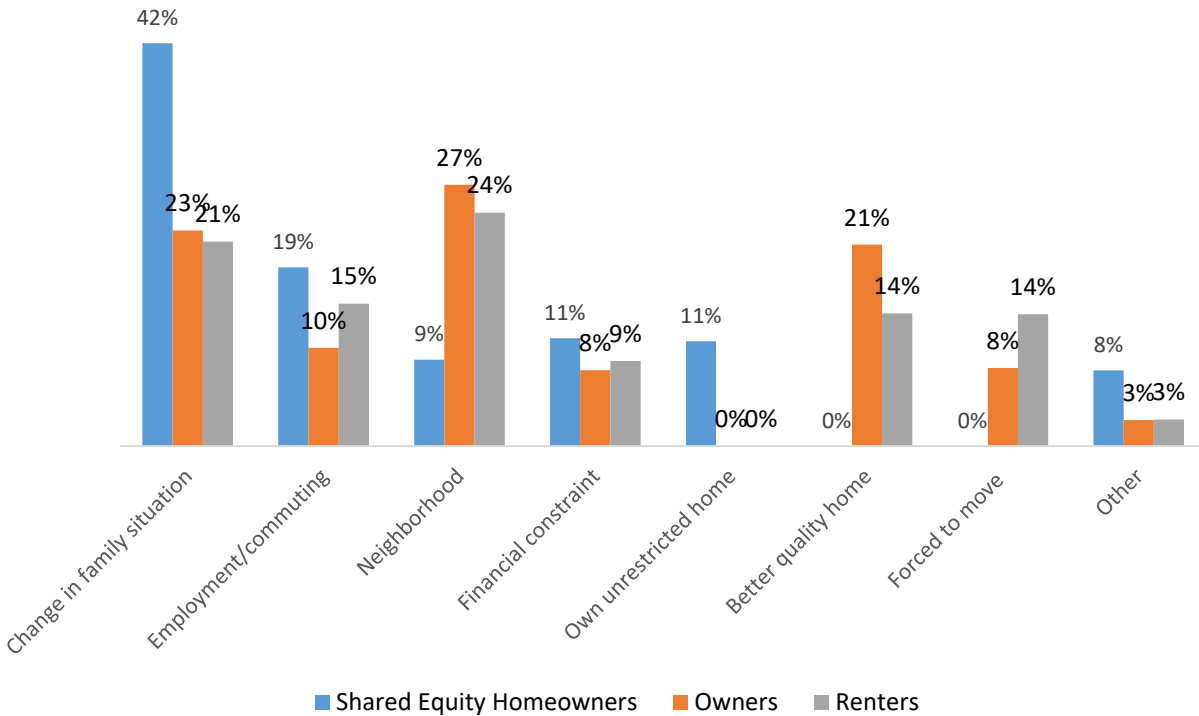
Move Distance

This study assessed the different scales of distance within which shared equity residents moved. The figure below (Figure 36) reports the percentage of moves that occurred within the same county; the percentage moves from one county to another within the same state; and the percentage of moves from one state to another. These percentages were calculated for both sellers and buyers of shared equity homes. On the one hand, the majority of homebuyers were from the same county, and the share of interstate moves decreased over time. On the other hand, the majority of sellers moved to different states, and the share of out-of-state movers increased over time (Figure 36). While move distance for shared equity homebuyers follows the same pattern as both national renters and owners, for sellers the share of interstate moves is remarkably high. It indicates that shared equity homeowners may be reluctant to leave the program unless they have a compelling life reason to do so.

Figure 36: Percentage Distribution of Move Distance by Housing Market Period (n = 1,386)

