THE INFLUENCE OF HOMEOWNERSHIP AND MOBILITY ON CIVIC ENGAGEMENT AMONG LOW-TO-MODERATE INCOME HOUSEHOLDS

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ABSTRACT

Jong-Gyu Paik: The Influence of Homeownership and Mobility on Civic Engagement Among Low-to-Moderate Income Households
(Under the direction of Marie O. Weil, DSW)

Homeownership is much more than a financial calculation. It is a socio-psychological phenomenon. Homeownership is also culturally embedded. Homeownership in the United States has historically been viewed as a fundamental aspect of the 'American Dream.' During the last decade studies of homeownership have demonstrated a positive link between homeownership and positive social outcomes including civic participation and volunteering.

This study compared civic engagement outcomes between homeowners and renters in the Community Advantage Panel Survey (CAPS) using data collected in 2004 and repeated in 2007. The study analyzed five dichotomous outcomes of formal participation in organizations and one continuous outcome: volunteering hours. Five variables indicating formal participation included: (1) neighborhood or block associations; (2) other volunteering or charitable groups; (3) (other than attending services) church or religious association; (4) PTA or school related organizations; and (5) participation in any of groups listed above. The remaining dependent variable is volunteering hours which was measured by the total number of hours per month served by all respondents for all organizations.

This study acknowledged bias arising from selection on observables and item-non-response throughout the analyses. To control these biases, this study employed analytical approaches including the treatment effect model, a bivariate probit model and finally the Heckman selection model. Results of this study confirmed that attainment of homeownership

is not possible for everyone. Findings from this study have provided some evidence that low-income homeowners are more likely to be involved in some types of civic engagement than renters. The relationship between homeownership and hours of volunteering was not significant when participation in civic engagement was correctly controlled for. In this study, the homeownership effect was hypothesized to interact with the lower mobility of homeowners after controlling for the endogeneity of homeownership. On the contrary however, the results of multivariate statistical analyses employed in this study showed that measurements of mobility had little effect on civic engagement.

Finally, issues relating to homeownership and civic engagement were discussed. Implications for social work practice and research were further discussed.

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INTRODUCTION

The research in this dissertation continues a long line of practice and research in the area of homeownership and civic engagement, and homeownership effects on positive social outcomes. Specifically, six chapters in this dissertation focus on homeownership and civic engagement -- how homeownership has effects on civic engagements.

Chapter I presents a rationale for studying homeownership and civic engagement.

Chapter II provides a review of theories and perspectives on homeownership and civic engagement.

Chapter III begins with reviews of empirical findings on homeownership and civic engagement. This chapter then presents research questions for the study drawing on relevant theories and empirical findings from selected studies.

Chapter IV illustrates details of the design of the study. The chapter begins with an overview of the Self-Help Community Advantage Home Loan Secondary Program (CAP) and Community Advantage Panel Survey (CAPS) to provide the context of the research. This chapter then presents an overview of research methods employed in the study and details measurement and the data analysis plan. Descriptions of six dependent variables are presented here: (1) participation in neighborhood based groups; (2) participation in other volunteering and charitable groups; (3) participation in religious groups; (4) participation in PTAs; (5) participation in any groups; and (6) a continuous measure of volunteering hours per month.

Chapter V presents results of data analysis on CAPs data collected in 2004 and 2007. This chapter begins with descriptive statistics that provide differences and similarities between homeowners and renters in demographics, socio-economic characteristics as well as association with civic organizations. The chapter then presents the multivariate analyses on six dependent variables. More specifically, results of the five dichotomous participation variables are presented in order using the recursive bivariate probit models. Results of hours of volunteering, a continuous variable in the study, are presented using the treatment regression models and further presented through the full-information maximum likelihood (FIML) of the Heckman selection model. The chapter concludes with a summary of the findings of this research.

Chapter VI provides discussion of this research and implications for social work research and practice.

CHAPTER I: HOMEOWNERSHIP AND CIVIC ENGAGEMENT

Statement of the Issue

The attainment of homeownership has been described as satisfying innate human desire in the Western societies (Hiscock, Kearns, MacIntyre, & Ellaway, 2001; Kearns, Hiscock, Ellaway, & Macintyre, 2000). Becoming a homeowner is regarded to promote more "ontological security" (Beck, Giddens, & Lash, 1994) than being a renter: A homeowner is deemed to have a place of security and autonomy, and a desirable social status. In this sense, homeownership is much more than a financial calculation. It is a socio-psychological phenomenon.

Homeownership is also culturally embedded. Notably, homeownership in the United States also has historically been viewed as a fundamental aspect of the "American Dream." Shiller (2010) pointed out that the "American belief that homeownership encourages pride and good citizenship and, ultimately preservation of liberty is still prevailing" (Shiller, 2010). By and large, encouragement of homeownership is a phenomenon across cultures and nations. In many Asian countries such as Korea and Japan, attaining homeownership is regarded as an individual's responsibility and culturally embedded as a major individual life achievement (Forrest & Lee, 2003; Park, 2007). A comparative study of eight European Union countries also pointed out that encouragement of homeownership appeared to be a policy objective in most countries (Elsinga, Toussaint, & Doling, 2007).

Traditionally homeownership has provided households with new opportunities. When house prices tended to increase in combination with the repayment of mortgages, this enabled homeowners to benefit from increased equity in their homes. Homeowners could utilize increased equity in many ways over the life course including as "opportunities for investment, an alternative savings and pensions and intergeneration transfer" (Horsewood & Neuteboom, 2006b). These options enabled homeowner to offer extra consumption and investment in the economy. In this way, homeownership has been providing a major boost to the general economy.

However, circumstances have changed dramatically for homeownership in recent years. Higher loans could be economically advantageous but this would also increase the probability of negative equity if house prices were to fall. This could lead not only to severe social and financial problems for the individual households but to major problems for financial sector as well. Indeed the risks that "any pitfall in the housing market will spread over to the wider economy is increasing in parallel with the rise of homeownership and mortgage lending" (Doling, Horsewood, Kassanis & Vasilakos, 2006, p. 79). In the United States, vastly increased homeownership with subprime mortgages actually triggered the recent financial crisis and housing remains a drag on economy (Kiviat, 2010). Since mid-2006, housing market problems had spread from mortgage and credit debts to the rest of the economy. Recovery on the housing prices nationwide had yet to emerge. The S&P/Case-Shiller Home Price Index showed steady declines from September 2008 through the end of March 2010 (Joint Center for Housing Studies of Harvard University, 2010).

At the same time, indispensible conditions for homeownership have been much eroded. Nationwide there has been a substantial decrease in income and employment and

these conditions make repaying a mortgage and debts difficult. The risks and insecurities households face are ever greater than before. For example, credit scores for the millions of homeowners those who have already lost their homes to foreclosure due to debts, unemployment or income loss, will take years to fully recover. Their re-entry into housing market will be hampered (Joint Center for Housing Studies of Harvard University, 2010). The current situation makes the odds of becoming homeowners for those who have been historically and structurally marginalized from the homeownership market much smaller. Historically, differential access to homeownership in the United States has meant that Blacks were less able to accumulate wealth than Whites (Oliver & Shapiro, 2006).

The greater regulation and scrutiny have been imposed on housing and mortgage lending industry due to the mortgage market crisis. Becoming a homeowner under these tight measures will be much more difficult for the time being. However, homeownership still represents a critical life stage both symbolically and financially (Rohe, Van Zandt, & McCarthy, 2002b). Therefore, opportunities to secure this "head-start" asset should be inclusive for all people (Shapiro, 2004). A house itself remains the most commonly held asset in the United States; and individual and the social benefits associated with homeownership still need to be investigated further.

