



# The Community Advantage Panel Survey: Announcing a Version for Public Use

Roberto G. Quercia, University of North Carolina at Chapel Hill ([quercia@email.unc.edu](mailto:quercia@email.unc.edu))

Sarah Riley, University of North Carolina at Chapel Hill ([sfr@email.unc.edu](mailto:sfr@email.unc.edu))

## Abstract

We announce the launch of a de-identified, public-use version of the Community Advantage Panel Survey (CAPS), which comprises 11 years of panel survey data provided by approximately 5,000 low- and moderate-income homeowners and renters during the period of 2003-2014. The UNC Center for Community Capital (the center) has overseen CAPS data collection with generous funding from the Ford Foundation and currently serves as the CAPS data custodian. The center has conducted a variety of research using the CAPS data. We first provide a brief overview of some research topics that have been considered by the center to illustrate the types of research projects for which the CAPS data may be of interest. Next, we discuss the general structure of the CAPS data sets and documentation, followed by sample characteristics. We conclude with instructions for how to access the data and get technical support as needed.

## Contents

Introduction .....	3
Research Topic Examples .....	4
Data Structure and Documentation .....	5
Data Sets .....	5
Major Survey Modules .....	7
Documentation .....	8
Naming Conventions .....	9
Omissions .....	9
Sample Characteristics .....	9
Baseline Sample Construction .....	9
Demographic Characteristics .....	10
Geographic Coverage .....	10
How to Access the Public-Use CAPS Data .....	11
Levels of Data Access .....	11
Contact Information and Support .....	11
Table 1: Survey Completions by Sample, Year, and Mode .....	12
Table 2: Major Survey Modules .....	13
Table 3: Baseline Demographic Characteristics by Sample .....	14
Table 4: Baseline Geographic Distribution by Sample .....	15
References .....	16

## Introduction

The Community Advantage Program (CAP) is a secondary mortgage market demonstration program that was initiated in 1998 via a partnership among the Ford Foundation, Fannie Mae, and Self-Help, a non-profit lender with headquarters in Durham, NC. Under CAP, Self-Help purchased qualifying loans from the originating lenders and resold them to Fannie Mae while retaining recourse for an agreed period of time (usually 5-10 years). Qualifying loans were those made to households with annual incomes no greater than 80% of the area median income at the metropolitan statistical area level (MSAMI), or to minority households with annual incomes no greater than 115% of the MSAMI. CAP was designed to provide policy-relevant insights with respect to community reinvestment lending, as defined by the Community Reinvestment Act, and to inform future housing policy.

CAP mortgages are predominantly 30-year, high-loan-to-value mortgages originated at near-prime, fixed interest rates. CAP loans were origination between 1983 and 2010, with 90% originated during the period of 1995-2005. At the time of mortgage origination, the median CAP loan recipient was about 32 years old and had a household income of about \$31,000 (or about 60% of area median income) and a credit score of 681. The median original loan balance was about \$79,000, and the median property value at purchase was about \$84,000, for a median original loan-to-value ratio of 97%. About 86% of CAP properties are located in urban areas. CAP loans were made in more than 40 states, with approximately 35% in North Carolina and about 68% in the South. As of the first quarter of 2017, about 17% of the CAP loan portfolio remained active; 7% had terminated in foreclosure sale; 5% had been returned to the originator; and 71% had been prepaid.

The Ford Foundation provided the original underwriting capital for CAP and subsequently funded the Community Advantage Panel Survey (CAPS), an 11-year panel survey of approximately 5,000 low- and moderate-income homeowners and renters fielded annually during the period of 2003-2014. The homeowners who were recruited to participate in CAPS received mortgages between 1999 and 2003 through the Community Advantage Program, and the participating renters were recruited to match these homeowners with respect to geographic proximity and an income ceiling. The survey collects a wide variety of information, including demographics and family formation, mobility and housing tenure choice, unemployment, wealth and asset holdings, social capital and civic engagement, and housing satisfaction. The survey period spans a full housing market cycle, comprising the housing market boom that ended in 2006, the housing market decline that ushered in the recession of 2007-2009, and the subsequent recovery. Thus, the CAPS data provide a means for researchers to answer a broad range of questions with respect to low- and moderate-income homeownership in the context of community reinvestment lending and under varied market conditions.