	Same County	Same State & Different County	Different State
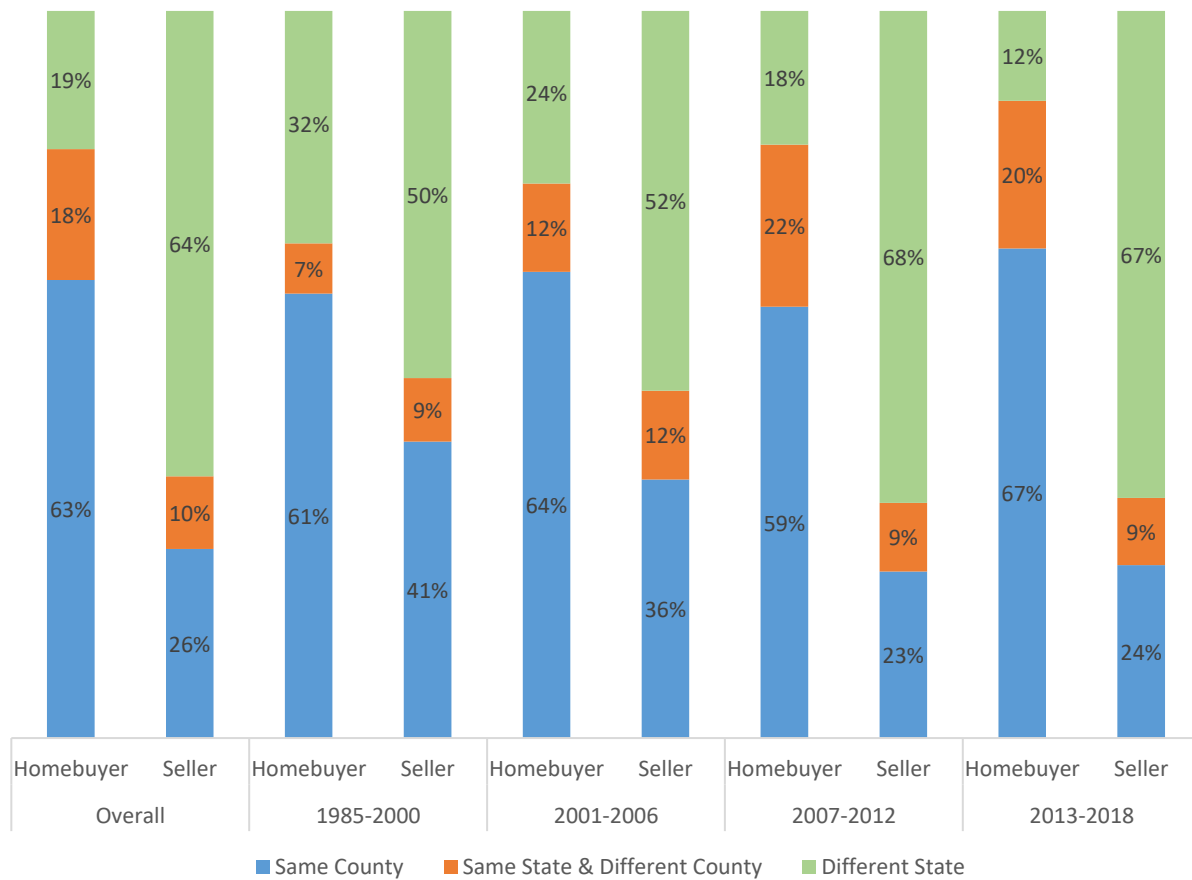
Conclusion

This study examines the growth, household profile, and performance of shared equity homeownership programs using administrative data derived from 58 programs and 4,108 properties. Findings of this study not only reinforce the assertion that shared equity models expand affordable homeownership opportunities to lower-income families, but also add nuance to existing knowledge. Most importantly, the study indicates that shared equity homeownership programs, which have steadily grown over time, are effectively serving low- and moderate-income households by providing access to overall sustainable homeownership experiences. This finding holds true over the past two decades despite housing market fluctuations. In effect, the shared equity homeownership sector is successful in mitigating the risks of traditional homeownership and delivers stable housing.

Although this study evaluates the shared equity homeownership sector based on the largest sample of data to date, there are limitations that prevent us from painting a full picture of sector performance. The sample largely represents CLTs and only incudes a small portion of deed-restricted programs and limited-equity cooperatives. Some HomeKeeper users opt-out of

providing their data for the Hub (on which this study is based) or users have backlogs of data that has yet to be inputted, which results in additional limitations in the dataset. In addition, some findings are primarily driven by a few large programs, as we know that nearly half of sample properties come from seven of the shared equity programs (12 percent) included in the study. Thus, the results are not representative of the entire sector. As shared equity homeownership programs are locally driven and program design varies widely, building a standard platform to track program performance and trends presents a daunting challenge. Further research would be greatly facilitated if more programs used management systems like HomeKeeper, so that information could be tracked in an efficient and uniform way and programmatic characteristics and outcomes could be readily aggregated and reported. In particular, units produced as part of inclusionary zoning programs administered by local governments and units in limited equity cooperatives would be important to track with greater detail.