During the last decade studies of assets including homeownership have demonstrated a positive link between homeownership and positive social outcomes. In these studies, homeownership generates beneficial outcomes for both households and communities. Suggested outcomes at the household level include: enhanced psychological functioning (Rohe, Quercia, & Van Zandt, 2007), increased participation in civic groups (Rohe & Stegman, 1994; Rossi & Weber, 1996), greater life satisfaction (Rohe & Stegman, 1994) and

child well-being (Haurin, Parcel, & Haurin, 2002) as well as gains in wealth and savings (Grinstein-Weiss et al., 2008). In addition to these individual outcomes, several recent studies have demonstrated that at the community level, homeowners were more likely to participate in voluntary organizations and activities to ameliorate community problems (Dietz & Haurin, 2003; DiPasquale & Glaeser, 1999; Glaeser, Laibson, & Sacerdote, 2002; Rohe & Stewart, 1996).

In a healthy civil society, civic engagement is high and many people participate in community activities such as voting, neighborhood watch and volunteering in civic organizations. Civic engagement is enacted through single or combined social resources such as human and social capital and economic resources (J. Wilson, 2000; J. Wilson & Musick, 1997a, 1998). The well known connection between socioeconomic status and participation in civic life is directly related to levels of individual educational attainment and in part related to family income levels(Cnaan & Cascio, 1999; Piliavin & Charng, 1990; Wandersman, Florin, Friedmann, & Ron, 1987; J. Wilson, 2000). Much of the existing empirical work on this issue focuses specifically on educational attainment rather than wealth and accumulated economic power such as homeownership (Gordon Nembhard & Blasingame, 2006)

As noted above, most of the studies published during the earlier phase of research on volunteerism and civic engagement which focused narrowly on demographics or neglected economic power such as homeownership are outdated both in relation to the limitations of the concepts used and equally importantly with regard to the research methodologies employed. Theoretically at this point, the extent to which homeownership promotes civic engagement and volunteering is not understood clearly, although the empirical evidence for positive homeownership effects is growing.

Are homeowners "better citizens"? Is there an independent effect of homeownership or is the "effect" just mirroring existing differences between homeowners and renters in terms of demographic variables and locations where they choose to live? These concerns naturally give rise to questions regarding the methodologies used in the estimation of the homeownership effect.

With regard to the research methodology in earlier studies, homeownership was not suitably treated (Green & White, 1997; Haurin, et al., 2002). For example, as discussed by Lerman & McKeran (2008), the problem of endogeneity arises when unobserved factors (e.g., financial thriftiness or motivation) are correlated both with the outcome variable (e.g., civic engagement) and with the explanatory variable of interest (e.g., homeownership) (Lerman & McKeran, 2008, pp. 178-179). In many instances high levels of financial thriftiness and high motivation may actually be causing civic engagement, however, the positive correlation between homeownership and civic engagement has been mistaken as indicating a causal role for homeownership. Despite increasing research interest in the potential positive associations between homeownership and various aspects of social well-being and civic engagement, there are still at least two important areas that we know little about. The body of knowledge on asset effects is still in an early stage, especially with regard to effects on low-to-moderate income populations (M. W. Sherraden & McKernan, 2008). More importantly, there has been insufficient research to document consistent homeownership effects.

The aim of this dissertation is to explore the possible effects of homeownership on low-to-moderate income households. This study seeks to contribute to the existing scholarship regarding civic engagement through examining the effects of homeownership and mobility on civic engagement and volunteering activities among members of the sample

population. This study will therefore help to fill the knowledge gap between theoretical arguments and empirical evidence. Previous studies of homeownership effects on social outcomes have found that homeownership has a modest impact on social and political behavior. However, this earlier body of literature reveals only weak conclusions regarding homeownership effects because of the questionable methodology these studies used and because they made no effort to control for endogeneity of homeownership (Dietz & Haurin, 2003; Haurin, Parcel, & Haurin, 2002; Lerman & McKernan, 2008 ; Rohe, Van Zandt, & McCarthy, 2002b). The empirical results of the current study attempt to contribute new knowledge for the on-going debate regarding homeownership effects on positive social outcomes.

Definitions

Civic Engagement

The broad category of civic engagement includes charitable giving; volunteering; membership in community, religious and other civic organizations; and voting, political participation and other such activities encompassed in a healthy civil society (Gordon Nembhard & Chiteji, 2006). In the 20th edition of *The Encyclopedia of Social Work* (Mizrahi & Davis, 2008), Amanda McBride defines "civic engagement" as follows:

> "Civic engagement" is a contemporary term used by a number of scholars, both within and outside of social work, to refer to a broad range of social and political actions. "Civic" pertains to the public arena, connoting public benefit. "Engagement" connotes action, which in this case aims to affect the care or development of others and influence public decision-making and resource distribution. (McBride, 2008)

Further, civic engagement is divided into two aspects based on the areas of action and performance: one area is "social engagement" and the other is the area of "political engagements" (McBride, 2008; McBride, Sherraden, & Pritzker, 2006). Through social

engagement, individuals connect to others in formal and informal ways that relate to and promote individual and social development. Social engagement includes "acting as a member of, donating or contributing to, and volunteering for an individual, group, association, or nonprofit organization" (McBride, 2008). Political engagement includes voting and advocacy at local or national levels. "Civic engagement" as used in this paper refers to the first area of civic engagement, that is: participation or volunteering in groups, associations and/or nonprofit organizations.

Low-to-Moderate Income Households

In the literature relevant for this study (Quercia, McCarthy, & Wachter, 2003; Retsinas & Belsky, 2002; Riley & Ru, 2010a) "low and moderate income" for households is defined as households earning less than 80 percent of the specific metropolitan area median income. For example, the Community Reinvestment Act (CRA) specifies loan eligibility based on the category of "low to moderate income" status as follows: "Non-commercial, residential loans made to families must be made to borrowers who either have household incomes no greater than 80% of the metropolitan area median income or live in census tracts where the census tract median income is no greater than 80% of the metropolitan area median income, in order to qualify under the CRA lending requirement."

CHAPTER II: THEORETICAL AND CONCEPTUAL REVIEW ON HOMEOWNERSHIP AND CIVIC ENGAGMENT

Several theoretical strands relate constructively to the examination of homeownership and civic engagement. The theories and perspectives guiding this study are as follows: (1) the assets for development perspective; (2) life course theory; (3) perspectives on homeownership; and (4) resource perspective on civic engagement.

Assets for Development Perspective

The assets for development perspective, proposed by Michael Sherraden (1991), provides a general framework to examine the effects of homeownership. While the initial focus of this theory centered on the concept of an individual holding/owning a range of different types of assets (Scanlon, 1998), later this framework was further developed and extended to include homeownership as a central variable (Nam, Huang, & Sherraden, 2008). The assets for development perspective perceives assets as a tool for social and economic development accomplished by building capacity through improvement in well-being and increase in life choices (Nam, et al., 2008; M. W. Sherraden, 1991).

"Assets" are the stock of what people posses, while "income" is the flow of resources in a temporal period (M. W. Sherraden, 1991). Assets inequality is much greater than income inequality in the United State (Oliver & Shapiro, 2006). As a complement to income transfer based policy to provide economic support for families in poverty, Sherraden asserts, that asset building approaches focused on expanding human capabilities can increase individuals' opportunities to develop savings and assets (M. W. Sherraden, 1991).

According to Sherraden (1991), assets provide greater economic security for the poor and also have positive effects on the behaviors of the people involved, especially those who had previously been excluded from economic participation because they lacked assets such as savings or ownership of a home. He identifies a set of behaviors that he thinks might result from asset accumulation among low income individuals or families. These include: (1) greater future orientation, (2) stimulus for development of other assets such as human capital, (3) improved household financial stability, (4) greater focus and specialization through specialized education or job training, (5) a foundation for risk-taking, (6) increased personal efficacy such as greater prediction and control of their lives, (7) increased social influence such as recognition by others, (8) increased political participation and (9) enhanced welfare of offspring such as intergeneration transmission of assets (M. W. Sherraden, 1991).