The UNC Center for Community Capital (UNC-CCC) was asked to conduct a program evaluation of CAP and has overseen CAPS data collection with generous funding from the Ford Foundation. The center currently serves as the CAPS data custodian and has conducted a variety of research using the CAPS data. At this time, we are pleased to announce the launch of a de-identified, public-use version of CAPS data. We first provide a brief overview of some of the center's prior research using CAPS data to illustrate the types of research projects for which the CAPS data may be of interest. We then discuss the general structure of the CAPS data sets and documentation, followed by sample characteristics. We conclude with instructions for how to access the data and get technical support as needed.

## Research Topic Examples

The UNC-CCC and collaborating research partners have published a variety of peer-reviewed research papers based on the CAPS data. Examples of the research topics that have been considered in these papers are as follows:

### Relocation, mortgage choice, and tenure choice:

- Spader and Quercia (2008) examine rates of exit from home ownership and subsequent tenure choices.
- Cohen et al. (2009) examine the home ownership intentions and norms of renters and the extent to which these beliefs predict actual home purchases.
- Spader and Quercia (2011) examine refinancing behavior among home owners, including product type, refinancing channel, and cash extraction.
- Riley, Nguyen, and Manturuk (2014) examine the relocation decisions of home owners and renters in relation to unemployment and house price trends.
- Lindblad et al. (2017) examine whether renter attitudes concerning future home purchase have shifted as a result of the financial crisis, as well as how such shifts vary with income and race.

### Wealth and financial behaviors:

- Freeman and Desmarais (2011) examine whether accumulating home equity tends to crowd out other financial investments and whether home owners tend to cash out their home equity to fund additional spending.
- Grinstein-Weiss et al. (2011b) examine the relationship between parental financial management teaching and subsequent use of credit card debt.
- Grinstein-Weiss et al. (2013) compare changes in the net worth of home owners and renters over time.

### Health, stress, and satisfaction:

- Grinstein-Weiss et al. (2011c) assess the relationship between residential tenure status and neighborhood satisfaction.

- Manturuk (2012) examines links between residential tenure status and mental health.
- Manturuk, Riley, and Ratcliffe (2012) examine the relationships among residential tenure status, financial stress, and financial satisfaction.

Community, family, and social connections:

- Manturuk, Lindblad, and Quercia (2009) examine relationships among residential tenure status, neighborhood quality, and voting behavior.
- Manturuk, Lindblad, and Quercia (2010) examine relationships among residential tenure status, social capital, and neighborhood group participation.
- Grinstein-Weiss et al. (2010) examine links between residential tenure status and engaged parenting practices.
- Grinstein-Weiss et al. (2011a) examine the extent to which marital status predicts subsequent home purchase.
- Manturuk, Lindblad, and Quercia (2012) examine the relationship of residential tenure status to civic engagement.
- Lindblad, Manturuk, and Quercia (2013) examine the relationship of residential tenure status to perceptions of neighborhood social cohesion and crime.
- Lindblad and Quercia (2014) examine mechanisms that may generate nonfinancial benefits from home ownership, including residential stability, perceived social control, social identity, and financial self-interest.

In addition, much of the center’s CAP research is summarized in two recent books intended for a general audience:

1. Regaining the Dream, published in 2011, discusses the US mortgage finance system in the context of the recent financial crisis and provides public policy recommendations with respect to low- and moderate-income homeownership.
2. A Place Called Home, published in 2017, discusses the nonfinancial public and private benefits of homeownership for low- and moderate-income households and seeks to explain the mechanisms underlying these benefits.

## Data Structure and Documentation

### Data Sets<sup>1</sup>

The CAPS data are divided into two samples, one for survey participants who were home owners at the beginning of the survey period and received CAP mortgages (i.e., **owners sample**) and one for survey participants who were renters at the beginning of the survey period (i.e., **renters sample**). Although some survey participants changed tenure status during the period of the survey, for data storage purposes each case remains part of the sample to which it was assigned at baseline. The data collected for each sample are stored in a series of year-specific

---

<sup>1</sup> Further information about the data collection process and results for each year can be found in the CAPS annual data collection reports.

SAS data sets. Each case has a unique ID number that is constant over time. The first variable in each data set provides the ID number for each case that appears in that data set. Information for all survey participants is present in the baseline data sets; the data set for each subsequent survey year contains information only for the participants who provided data in that year.