A primary objective of this study is to compare shared equity model performance across housing market periods. Key findings can be summarized into four points. First, public funding, specifically state and federal dollars, increased substantially during the housing boom and bust periods and declined significantly during the housing recovery period. This trend seems to drive the overall growth pattern of the shared equity stock. In response to declining federal support, shared equity programs relied more upon local public dollars and private funding sources. Overall, the results imply that public funding is vital to sector growth.

Second, the share of families headed by people of color increased from 13 percent in the pre-2001 period to 43 percent in the housing recovery period. Racial composition in the most recent housing recovery phases is on par with the comparison owner group. It is promising to see the trend of diversifying racial composition as shared equity homeownership models are seen as one tool for affirmatively furthering fair housing and building inclusive communities (Davis 2017).

Third, the median net appreciation decreased steadily from $7,639 in the housing boom to $4,049 in the bust and then to -$898 in the recovery period. Although this finding suggests that the housing bust and its aftermath made a considerable impact to the net appreciation of shared equity homes, the declining net appreciation is largely offset by increasing mortgage principal gains in the housing bust and housing recovery periods. Overall, shared equity sellers have accumulated wealth during all periods and experienced smaller decreases in home values than market rate sellers during the housing bust period.

Fourth, housing market fluctuation seems to impact residential mobility, and shared equity homeowners seem to adjust their move patterns when the housing market is in decline or recovery. During the onset and aftermath of the housing bust, a smaller share of homeowners moved in order to purchase an unrestricted home—an indication that similar to other owners, shared equity homeowners opt to weather the storm when they can. During these periods, they were able to stay in the programs longer without making forced moves. When they decided to relocate, the majority made long-distance (interstate) moves, and the share has increased in recent years, indicating the reluctance of moving unless they have a compelling life reason to do so (and in most cases due to a change in household members or for job-related reasons).

It is equally important to note which aspects have not changed over time. First, shared equity programs tend to serve families with similar characteristics over time. The majority of purchasers are first time homebuyers, low-income (51–80 percent AMI), female-headed household, in their late 30s, and employed in office, retail or service industries. Second, in terms of affordability, 95 percent of shared equity homes are priced to be affordable to families earning at or below 80 percent of AMI. Most shared equity homeowners are not cost burdened, as they spend less than 30 percent of their income on housing costs. This is true not only across housing market periods, but also for both first purchases and resales. This finding indicates that resale restrictions are effective in retaining the original community investment and achieving lasting affordability. Third, the median household accumulated substantial wealth ($13,774 in nominal terms) through their participation in shared equity programs, and these homeownership opportunities generated consistent wealth across all market conditions. Fourth, in terms of residential mobility, shared equity homeowners move at a low rate, and when they move, the majority choose to purchase again. This finding suggests that shared equity models are effective at providing stable housing and promoting upward mobility regardless of housing market conditions.

When contextualizing the findings with comparable renter and owner groups, it becomes evident that shared equity homeownership models are uniquely situated in providing stable homeownership opportunities to lower-income populations. Shared equity programs seem to serve more vulnerable populations compared to households earning similar incomes. Families participating in shared equity programs are more likely to either be single person households, or with children, and headed by females and people of younger age. Although shared equity homeowners experienced substantial decline of net appreciation of their homes during the housing bust and recovery periods, the annual percentage of net appreciation they received was comparable (or even slightly higher during the bust) to what they would have received if they had purchased a house in the same neighborhood (ZIP Code) that did not have resale restrictions. Shared equity homeowners also differ in locational outcomes and mobility rates from comparable renter and owner groups. Understanding whom shared equity programs are serving and how they fare lays the foundation for future work.

This study starts to reveal the trends and performance of shared equity programs. Future research should be directed to examine racial disparities across performance metrics, as well as to address what forces drive the perceived patterns and trends. Answers to these inquiries can help housing practitioners and communities work together to overcome barriers to homeownership for lower-income, minority households. As America is bouncing back from the Great Recession and facing new challenges around affordability and homeownership, shared equity homeownership models are a promising tool for achieving an inclusive, sustainable society.

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