The central concepts of "stakeholding" and "cognitive schemata" are employed in the assets for development perspective to explain the mechanisms that produce positive assets-effects (McBride, 2003; McBride, et al., 2006; Yadama & Sherraden, 1996). Attaining assets gives people a "stake" in society and helps to engender a more positive "cognitive schemata" about their lives. As Sherraden and Midgley (2007) note:

> First, the pathway out of poverty is through savings and accumulation. Reaching important economic development goals almost always requires the prior accumulation of assets. Assets are needed to move to a better neighborhood, to send a child to college, to purchase a home, to start a small business, or to achieve other economic goals. Second, when people begin to accumulate assets, their thinking and behavior changes as well. Accumulating assets leads to important psychological and social effects that are not achieved in the same degree by receiving and spending an equivalent amount of regular income. (pp. 80-81)

The notion of "stakeholding" has been acknowledged by political philosophers as an "emancipation strategy" giving each person the material independence necessary to achieve

freedom from interference (Maxwell & Sodha, 2006; McKernan & Sherraden, 2008; M. W. Sherraden, 1991; M. W. Sherraden & Midgley, 2007). For low-income households, economic insecurity causes greater risks and negative consequences. Asset ownership is thought to increase the economic security of individuals, and thereby allow people to take productive risks in other area of their lives (Maxwell & Sodha, 2006). Second, attainment of assets is intended to change the "cognitive schemata" of people. "Cognitive schemata" is defined as "cognitive structures or general expectation about the way the world function" (M.W.Sherraden, 1991, p. 154). Put simply, "cognitive schemata" is the person's understanding of the social world. People without assets and those who in poverty tend to develop a set of cognitive schemata that recognize only limited opportunities. Sherraden reasoned that assets would alter their cognitive schemata, providing them with a more positive world view that could incorporate the importance of asset accumulation.(M. W. Sherraden, 1991; Yadama & Sherraden, 1996).

The assets for development theory proposes that asset accumulation alters peoples' thinking and behavior in a number of ways resulting in an increased sense of personal efficacy and hope for the future. Asset accumulation creates greater economic stability, encourages greater community involvement and political participation and importantly for wealth creation, it enhances intergenerational welfare (M. S. Sherraden, Sanders, & Sherraden, 2004; M. W. Sherraden, 1991). Thus Sherraden and his colleagues argue, the assets for development perspective suggests a different approach to the world that may result in a "virtuous cycle" for low-income individuals and families in which asset accumulation and positive behaviors reinforce one another.

In addition to describing the theory related to the assets for development perspective Sherraden has also challenged the prevailing view that welfare should be measured predominantly in terms of the income of the household (McKernan & Sherraden, 2008). Naturally, this raised questions on the possible role of assets and their effect on the well-being of people. Consequently, the assets for development perspective is now reflected in a growing literature on "welfare dynamics" related to lack of assets that stresses the negative effects of "asset poverty" and living on "welfare" as a life course process (Bynner, 2001; Hirschl & Rank, 2006; Leisering & Leibfried, 1999; W. Paxton, 2001; Rank, 2008; Rank & Hirschl, 1999).

Life Course Perspective

More than one hundred years ago, Benjamin Seebom Rowntree (1871-1954), the founding father of the life course approach, identified and described the life cycle of needs and resources in relation to poverty (Rowntree, 1901). In his study of poverty in York, a city in Northern England, he discovered that workers typically were not poor throughout their whole lives but only during certain stages, for example, when they had dependent children or when their earnings were limited due to aging. Now building on Rowntree's work and subsequent developments in the life course perspective, "poverty is not a fixed condition or a personal or group characteristic but rather it is an experience or a stage in the life course" (Leisering & Leibfried, 1999, p. 239).

Analogous to Rowntree's nineteenth-century analysis, in modern post-industrial or industrial societies, poverty occurs commonly at certain junctures in people's lives. In his book, *Risk Society* (1992), Ulrich Beck emphasizes the concept of the "democratization" of both poverty and unemployment in order to point out that in advanced modern societies ever

larger sections of the population share the risks of experiencing poverty and unemployment. Consequently, one of the main issues faced in current social policy is whether or not to insure against the economic "risks" people face over the course of their lives (Voyer, 2004). In Voyer's view, social policies should help protect against "social risks" as well as insecurities in order to help people exercise greater control over their lives. Voyer's argument (2004) emphasizes areas of risk such as "exclusion from an adequate level of goods and services (e.g., income disparities), exclusion from adequate and affordable housing and exclusion from the community (e.g., support from the voluntary sector)" (p. 27).

The terms "temporalization" and "democratization" indicate that experiences of poverty occur in many temporal forms and that current risks of being impoverished are more diversely distributed among people than earlier assumed (Beck, 1992; Leisering & Leibfried, 1999). For example, the risk of poverty is higher for families in lower social and economic status; but currently poverty also looms as a permanent risk facing middle-class families (Leisering & Leibfried, 1999). Temporal spans of poverty can occur in short, medium or long term periods or in single or repeated "spells" of poverty related to different life course stages.

This mechanism is comparable with what is known as the "life stage principle" enunciated by Elder (1978). More recently, Dewilde (2003) argues that "social changes or historical events have a different impact on the life course of divergent social groups and the impact on the subsequent life course will be strongest for those individuals who find themselves in a vulnerable and dependent situation during the process of social change" (p. 117).

Recently, the life course perspective has been directly extended to apply to the framework of asset accumulation – including both assets and homeownership. Rank and his

colleague Hirschl (Hirschl & Rank, 2006; Rank, 2008; Rank & Hirschl, 1999) explicitly linked the study of asset building to a life course perspective. Rank (2008) reasoned that "asset accumulation unfolds over a period of years and decades within an individual's life time, and the effects of such accumulation can best be understood within the context of the entire life course" (p. 81).

In current literature that combines asset development and life course perspectives (Rank, 2008; Rank & Hirschl, 1999), several additional factors are noted. In this framework, race and ethnicity still are critical elements in individuals' possibilities of accumulating assets during their life course. A stable income across adulthood is an important factor in the building of assets (Rank, 2008). Unprecedented demographic changes which affect household formation are underway in contemporary societies. First, there is "individualization" which represents the rise of the single person household. Second, at the same time, there is a rise in the dissolution of households through marriage disruption. European scholars Horsewood and Neutebom (2006b) argue that in several European nations the increase in divorces and other marriage disruptions has affected the terms of mortgages. They hold it is not easy to consider granting mortgage terms longer than the average length of marriages in the European Union countries they studied (Horsewood & Neuteboom, 2006a). Moreover, parents who have more resources and opportunities are able to transfer these resources and opportunities to their children—building wealth through intergenerational transmission of assets. This transmission of resources and opportunities in turn positively affects children's future life chances and outcomes, including their accumulation of assets (Rank, 2008).

Additionally, the specific timing of life events at particular points in the life course (e.g., early child bearing, unemployment, divorce, etc.) can have later effects on asset accumulation. The "timing of life events" has much to do with the "principle of linked lives." As Elder (1999) has stated: "lives are lived interdependently and social-historical influences are expressed through the network of shared relationship" (1999, p. 11). In order to understand the inability to accumulate assets over the life course, several factors in combination are critical. These factors include a shortage of parental resources resulting in small or no intergenerational transmission of assets, being nonwhite and its cumulative effects of disadvantage over time, family disruptions, and ill-timed life events (Rank, 2008).

Perspectives on Homeownership

Not everybody can accomplish a dream of homeownership and not everybody wants to become homeowners. In this sense, discussion on the benefits of homeownership must not stigmatize renters (Maxwell & Sodha, 2006). Many people in the United States may never become homeowners, and probably lack the necessary finances to try. For some, it will not be in their interests to become homeowners, especially given the risks that homeownership can bring.