Data collection for the owners sample baseline interview was conducted during the period of 2001-2003; data for subsequent survey years was collected annually thereafter through 2014. The baseline sample size for the owners sample was 3,743 cases. The survey was administered by phone each year, except that in-home interviews were conducted for a subsample in 2005, 2008, and 2012. In particular, two separate survey instruments were fielded in 2005, one by phone and one via in-home visits; eligibility for the in-home survey was restricted to a subset of the owners sample in an effort to contain survey costs, while all owners sample members were eligible for the phone survey, which consisted of different questions. Thus, some owners sample respondents completed two interviews in 2005. In the years 2008 and 2012, a single survey instrument was fielded, but it was administered as a mixed-mode survey in which participants who had completed the 2005 in-home survey were eligible for in-home interviews and all other survey participants were eligible for phone interviews. As a result of this data collection pattern, a total of 13 SAS data sets exist for the owners sample; these include one data set for the 2001-2003 baseline interview, two data sets for 2005, and one data set for each of the other survey years, 2004 and 2006-2014.

Data collection for the renters sample began in 2004 and continued annually through 2014. The baseline sample size for the renters sample was 1,529 cases. The mode assignments for renters sample interviews were similar to those for the owners sample, except that the renters sample 2005 interview was administered to all respondents as an in-home survey. The renters sample survey instrument for 2005 covered the same questions that were administered to the owners sample members in that year, except that they were administered as one survey rather than as two. Thus, a total of 11 SAS data sets exist for the renters sample, one for each survey year from 2004 through 2014.

One additional set of phone interviews for both samples was conducted in 2006. The goal of this supplemental, or “soft-refusal,” survey was to collect data from original survey participants who had not completed any interviews in 2005. The soft-refusal survey instrument contained all survey questions for 2005, in addition to those that were scheduled for 2006. Thus, soft-refusal completers were only asked to complete one survey in 2006. A total of 262 owners sample members and 76 renters sample members completed this soft-refusal survey, and their data has been merged into the annual data sets for 2005 and 2006 where appropriate for the questions that were administered. Remerged cases are indicated with the flag **SR\_IND** at the end of each relevant data file. Cases for which **SR\_IND=1** represent soft-refusal completions. The structure of the data components and the number of interviews completed in each year are summarized in Table 1.

## Major Survey Modules<sup>2</sup>

The survey instruments fielded each year include a **universal core** module and various supplemental modules that cover specific topic areas. The universal core module collects standard demographic information, such as race, gender, marital status, educational attainment, income, tenure status, and labor force participation; it also collects a variety of financial information, such as household utility expenditures, use of credit cards, precautionary savings, health insurance coverage, and receipt of tax refunds.

The supplemental modules fielded in various years include the following:

- Homeownership counseling: Collects information about any home ownership counseling or classes that the owners sample members completed before purchasing their CAP properties.
- Social capital: Collects information about involvement in the neighborhood and community, connections to people with particular skills or knowledge, formal participation in organizations, and informal social control, such as neighborhood crime prevention.
- Parenting: Collects information about parenting behaviors with reference to a randomly selected child in the household, including time spent, involvement in schools, provision of enrichment activities, and expectations for college completion.
- Energy expenditures: Collects information about expenditures on home heating and cooling, and gasoline purchased for driving.
- Sense of community: Collects information about whether respondents feel at home in their neighborhoods and share values with their neighbors.
- Wealth/assets: Collects information about bank accounts, savings vehicles, and credit/debt products used, as well as account balances and ownership of vehicles and real estate.
- Mortgages: A subsection of the wealth/assets module; collects information about mortgage choice and refinancing, including product type, interest rates, origination channel, and use of second mortgages and home equity lines of credit.
- Savings: Collects information about whether respondents learned about personal financial management from their parents, current financial situation relative to parents at the same age, savings behaviors, and attitudes toward debt.
- Stress: Collects information about subjective feelings concerning being in control of life and finances.
- Economic challenges: Collects information about changes in household spending patterns as a result of the financial crisis, such as postponing mortgage or rent payments, foregoing medical treatment, cashing out retirement savings, and changes in family formation decisions.

---

<sup>2</sup> Further information about the questions that were fielded in each year of the survey can be found in the CAPS questionnaire specifications documents.