According to Vale (2007), unfortunately there is a disturbing legacy that remains from the earliest ideologically grounded efforts to promote homeownership. He further describes this problematic holdover from Social Darwinism as follows: "homeownership truly is much more than a financial calculation. Yet as citizens and as housing policy makers we still suffer from a lingering fantasy: a belief that the only thing thwarting the United States from becoming 100 percent homeowners inheres in the character flaws and lack of responsibility of our lowest income households" (p. 40).

Homeownership in the United States has historically been viewed as a fundamental piece of the "American Dream," with around 70 percent of households owning their homes as of 2006. Yet it has also been demonstrated that nonwhites are less likely to own a home and that when they do, the value of their homes is much less than that for whites, even when social class is taken into account (Hirschl & Rank, 2006). Oliver & Shapiro (1995) have shown how differential access to homeownership in the United States has meant that Blacks were less able to accumulate wealth than Whites. Homeownership rates further differ by subgroups of populations such as household type,and income level. While minority homeownership has been increasing faster than the rate for Whites, the overall level of minority homeownership is still well below the rate for Whites. For example, in 2007 the homeownership rate for Whites was 75 percent, whereas homeownership rates for Blacks and Hispanics were below 50 percent (Joint Center for Housing Studies of Harvard University, 2008). In addition, recent problems in the housing market have added additional complexity and challenges in maintaining stable homeownership. In fact, there are sometimes unrecognized subsequent costs relating to homeownership.

According to the report on the state of the nation's housing in 2008 (Joint Center for Housing Studies of Harvard University, 2008), by early 2008, housing market problems had spread from mortgage and credit debts to the rest of the economy. In 2007, mortgage origination plunged as house prices fell and credit standards tightened. Overall mortgage performance in general has been slipping since mid-2006, and delinquencies within the subprime market are particularly high. With borrowers defaulting in record numbers and lenders unable or unwilling to restructure the loans, the number and share of the homes entering foreclosure have recently skyrocketed to their highest levels since 1974. The number

of loans in foreclosure more than doubled from an average of 455,000 annually in 2002-2006 to nearly 940,000 in the fourth quarter in 2007 (Joint Center for Housing Studies of Harvard University, 2008). For households, the consequences of foreclosure go beyond wiping out equity and even losing homes. The implications for their credit scores and long-term financial well-being can be disastrous. Moreover, many Americans have already been struggling to secure decent and affordable housing. In 2007, 68 percent of all Americans owned homes. Overall in 2006, 8.8 million households or 11 percent of all homeowners were severely cost burdened (that is, they spent more than 50 percent of their income on housing) and another 13 million or 18 percent of all homeowners were moderately cost burdened (spending 30 to 50 percent of their income on housing) (Joint Center for Housing Studies of Harvard University, 2008). Such concerns and increasing costs of homeownership may require tight scrutiny. However, a home itself still remains the most commonly held asset in the United States, and individual and social benefits associated with homeownership still need to investigated further (Lerman & McKernan, 2008).

As seen in the assets for development approach, this working theory on homeownership postulates that there are shared aspects relating greater financial security to people's sense of control of their own lives and to positive cognitive changes occurring as a result of homeownership. However, the responsibilities of homeownership are qualitatively different from the responsibilities related to other types of assets such as savings or car ownership. What may initiate the expected cognitive change is the mental adjustment of seeing oneself as a homeowner or taking on the extra responsibilities that come with homeownership (Maxwell & Sodha, 2006). Homeownership is regarded as "a rite of passage symbolizing the achievement of certain economic status (Rohe, 2002, p. 55)." In addition,

homeownership is qualified as the "head-start" asset, which is defined as the financial ability to purchase a home (Shapiro, 2004). Thus homeownership represents a critical life stage both symbolically and financially.

There are two distinctive characteristics associated with homeownership (Dietz & Haurin, 2003). The first attribute is the set of property rights associated with ownership. The purchase of a home also constitutes a considerable portion of an average household's wealth. Secondly, homeownership differs fundamentally from renting in terms of the high transaction costs associated with homeownership. Since transaction costs are greater for homeownership, households with short expected lengths of stay in a community are assumed to be renters. One clear consequence of this choice is that owners are likely to be less mobile than renters (Blum & Kingston, 1984; Dietz & Haurin, 2003; Rohe, et al., 2002b).

Rohe and Stewart (1996) also suggested two similar mechanisms. The first mechanism is related to human capital. Homeowners are generally found to have higher incomes, to be older and more educated, and therefore are expected stay longer in their current housing. The second mechanism is related to homeowners' interests in maintaining their property values. The combination of these two factors "provides powerful incentives for owner-occupants to maintain their properties at a higher standard and to join organizations that protect the collective interests of homeowners in the area" (Rohe & Stewart, 1996, p. 71).

In sum, homeowners' financial investments in their properties are illiquid and not easily extracted compared to other types of assets such as savings; therefore homeowners are likely to be more active in maintaining or seeking to improve the quality of their neighborhoods, not just their own houses (Harkness & Newman, 2002).

Resource Perspective on Civic Engagement

Participation in voluntary organizations is a productive activity that requires both individual and social resources (Cnaan & Cascio, 1999; J. Wilson, 2000; J. Wilson & Musick, 1997b, 1998). According to Wilson & Musick (1997a), entry into the volunteer sector requires three different kinds of resources – human, social, and cultural capital.

Human capital assets—individual attributes such as level of education, income, and occupation—assume a specific significance, rendering a person greater prestige and respect (J. Wilson, 2000). The dominant approach to analyzing status argues that people with demographic characteristics perceived by society as more desirable will rise to leadership positions and will tend to volunteer more frequently and more intensely than those whose demographic characteristics are perceived as less desired (Cnaan & Cascio, 1999). Individual decisions on engaging in volunteer work are also based on an individual's rational balancing of the costs and benefits of such participation. The personal investment approach also postulates that individuals who own property (home or business), who are married or partnered, who have children growing up in the community, and who do not plan to relocate are more interested in the quality of life of their community and thus are more willing to volunteer since they view the potential rewards as compensating for the costs of volunteering (Wandersman, Florin & Meier, 1987). Thus, both approaches indicate that those who are more educated, those with higher incomes, and those in more prestigious occupations will be more committed and perform better as volunteers.

The availability of extensive social networks, multiple social organizational memberships and intra-familial relationships also increase the chances of volunteering (E. Brown & Ferris, 2007; Tang, 2006; J. Wilson, 2000; J. Wilson & Musick, 1997a, 1998). Volunteering involves collective action for community improvement (J. Wilson & Musick,

1997b). Increased social capital therefore creates mutual obligations, provides supports and supplies information through social networks and organizational memberships. In addition, individual efforts to achieve collective goods are mobilized and linked through social capital and networks (J. Wilson & Musick, 1998).

At the cultural level, "capital" consists of attitudes, knowledge, and preferences (Bourdieu, 1986). Culture is not a part of nature; rather, it is constructed by humans and acquired/transmitted through human interaction. Like other forms of capital, it is invested to produce profits. Bourdieu (1986) contends that different types of capital can be distinguished according to how easily they are transmitted. Economic capital is immediately and directly convertible and can be institutionalized in the form of property rights. Social capital is convertible into economic capital and may even be institutionalized, for example in the form of a title of nobility; and cultural capital is convertible into economic capital and may be institutionalized in the form of educational qualifications (Bourdieu, 1986). Wilson and Musick (1997) extended Bourdieu's notion of cultural capital (1986) in relation to research on volunteering. They pointed out that churches are examples of cultural capital because churches have historical roots in promoting a culture of community and goodwill. They discussed "religiosity" as one indicator of institutionalized cultural capital promoting volunteering (J. Wilson & Musick, 1997a). Cultural capital generates "social profits" in the form of "symbolic profits" (Bourdieu, 1986). For example, volunteering at a homeless shelter in a community has both real and symbolic profits – homeless people get help and a volunteer may develop a good reputation and life satisfaction.

Different forms of capital as resources available to individuals can be correlated and transmitted (Bourdieu, 1986; J. Wilson, 2000; J. Wilson & Musick, 1997a, 1998). For

example, the relationship between social resources and human capital is high. The effects of social resources are reported as stronger among high-status people (J. Wilson & Musick, 1998). The effects of cultural capital on civic engagement and volunteering vary by demographic characteristics. Particularly among African-Americans, civic engagement has been high through church participation. African-American faith-based-organizations (FBOs) have historically placed a strong emphasis on the association between religious commitment and social action (Farmer, 2006), and civic engagement has been traditionally inspired among African Americans by religious devotion and the need for group survival (Carlton-LaNey, 2006). In turn, this cultural capital generates embedded social ties that are integrated within a community (Woolcock, 1998). The effects of social resources also correlate strongly with possession of economic resources, such as homeownership (Glaeser, et al., 2002). Homeowners are more socially involved. As a result of these advantages of resources, homeowners are more likely to participate in non-professional (voluntary) organizations and in projects to solve community problems (DiPasquale & Glaeser, 1999).

The conceptualization of local opportunity structures (Galster & Killen, 1995; Retsinas & Belsky, 2002) explains the mechanisms through which homeownership affects volunteering in relation to the opportunity structure of the area. For example, people living in areas with higher homeownership rates are more likely to hear about local opportunities and they are more likely to receive positive assessments of the rewards associated with those opportunities (Galster & Killen, 1995; Retsinas & Belsky, 2002). Homeownership in turn influences the local opportunity structure. Homeowners' decreased mobility creates incentives to invest in particular forms of social capital such as neighborhood watch

programs or civic associations that increase the value of local properties (DiPasquale & Glaeser, 1999; Glaeser, et al., 2002).

Summary of the Chapter

The assets for development perspective introduces two pathways by which assets influence the social and economic development of people. First, assets provide greater economic security through savings and accumulation. Assets provide people with improved life choices such as moving to better neighborhoods, sending children to college, or purchasing a home. Second, through increased life choices, assets have further influence and can open ways to connect people (1) to larger systems in the community, (2) to political participation, and (3) to increased intergenerational well-being in the future (M. W. Sherraden, 1991).The assets for development perspective also posits that increased assets ownership is associated with positive social outcomes, but is not clear about what forms of asset building are most highly related to positive social outcomes (McBride, 2003; McBride, et al., 2006).

The life course perspective holds that specific events affect the accumulation or non-accumulation of assets and that this process is influenced by diverse factors which include (on the negative side) a shortage of parental resources resulting in little intergenerational transmission of assets. Being nonwhite and the cumulative effects of racism over time, being a single parent, or family disruptions can also negatively affect efforts to accumulate assets. In general, the life course perspective illustrates that the intersection of certain stages of the life cycle (those that carry greater risk of economic insecurity) with specific problematic life events, can alter the trajectory of the life course and undermine efforts to accumulate assets (Rank, 2008). Parental homeownership clearly affects the tenure choices of the next

generation and children of homeowners are more likely to become homeowners themselves (Boehm & Schlottmann, 1999; Cohen, Lindblad, Paik, & Quercia, 2009). Such intergenerational support for accumulating assets and owning a home is however, affected by other variables. For example, the opportunities to accumulate assets and own a home are lower for nonwhites than for Whites (Oliver & Shapiro, 2006). In addition, circumstances such as a poor credit history combined with unemployment or underemployment and educational disparities frequently place limitations on minority and low-income households that seek access to homeownership (Collins, 2007). And as Reid (2004) has documented, for low-income and minority families, the financial returns of homeownership are far less than for middle- and upper-income Whites.

The working theory of homeownership shares aspects with the assets for development perspective; both approaches relate greater financial security to positive changes occurring as a result of homeownership. However, the responsibilities of homeownership are different from the responsibilities related to holding other types assets such as savings or car ownership (Maxwell & Sodha, 2006). The first attribute connected with homeownership is a set of the property rights directly associated with ownership. The human capital of homeowners' in combination with their interests in maintaining their property value provide incentives for owners to maintain their properties at a higher standard and to join groups such as neighborhood organizations and neighborhood watch programs. A second attribute directly related to homeownership is that the higher transaction costs involved in home purchase prevent homeowners from moving frequently. Financial investments in their properties are not easily extracted compared to other types of assets so homeowners are more likely to stay in one place compared to renters (Dietz & Haurin, 2003; Rohe & Stewart, 1996;

Rohe, et al., 2002b). Since homeowners move less frequently than renters they have longer residency in their neighborhoods which can also contribute to increased social capital (U.S. Census Bureau, 2004). Their place attachment is high compared to renters which may relate to both longer tenure and greater investment (B. Brown, Perkins, & Brown, 2003). The combined and measurable effects of homeownership therefore indirectly work to create a stronger and longer connection with the geographic area in which homeowners live (DiPasquale & Glaeser, 1999).

The resource perspective documents that civic engagement requires multiple kinds of resources including human, social and cultural capital. These resources are correlated and transmittable. The relationship between social resources and human capital is high (J. Wilson, 2000). Social resources also correlate strongly with possession of economic resources such as owning a home (Glaeser, et al., 2002). As a result of advantages provided by these resources, home owners are thought to participate more in voluntary organizations and volunteering activities. The well known connection between socioeconomic status and participation in civic life is directly related to levels of individual educational attainment and in part related to family income level (J. Wilson, 2000). However, much of the existing empirical work related to civic engagement focuses on educational attainment rather than assets or homeownership (Gordon Nembhard & Blasingame, 2006). Further investigation of the multiple connections among civic engagement, homeownership, and asset development is needed.

The next chapter presents a review of empirical literature on homeownership and civic engagement.

CHAPTER III: EMPIRICAL FINDINGS ON HOMEOWNERSHIP AND CIVIC ENGAGEMENT

Factors Associated with Homeownership

Low-income and minority households may be hampered from buying a home by several factors. Frequently cited constraints are low and unstable incomes, inadequate savings, low wealth, weak credit history, inadequate information, discrimination, and restrictions in mortgage terms (Glaster & Santiago, 2008). The relationships between homeownership and income and education interact with age patterns of homeownership. For example, in 2004, only 42 percent of families headed by persons under age 35 owned homes, compared to 79 percent of families headed by persons between the ages of 55 and 64. Homeownership rates for Hispanics are below average. Only about 51 percent of families headed by Hispanics own a home, compared with 76 percent of Whites. Several factors other than race explain this differential such as level of income, educational achievement, and status as single parent households (Carasso, Bell, & Olsen, 2005; Carasso & McKernan, 2008). Frequently renters seeking to become homebuyers lack sufficient income to afford the monthly payments, interest rates, taxes, home insurance, and maintenance costs on homes that are affordable and available.

In addition, lack of savings for a home down payment and the expense of closing costs present barriers to homeownership. A poor credit history, which either prevents approval for a mortgage loan or results in a high interest rate if a loan is approved, also serves to limit access to homeownership. Combined with employment and educational

disparities, these factors place additional limitations on minority and low-income households in accessing homeownership (Collins, 2007).

Haurin and his colleagues (1997) discuss the importance of steady income as well as the higher costs of owning a home in comparison to renting. A steady income is important because both tenure choice and taking on the expenses associated with purchasing a home constitute considerable risk and represent major, long-term decisions. Consequently liquid assets are important factors in having a tenure choice because lenders typically require initial equity contributions from borrowers in the form of down-payments on homes (Haurin, et al., 1997).