- Travel/commuting: Collects information about distances traveled to school or work, other destinations visited and number of trips, and modes of transportation typically used.
- Financial services: Collects information about methods of bill payment, use of prepaid cards, and perceived financial self-efficacy.
- Medical expenses: Collects information about medical bills, methods of medical bill payment, and difficulty in paying for medical care.
- Moral hazards: Collects information about attitudes toward debt repayment, strategic mortgage default, filing for bankruptcy, and internal vs. external locus of financial control.
- Home improvements: Collects information about the renovations and repairs that owners have completed on their homes, including associated expenses.
- Housing experiences: Collects information about property characteristics, factors influencing the home purchase decision, residential satisfaction, mobility intentions, and perceived house price appreciation.
- Buy a home: Collects information from renters about future home purchase intentions, beliefs about access to mortgage credit, down payment savings, and home shopping behaviors.

The survey years in which these modules were administered are summarized in Table 2.

### Documentation

The documentation available for each survey year consists of annual data collection reports, questionnaire specifications, and codebooks. The information provided in each of these documents is as follows:

Data collection reports: Contain details about survey data collection procedures and completions for each survey year, including sampling methods, survey instrumentation, tracing procedures, interviewing, data processing, quality control, and deliverable finalization. A data collection report is provided for each year of survey data collection.

Questionnaire specifications: Contain survey question wording, response options, skip logic, and question sources. A questionnaire specification is provided for each survey instrument that was fielded during the survey period. For early survey years, the owners and renters samples were interviewed using separate survey instruments, so distinct questionnaire specifications are available for each sample. Beginning in 2007, a single survey instrument was used for both samples, so a single questionnaire specifications document is provided for that and each subsequent year.

Codebooks: Provide the name, label, format, and corresponding survey question associated with each variable, as well as summary statistics for all survey responses. A codebook is provided for each SAS data set.

## Naming Conventions

The name of each data or documentation file and data set variable ends in a suffix indicating the associated survey year. As indicated in Table 1, each survey year has been given a numeric label that represents its timing relative to the baseline survey. Thus, the baseline survey period of 2001-2003 is called **Year 0**, the 2004 survey year is called **Year 1**, the 2005 survey year is called **Year 2**, and so forth. Those files that apply to either the owners sample or the renters sample, but not to both samples, also contain the sample name. For example, the owners sample survey data for baseline are provided in the SAS data set named **CAPS\_OWNERS\_Y0**, and the data annual data collection report for Year 6 is named **CAPS\_DATA\_COLLECTION\_REPORT\_Y6**. Similarly, the residential tenure status variable in the Year 11 survey data sets is named **TENURE\_y11**.

## Omissions

Per the guidelines of the UNC Institutional Review Board, all of the data included in our public-use data offering have been de-identified. In addition to direct personal identifiers, all geographic location information below the state level and variables that contain open-ended text responses, which could potentially be used to identify respondents, have been removed from the data.

## Sample Characteristics

### Baseline Sample Construction<sup>3</sup>

Sample construction was carried out over the course of several years between 2001 and 2004. The owners sample is a convenience sample selected from Self-Help's CAP loan portfolio at the beginning of the survey period, and the renters sample is a random sample drawn one year later from neighborhoods near those in which urban owners sample members were living at the time of the baseline survey.

***Owners sample:*** A total of 7,223 CAP loans were purchased by Self-Help before or during the baseline CAPS interview period of 2001-2003. These loans were originated during the period of 1999-2003. All of the borrowers whose loans had been purchased were put into calling, screened (efforts were made to exclude retirees and full-time students, and to include only those borrowers who still lived in their CAP properties and retained their CAP mortgages at the time of the baseline survey), and given the opportunity to participate in the baseline survey if they met the screening criteria. A total of 3,743 CAP borrowers completed the baseline survey<sup>4</sup>.

***Renters sample:*** A total of 15,934 potential renters sample members were selected via random digit dialing from the 30 metropolitan statistical areas (MSAs) with the greatest representation

---

<sup>3</sup> More information about the design of both samples is provided in the CAPS annual data collection reports.

<sup>4</sup> Self-Help continued to purchase loans after CAPS was launched and subsequently accumulated a portfolio of more than 46,000 CAP mortgages.

of owners sample members. The dialing zones were initially restricted to the census block groups in which owners sample members were located but were each subsequently expanded to encompass a four-mile radius for those cases in which a more localized match with an owners sample member could not be obtained. Potential renters sample members were screened for tenure status and a household income ceiling. The income ceiling for each potential renters sample member was based on the area median income (AMI) of the matched owners sample member's MSA and the percentage minority representation of the matched owners sample member's census tract. The income threshold was set equal to 80% of the AMI if minority representation was less than 30%, or equal to 115% of the AMI if minority representation was 30% or greater. Calling and screening continued until the target baseline sample size had been achieved. The baseline renters sample comprises 1,529 cases.

### Demographic Characteristics

As summarized in Table 3, the owners sample members were, on average, 35 years old with an annual household income of about \$32,000 at the time of the baseline survey. Slightly more than half of the owners sample respondents (54%) were male, and about 46% were married at baseline. About half of the owners sample respondents also reported children in the household at baseline. Whites make up about 62% of the sample, followed by Blacks (19%) and Hispanics (16%). Approximately 51% of owners sample members had completed a high-school education as of baseline, while an additional 14%, 18%, and 6% had completed an associate's degree, bachelor's degree, or graduate degree, respectively. The labor force participation rate of the owners sample was about 96%, and approximately 92% of owners sample members were employed at baseline.

In comparison, the renters sample members at baseline were slightly older (40) on average, had a somewhat lower average income (\$20,200), and were more likely to be female (70%). Blacks (33%) and Hispanics (19%) have greater representation in the renters sample, and Whites (44%) have lower representation. The renters sample members were less likely to be married (27%) at baseline and were less likely to report children in the household (43%). The renters sample members also exhibited a lower rate of postsecondary degree completion (25%), labor force participation (75%), and employment (63%) at baseline.

### Geographic Coverage

As summarized in Table 4, a majority of owners (62%) and renters (74%) sample members were located in the South at baseline. An additional 26% of the owners sample and 14% of the renters sample members were located in the Midwest, while 10% of the owners sample members and 12% of the renters sample members were located in the West. Only about 3% of the owners sample members and none of the renters sample members were located in the Northeast.

At the state level, North Carolina accounts for 27% of the owners sample and 33% of the renters sample. Ohio accounts for an additional 12% of the owners sample and 6% of the

renters sample, while Oklahoma contributes an additional 11% of the owners sample and 22% of the renters sample. Each of the other states represents less than 10% of both samples.

## How to Access the Public-Use CAPS Data

### Levels of Data Access

Due to data security and individual privacy considerations, two levels of data access will be provided, as follows:

***Tier 1 (Unrestricted Public Access):*** Provides unrestricted public access via direct download and includes the de-identified annual survey data sets, along with all annual data collection reports, codebooks, and survey questionnaires. When the data are released, Tier 1 survey data and documentation will be available for free download from the Carolina Digital Repository (<https://cdr.lib.unc.edu/>). Users who require assistance from UNC-CCC in understanding and using these files must be prepared to pay a fee for technical support.

***Tier 2 (Restricted Public Access):*** Provides restricted public access via a collaborative data sharing contract and includes not only the items available via Tier 1, but also additional value-added data products and proprietary or sensitive data that cannot be shared with the general public. These data components include state-level geographic information, Census and American Community Survey data matched at various geographic levels down to the block group, Federal Housing Finance Agency house price index data matched at the MSA level, variables aggregated or calculated from the annual survey data (e.g., net worth), Self-Help's administrative and mortgage performance data for all CAP loans, and survey weights that permit generalization of the owners sample survey data to a larger subset of the CAP loan portfolio. Researchers who would like Tier 2 data access must submit a letter of interest and (if invited) a full research proposal, be willing to include one or more UNC-CCC researchers as coauthors on any research publications produced using the data, and be prepared to cover all UNC-CCC costs associated with making the data available<sup>5</sup>. When the data are released, the Tier 2 data sharing protocol and associated application forms will be made available via the UNC-CCC's website.

### Contact Information and Support

For technical assistance with downloading Tier 1 data and documentation files, please contact the Carolina Digital Repository: <https://cdr.lib.unc.edu/>

For assistance with other issues and to apply for Tier 2 data access, please contact the UNC Center for Community Capital: <http://communitycapital.unc.edu/>

---

<sup>5</sup> These requirements may be waived for students who use the CAPS data for a Master's thesis or Ph.D. dissertation.