Another factor related to racial discrimination and segregation is especially important for minority populations. Collins (2007) described the historical legacy of racial discrimination and emphasized that the history of segregation—particularly long established patterns of housing segregation have excluded minority and low income families from owning homes and building home equity which can be passed on to successive generations (Collins, 2007). In this regard, Rohe and Watson (2007b) argue that one of the significant developments in public policy supporting homeownership came not in the form of federal programs but in legislation to regulate the behavior of mortgage lenders – and prevent the practice of "redlining" (Rohe & Watson, 2007). Congress passed the Home Mortgage Disclosure Act in 1975. This act for the first time required major lenders to report on the characteristics and locations of mortgage applications and whether those applications were approved or denied. Upon analysis, data from this required reporting raised serious questions about discrimination in mortgage lending. Findings from these mandated reports have been used to force mortgage lenders and bankers to expand the scope and eliminate racial

discrimination in their lending practices (Rohe & Watson, 2007). In 1977 Congress passed a major piece of housing legislation, the Community Reinvestment Act (CRA), to put additional pressure on lending institutions to issue loans to qualified applicants of all races and in all neighborhoods. The CRA made it clear that lenders had an affirmative responsibility to provide mortgage loans in all parts of their service area. CRA stipulates that the community lending record of financial institutions will be examined in relation to applications for mergers and new branch openings. In addition, during these mandatory reviews, community advocates have an opportunity to comment on the lending practices of the institutions involved (Rohe & Watson, 2007)

However, as Oliver and Shapiro (2006) pointed out in their tenth anniversary edition of Black Wealth/White Wealth, disparities in wealth and homeownership still prevail. They reported that the median net worth of all American families increased by 39 percent and median net financial assets grew by 60 percent between 1995 and 2001. However, by 2001, the richest 5 percent of American households possessed over 67 percent of the country's financial wealth. Whereas the bottom 60 percent had only 8.8 percent and the bottom 40 percent held just 1 percent of the country's financial wealth (Oliver & Shapiro, 2006). They also emphasized the importance of affordable housing especially for minority populations. The rationale they provided was that homeownership is critical for minority populations because homeowners are more likely to become stakeholders in communities, through involvement in schools, local politics and civic engagement (Oliver & Shapiro, 2006). They argued that affordable housing programs should aim to bring homeownership opportunities to low-income families and communities previously excluded because of bad credit, lack of knowledge and information, or the high costs of available housing (Oliver & Shapiro, 2006).

Geographic location is also a factor in understanding low-income homeownership. Using the Home Mortgage Disclosure Act (HMDA) data, Stuart (2000) examined the characteristics of neighborhoods where low-income and minority homebuyers were purchasing homes. He found that while low-income buyers were distributed across communities of all income levels, they were more likely to purchase in low-income communities (60 percent) than middle-income (47 percent) or higher-income (34 percent) communities. Belsky and Duba (2002) also used HMDA data for the period 1993 to 1999 to examine home purchase activity by low-income and minority households in nine metropolitan areas. They found that frequently, large numbers of low-income and minority home buyers were found in the suburban areas and one of reasons was that the number of loans available to central cities decreased over that period (Belsky & Duda, 2002)

Olsen (2007) argues that many low-income families could benefit from the same type of homeownership incentives available to middle- and upper-income families. Under current policy, low-income housing subsidies (such as Section 8 and affordable apartments) provide a financial disincentive for many low-income families to own a home because moving from renting to homeownership would cause them to lose their rental housing subsidies (Olsen, 2007). In addition, most subsidies for homeownership go to higher-income families in the form of tax savings, whereas most low-income families cannot take advantage of these tax savings subsidies because they pay little or no income tax (Carasso, et al., 2005; Carasso & McKernan, 2008).

Intergenerational Transmission of Homeownership

It has been well documented that parental economic resources consistently predict children's adult economic attainment (Corcoran, 1995). A study by Boehm and Schlottmann

(1999) raised broader questions about the nature of intergenerational effects of homeownership. Using the Panel Study of Income Dynamics, they explored the impact of parental homeownership on "children's productivity" measured by educational attainment and their tenure choices as adults after they leave their parent's home. The sample they used from the PSID between 1968 and 1992 focused on children who left their parents' households between 1975 and 1982. The reported size for the "children's" tenure choice sample was 779. Even after controlling for other factors affecting the tenure choice of the "children," Boehm and Schlottmann (1999) found that the housing tenure of parents plays a primary role in determining whether or not the "child" becomes a homeowner. Their research demonstrated that individuals with higher wealth and income, and/or larger families are significantly more likely to own. The likelihood of ownership for single female heads of households and nonwhites was low. In addition, homeowners were found more in the southeastern region of the United States. In general the size of the city (small city vs. metropolitan) was negatively related to the likelihood of homeownership. That is, the smaller the city the greater the chance of homeownership. The magnitude of the impact of parental homeownership on the "child's" future tenure was relatively large. The odds of parental homeownership were associated with a 59 percent point increase in the likelihood of homeownership by the "children" (Boehm & Schlottmann, 1999) illustrating how significantly parental homeownership contributes to the future success of children. Similarly, Cohen and her colleagues (2009) also suggested that parents' homeownership status had an intergenerational effect on their children's aspirations to become homeowners. At the same time, parental homeownership status may have immediate benefits to children as the literature on benefits of homeownership indicates. Parental homeownership status is

positively related to child educational achievement (Haurin, et al., 2002), educational success (Harkness & Newman, 2003), lack of behavioral problems and positive social development, and social environment (Dietz & Haurin, 2003; Harkness & Newman, 2003). These studies focused more on children's academic success and positive behaviors and did not directly measure intergenerational transmission of homeownership status. However the results are still informative. For example, children of homeowners appear to successfully complete higher levels of education; and increased education is associated with higher earnings in later life. These positive factors relate back to the savings behavior of the parental generation and their own transition to homeownership.

Mobility of Owners and Renters

Homeowners tend to move less often and stay longer in their neighborhood than renters. In their 2002 study, Rohe, Van Zendt and McCarthy (2002) found that homeowners were far less likely to move than renters. They reported that more than 70 percent of homeowners had lived in their current residence for more than an average of 8.2 years, while more than 70 percent of renters had live in their current residence for less than 4 years, with an average of 2.1 years. In a study examining attachment to the home and block/neighborhood for over 600 residents of a neighborhood, homeowners were found to be high in their place attachment (B. Brown, et al., 2003).

Homeowners move less frequently than renters and thus stay in the same neighborhood for a longer period. A national report from the Census Bureau (U.S. Census Bureau, 2004) showed that 7.4 percent of owners moved between 2002 to 2003 whereas nearly 30 percent of renters changed residential location during the same period. The main reasons for the higher rate of moves for renters were related to the findings that renters were

younger; looking for the ideal job; or not yet married. The percentage of people changing residence among those less than 24 years old was around 30 percent and the mover rate dropped below 10 percent among those 50 years old or more. Marital status was also related to the mover rate. The mover rate for people who were married or partnered was half that of households living in other arrangements. After controlling for covariates such as age, race, education, and immigration status, the odds of moving for renters were far greater (almost 3.9 times) than those of owners (U.S. Census Bureau, 2004). For the majority of people (51 percent), the main reasons for moving were housing related—that is, they wanted to own their own home, wanted a newer/better house or apartment, needed affordable housing and/or other housing related issues. Housing-related issues were followed by family-related reasons and work-related reasons for moving. Those who moved longer distances (e.g., 500 miles or more) were more likely to move for work-related reasons and they were also found to be more highly educated (U.S. Census Bureau, 2004). In sum, homeowners overall were less likely to move when controlling for other individual characteristics than renters. The types and distances of moving were varied by individual characteristics and their reasons for moving.