Table 1: Survey Completions by Sample, Year, and Mode

Calendar Year(s)	Survey Year(s)	Owners Sample		Renters Sample	
		Mode	Completes	Mode	Completes
2001-2003	0	CATI	3,743		
2004	1	CATI	2,614	CATI	1,529
2005	2	CATI	2,738 (37 SR)		
		CAPI	1,486 (203 SR)	CAPI	1,232 (75 SR)
2006	2 & 3 (SR)	CATI	262	CATI	76
	3	CATI	2,380 (262 SR)	CATI	1,045 (76 SR)
2007	4	CATI	2,079	CATI	902
2008	5	CATI	1,296	CATI	54
		CAPI	1,080	CAPI	926
2009	6	CATI	2,229	CATI	915
2010	7	CATI	2,088	CATI	873
2011	8	CATI	2,018	CATI	851
2012	9	CATI	1,142	CATI	47
		CAPI	913	CAPI	838
2013	10	CATI	1,924	CATI	823
2014	11	CATI	1,832	CATI	791

Notes:

- CATI = Computer Assisted Telephone Interviewing
- CAPI = Computer Assisted Personal (In-Home) Interviewing
- SR = Soft Refusal Cases
- Two separate surveys containing different questions, one administered via CATI and one administered via CAPI, were fielded for the owners sample in Year 2, and some respondents completed both of these interviews. In subsequent mixed-mode survey years (5 and 9), a single survey instrument was used.
- Gray shading indicates the soft-refusal interviews. These cases have been merged into the Year 2 and Year 3 data sets as appropriate based on the survey modules fielded in each year. The number of remerged soft-refusal cases is indicated in parentheses for each of the relevant data sets.

Table 2: Major Survey Modules

Module	2001-2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Universal core	X	X	X	X	X	X	X	X	X	X	X	X
Homeownership counseling	X											
Social capital		X			X							X
Parenting		X			X							
Energy costs				X								
Sense of community				X								X
Wealth/assets			X			X		X	X	X	X	X
Mortgages			X			X				X		
Savings			X			X				X		
Stress							X	X	X	X	X	X
Economic challenges							X	X	X	X	X	X
Travel/commuting											X	
Financial services											X	
Medical expenses					X							
Moral hazards									X	X	X	X
Home improvements						X				X		
Housing experiences						X						
Buy a home (for renters)		X	X	X	X	X	X	X	X	X	X	X

Note: Gray shading indicates that the extended, CAPI version of the wealth/assets module was administered. An abbreviated CATI version was administered in other years.

Table 3: Baseline Demographic Characteristics by Sample

Variable	Owners Sample (N = 3,743)		Renters Sample (N=1,529)	
	Mean	Std Dev	Mean	Std Dev
Age	35	11	40	13
Income	\$32,040	\$11,941	\$20,208	\$13,734
	<i>Percent</i>		<i>Percent</i>	
Gender				
Male	53.9		29.7	
Female	46.1		70.4	
Race				
White	61.7		44.1	
Black	19.4		32.5	
Hispanic	15.9		19.3	
Other	3.1		4.1	
Marital status				
Married	45.8		27.4	
Widowed	1.8		4.1	
Divorced	15.9		21.3	
Separated	2.0		6.2	
Cohabiting	11.1		9.9	
Other	23.4		31.2	
Children in household				
0	49.7		57.0	
1	22.3		19.3	
2+	28.0		23.7	
Educational attainment				
High school diploma/GED	51.3		55.0	
Associate's degree	14.4		7.7	
Bachelor's degree	18.4		13.2	
Graduate degree	6.1		4.1	
Other	9.9		20.2	
Employment status				
Employed	92.3		62.6	
Unemployed (looking for work)	3.2		12.0	
Not in labor force	4.5		25.4	

Table 4: Baseline Geographic Distribution by Sample

	<b>Owners Sample (N = 3,743)</b>	<b>Renters Sample (N=1,529)</b>
	<i>Percent</i>	<i>Percent</i>
<b>Region</b>		
Northeast	2.6	0.0
Midwest	25.6	13.9
South	61.5	74.1
West	10.3	12.0
<b>State</b>		
North Carolina	26.7	32.9
Ohio	11.7	5.9
Oklahoma	11.3	21.9
Illinois	4.9	3.9
California	4.5	2.5
Virginia	3.7	1.1
Arizona	3.2	6.7
Michigan	2.9	1.6
Mississippi	2.8	0.0
Texas	2.8	3.1
Other	25.6	20.4