DiPasquale and Glaeser (1999) used length of residency as a means of testing whether the effects of homeownership work primarily through the independent effect of homeownership or through a longer connection with the areas in which homeowners live. The four length of residency categories included residency in a particular house (1) less than one year, (2) one to three years, (3) four to nine years, and (4) more than ten years. The reference category was having lived in the community without moving. They found that homeowners were much less mobile. For example, 41 percent of renters had lived in their

communities for three years or less, while 16 percent of owners had lived in their communities for three years or less. The homeownership variable was still significant but the magnitude decreased, when they controlled for individual measurement of length of residency in the model. Specifically, the effect of homeownership on the number of voluntary organizations people were involved in decreased by 90 percent after controlling for individual mobility. Aaronson (2000) also reported that a positive effect of homeownership was mediated by mobility. In his research, a positive effect of homeownership on the likelihood of graduating from high school decreased by half when he controlled for the previous moving history of individuals. Harkness and Newman (2002, 2003) also showed that most of the homeownership effect was explained by the residential stability associated with homeownership. In their analysis, residential stability was measured as the percentage of families living in the same housing unit for five or more years within a census tract or a zip code level.

However, homeowners' longer residency in one place is not always beneficial to individuals. Oswald (1997), for example, specifically suggested that owners' financial investments in their homes impeded their mobility and this might be detrimental to some owners. An unemployed homeowner, for example, might have impediments to changing labor markets easily so that their searches for new jobs might be constrained. However, Oswald's conclusion has limited application because the analysis he used in this aspect of his study was a simple regression model between the homeownership rate and the unemployment rate in 1960 across 12 countries.

In the homeownership literature, length of residence is sometimes referred to as "individual investment in community." Regardless of whether this factor is measured at the

individual level (e.g., an individual's length of time in one place) or at the neighborhood level (e.g., percentage of families living in the same housing unit for five or more years within a census tract), the measurement is not an aggregated measurement, which is an important distinction in the literature on contextual effects. For example, Sampson (1991) argued that micro-level and macro-level dimensions of community life should be integrated. A key variable of his model was the aggregated measurement of length of residence to represent stability within a neighborhood. He argued that residents of stable neighborhoods have more opportunities and participate more in local affairs regardless of their individual length of residence (Sampson, 1991; Sampson, Raudenbush, & Felton, 1997).

Civic Engagement

Trends in Civic Engagement

Civic engagement is believed to be essential for community prosperity and is an important indicator of individuals' sense of belonging and connection to social institutions and groups. Those connections give individuals the capabilities to improve the quality of their lives and to fend off poverty and social exclusion (Granovetter, 1973). Through the examination of civic traditions in modern Italy, Putnam and his colleagues (1993) regarded networks of civic engagement to be at the very core of their concept of social capital. Secondary associations such as church groups, labor unions, school groups and fraternal organizations were viewed as especially important manifestations of community interaction (Putnam, Leonardi, & Nanetti, 1993). Putnam (1995) also documented a general decline in civic engagement since the 1960s that has transformed the United States into a nation of increasingly solitary and mutually mistrustful citizens. Later, Putnam (2000) found evidence of a decline in social capital using a wide array of measurements including volunteering,

voting, trust, and memberships in organizations. He documented an increase in volunteering since the mid-1970s but it was accompanied by a decline of participation in community organizations. Crenson and Ginsberg (2006) described this change with the phrase: "altruism itself has been privatized" (2006, p. 219).

Paxton (P. Paxton, 1999) using the General Social Survey (GSS) and a factor analysis model found no evidence of a decline in association, measured by group membership and evenings spent with friends or neighbors, moreover, she did not find evidence of a decline in trust. Costa and Kahn (2003b) reported the probability of volunteering fell by 5 percentage points between 1974 and 1989. The decline in volunteering was larger among women especially among married women. The decline in volunteering among women was attributed to their increased participation in the labor force. They also reported that sharp decline in membership in civic organizations in the 1980s relative to 1970s coincided with an increase in metropolitan wage inequality, an increased number of immigrants and an increased racial heterogeneity (Costa & Kahn, 2003a).

Trends in Volunteering

In Western countries, the percentage of individuals older than 18 years of age engaged in formal volunteer activities ranges from 27 percent in Canada, and 32 percent in Australia, to 34 percent in Germany and 44 percent in the United States (Penner, 2004). An economic analysis of volunteering in the United States provides us with additional indications of its scope and impact. The Independent Sector (2002) estimated that Americans spent 19 billion hours per year volunteering and put the value of these efforts at $226 billion. This represents about 2.5 percent of the United States Gross Domestic Product (GDP) and is greater than the GDP of 85 percent of the countries in the world (Penner, 2004).

In their annual report for 2007, the Bureau of Labor Statistics documented that , about 26 percent of the U.S population, or 60 million people over the age of 16 in the United States had volunteered during 2007[1] (Bureau of Labor Statistics, 2008). The reported statistics indicated the following demographic findings in terms of volunteering among demographic groups:

- Age: People between the ages of 35 to 54 are the most likely to volunteer compared to age groups of 16-24, 25-34, 55-64, and 65 years and older.
- Race: Whites volunteered at a higher rate (27 percent) than Blacks (18 percent) or Hispanics (14 percent).
- Marital Status: Married people volunteered at a higher rate (32 percent) than never married (19 percent).
- Parents: Parents with children under age 18 were substantially more likely to volunteer (37 percent) compared those without children of that age (23 percent)
- Education: Individuals with higher education volunteered at higher rates. For example, more than 40 percent of college graduates volunteered compared with less than 20 percent of high school graduates and around 10 percent of those with less than a high school diploma.

In addition to these basic demographics, the study reported that most volunteers were involved in either one (68 percent) or two organizations (20 percent). Religious organizations were most frequently reported (36 percent), followed by educational service related organizations (26 percent) and social or community service organizations (13 percent) Finally, volunteers spent a median of 52 hours on volunteering activities per year during

[1] The data on volunteering is collected through a supplement to the September Current Population Survey (CPS) ever year.

2007. Volunteer hours ranged from a low of 36 hours for those aged 25 to 34 years to a high of 96 hours for those who were 65 or more years of age (Bureau of Labor Statistics, 2008).

Volunteering differs to some extent by race and ethnicity. However, according to Fischer and Schaffer (1993), the volunteer activities of most members of minority populations in the United States are strongly based on informal helping. When the definition of volunteering includes both formal and informal activities, the proportion of minority population volunteers is assumed to be greater.

Types of Organizations

The relationship between homeownership and participation in voluntary organizations overall indicates that homeowners are more likely to join and participate in local voluntary organizations, such as neighborhood associations or parent-teacher associations than are renters, and to participate in local political affairs such as voting in elections (Rohe, et al., 2007; Rohe, et al., 2002b) Research on homeownership effects does not explicitly make a distinction between types of civic organizations within communities. However, the distinctions are conceptually important.

According to Brisson and Usher (2007), there is a distinction between place-based communities and interest-based communities. For example, a neighborhood association would be an example of an organization in a place-based community as would a local church community. A Parent Teacher Association (PTA) would, however, be an example of an interest-based community organization. Even after making this distinction, there still remain overlaps between place-based and interest-based community groups such as neighborhood watch groups—which serve a neighborhood and an interest in increased security (Brisson & Usher, 2007b). Similarly as Glanville (2004) has pointed out, members of the voluntary

organizations located within a neighborhood share some similar characteristics. First, belonging to an organization in a neighborhood means that those who are members of the association often also live in the neighborhood and therefore people can interact with other residents in multiple settings. Second, people who belong to voluntary associations located within their neighborhood are likely to encounter members who are socially similar to themselves (Glanville, 2004).

Formal Participation

In her analysis of an Individual Development Account (IDA) program, McBride (2003) showed that increased asset ownership is a strong predictor of social engagement including attending school events, helping with a school fund raiser, and attending PTA meetings. In their review of homeownership and social participation, Rohe and Stewart (Rohe & Stewart, 1996) indicated that homeowners were more likely than renters to participate in local organizations, even after controlling for income, education, and other socioeconomic characteristics.