## References

- Cohen, Taya, Mark Lindblad, Jong-Gyu Paik, and Roberto Quercia. 2009. Renting to Owning: An Exploration of the Theory of Planned Behavior in the Homeownership Domain. *Basic and Applied Social Psychology* 31(4): 376-389.
- Freeman, Allison and Bruce Desmarais. 2011. Portfolio Adjustment to Home Equity Accumulation among CRA Borrowers. *Journal of Housing Research* 20(2): 141-160.
- Grinstein-Weiss, Michal, Pajarita Charles, Shenyang Guo, Kim Manturuk, and Clinton Key. 2011a. The Effect of Marital Status on Home Ownership Among Low-Income Households. *Social Service Review* 85(3): 475-503.
- Grinstein-Weiss, Michal, Jonathan Spader, Yeong Hun Yeo, Andréa Taylor, and Elizabeth Freeze. 2011b. Parental Transfer of Financial Knowledge and Later Credit Outcomes among Low- and Moderate-Income Homeowners. *Children and Youth Services Review* 33(1): 78-85.
- Grinstein-Weiss, Michal, Yeong Yeo, Katrin Anacker, Shannon van Zandt, Elizabeth Freeze, and Roberto Quercia. 2011c. Homeownership and Neighborhood Satisfaction among Low- and Moderate-Income Households. *Journal of Urban Affairs* 33(3): 247-265.
- Grinstein-Weiss, Michal, Clinton Key, Shenyang Guo, Yeong Yeo, and Krista Holub. 2013. Homeownership and Wealth among Low- and Moderate-Income Households. *Housing Policy Debate* 23(2): 259-279.
- Grinstein-Weiss, Michal, Trina Shanks, Kim Manturuk, Clinton Key, Jong-Gyu Paik, and Johann Greeson. 2010. Homeownership and Parenting Practices: Evidence from the Community Advantage Panel. *Children and Youth Services Review* 32(5): 774-782.
- Lindblad, Mark, Kim Manturuk, and Roberto Quercia. 2013. Sense of Community and Informal Social Control among Lower Income Households: The Role of Homeownership and Collective Efficacy in Reducing Subjective Neighborhood Crime and Disorder." *American Journal of Community Psychology* 51(1-2): 123-139.
- Lindblad, Mark and Roberto Quercia. 2014. Why Is Homeownership Associated with Nonfinancial Benefits? A Path Analysis of Competing Mechanisms. *Housing Policy Debate* 25(2): 263-288.
- Lindblad, Mark, Hye-Sung Han, Siyun Yu, and William Rohe. 2017. First-time Homebuying: Attitudes and Behaviors of Low-Income Renters through the Financial Crisis. *Housing Studies* 32(8): 1127-1155.
- Manturuk, Kim, Mark Lindblad, and Roberto Quercia. 2009. Homeownership and Local Voting in Disadvantaged Urban Neighborhoods. *Cityscape* 11(3): 213-230.
- Manturuk, Kim, Mark Lindblad, and Roberto Quercia. 2010. Friends and Neighbors: Homeownership and Social Capital among Low- to Moderate-Income Families. *Journal of Urban Affairs* 32(4): 471-488.

- Manturuk, Kim, Mark Lindblad, and Roberto Quercia. 2012. Homeownership and Civic Engagement in Low-Income Urban Neighborhoods: A Longitudinal Analysis. *Urban Affairs Review* 48(5): 731-760.
- Manturuk, Kim, Mark Lindblad, and Roberto Quercia. 2017. *A Place Called Home*. Oxford University Press: New York, NY.
- Manturuk, Kim, Sarah Riley, and Janneke Ratcliffe. 2012. Perception vs. Reality: The Relationships among Low-income Homeownership, Perceived Financial Stress, and Financial Hardship. *Social Science Research* 41(2): 276-286.
- Quercia, Roberto, Allison Freeman, and Janneke Ratcliffe. 2011. *Regaining the Dream*. The Brookings Institution: Washington, DC.
- Riley, Sarah, Giang Nguyen, and Kim Manturuk. 2014. House Price Dynamics, Unemployment, and the Mobility Decisions of Low-Income Homeowners. *Journal of Housing and the Built Environment*: 1-16.
- Spader, Jonathan and Roberto Quercia. 2008. Mobility and Exit from Homeownership: Implications for Community Reinvestment Lending. *Housing Policy Debate* 19(4): 675-709.
- Spader, Jonathan and Roberto Quercia. 2011. Mortgage Brokers and the Refinancing Transaction: Evidence from CRA Borrowers. *Journal of Real Estate Finance and Economics* 42(2): 181-210.