Rohe and Stegman (1994) compared a group of low-income home buyers with a similar group of continuing renters whose rental housing was subsidized by Section 8 vouchers in Baltimore, Maryland. Both owners' and renters' samples were interviewed again 18 months later. They found that homeowners were more likely to belong to neighborhood organizations but no difference was found between renters and owners in terms of belonging to other types of local organizations.

Rohe and Basolo (1997) showed homeownership effects after controlling for the initial differences between owners and renters by analyzing two or three waves of data with a quasi-experimental design. They examined two measures of organizational involvement. The

extent of organizational involvement was measured by the number of organizations to which a respondent belonged. They used an additive index of dichotomous responses to questions about belonging to a variety of organizations, including school associations, political associations, neighborhood/block associations, church groups and other social organizations. The level of participation was measured by the number of meetings attended. They found no significant effect of homeownership on the extent of organizational involvement and the overall level of participation. Homeownership was significant only with regard to the number of neighborhood and block group association meetings attended. The other results of the study, however, suggested some positive effects of homeownership on life satisfaction measures and neighboring (informal participation) over a three-year period.

Some of the studies reviewed showed homeownership effects after controlling for the initial differences between owners and renters by analyzing two or three waves of data with a quasi-experimental design. However, those studies reported small sample size (N=283 at wave 1 for Rohe & Basolo's 1997 study), and the composition of the sample was mainly single, African American women. Because of these limitations, the generalizability of the results is questionable.

Volunteering

Volunteering is enacted through single or combined social resources such as human and social capital and economic resources (J. Wilson, 2000; J. Wilson & Musick, 1997a, 1998). Earlier research, tended to associate "civic engagement" and "volunteering" specifically with personal altruistic impulses, individual status differentiations or individuals' rational choices (Cnaan & Cascio, 1999; Piliavin & Charng, 1990; Wandersman, et al., 1987; J. Wilson, 2000). However, these earlier studies and resulting theories have been criticized

for having too narrow a focus, examining only demographic characteristics, and easily measurable quantities such as "time spent in volunteering" or "income lost due to volunteering" with little attention to more complex relationships such as "social relations" or "social networks" that are now recognized as having an impact on civic engagement (J. Wilson, 2000).

More recently Wilson (2000) and Brown and Ferris (2007) among others, have championed an alternative research perspective drawn from social network theory which asserts that individuals' chances of volunteering are increased by the availability of social networks, organizational memberships, or family relations (E. Brown & Ferris, 2007; Ryan, Agnitsch, Zhao, & Mullick, 2005; Tang, 2008; J. Wilson, 2000; J. Wilson & Musick, 1998). For example in social network theory, people who have more—or more extended—social networks are assumed to have high participation in volunteer activities through what is now called the "cumulative effect of volunteering" (Ryan, et al., 2005). From this perspective, social resources have a combined effect with human capital or other resources. For example, the effects of social resources on volunteering are strong among highly educated people (J. Wilson & Musick, 1998). The well known connection between socioeconomic status and participation in civic life is directly related to levels of individual educational attainment and in part related to family income levels. Much of the existing empirical work on this issue focuses on educational attainment rather than wealth and accumulated economic power such as homeownership (Gordon Nembhard & Blasingame, 2006).

Using 1995 Americans' Changing Lives (ACL) survey data, Wilson and Musick (1997a) found that human capital, number of children in the household, informal social interaction with neighbors and religiosity were all positively related to volunteering in formal

organizations, while informal helping such as helping a neighbor was primarily determined by sex, age and health. Tang (2006) also used three waves of ACL survey data and tested the impact of resources available to individuals based on the number of organizations in which they volunteered and their actual hours of volunteering. Resources such as human capital (e.g., education, income, high functional ability and lack of chronic conditions), social capital (e.g., level of contact with friends and number of friends) and cultural capital (e.g., church attendance, spiritual support) were significantly related to the outcomes. Upon further investigation of the interactions of age categories with resources, they drew conclusions regarding the existence of age-cohort effects on volunteering. For example, the relationship between education and the number of organization in which they volunteered was moderated by the age cohort (Tang, 2006).

Using a pooled sample as well as a national sample from the 2000 Social Capital Benchmark Survey (SCBS), Brown and Ferris (2007) argued that social capital--especially interpersonal trust and organizational trust--was strongly related to the respondents' level of volunteering. The effects of education decreased when they controlled for social capital and suggested that the larger effect of education in previous studies was likely overstated. In contrast to earlier studies, after controlling for social capital, Blacks and Hispanics were reported to volunteer more than Whites (Brown and Ferris, 2007)

The effects of cultural capital, generally measured by church attendance or religiosity (e.g., frequency of attending services) on civic engagement and volunteering vary by demographic characteristics. As noted previously, civic engagement has been traditionally inspired among African Americans by religious devotion and the need for group survival (Carlton-LaNey, 2006). Using a sample of African American males from the national sample

of 2000 SCBS survey, Farmer (2006) found faith-based social capital--measured by church membership, church service attendance, non-religious service church participation and affiliation with non-church religious groups--was a significant factor of African American males' participation in civic activities such as voting and working on community projects as well as giving time and money to voluntary organizations.

Few studies have directly examined the effect of homeownership on volunteering. Farmer (2006) included a dummy variable of homeownership as a control variable but found no effects on civic activities and charitable behaviors. Gordon Nembhard and Blasingame (2006), using data from the Center of Philanthropy Panel Study (COPPS) of the 2001 Panel Study of Income Dynamics (PSID), investigated the relationship between wealth including homeownership and charitable giving, volunteer incidence, and volunteer hours for Whites and Blacks. (Gordon Nembhard & Blasingame, 2006). They employed a probit model and a selection model of donation and volunteering to determine the impact of wealth after controlling for other socioeconomic variables. The probit model indicated that household wealth was significant for White households in the decision to give and volunteer but was not significant for Black households. However, the significance of household wealth disappeared in the selection model with regard to total volunteer hours once the decision to volunteer had been correctly controlled for (volunteer=1; not volunteer=0). For Blacks, the only significant variable in both the selection model of giving and volunteering was the number of children in the household. Specifically, additional children increased both White and Black households' propensity to volunteer. In addition, additional children decreased Black households' propensity to give money to organizations. Overall, the effect of wealth on White giving and volunteering was small; and an increase in wealth was related to modest increases in giving

and volunteering. Further, wealth had no effect on Black households' giving money to organization and on their number of hours volunteering. (Gordon Nembhard & Blasingame, 2006)

Methodological Issues

Many early studies of the effects of homeownership do not account for the possibility that unobservable factors increase both the likelihood of becoming homeowners and the likelihood of homeownership's relationship to some other behaviors (Dietz & Haurin, 2003). In this case, the standard single equation estimation approach incorrectly estimates the impact of homeownership on behavioral outcomes. When a single explanatory variable in a regression model is endogenous, it generally results in a biased estimate of the effects of all the explanatory variables in the model (Lerman & McKernan, 2008). That is, the result is a potentially biased estimate of the effects of homeownership and all other explanatory variables (e.g., demographic variables) on the outcome of interest (e.g., civic engagement). For example, suppose homeowners systematically differ from renters in terms of specific observable characteristics (e.g., demographic variables) and also by unobservable characteristics (e.g., financial thriftiness or aspirations). The same characteristics that make some people more likely to be homeowners may also make some people more likely to engage in civic affairs.

As a result, homeownership effects can be wrongly attributed to the effects of differences in these characteristics. Consequently, without efforts to control for endogeneity most likely there will be bias in estimates of homeownership effects (Aaronson, 2000; DiPasquale & Glaeser, 1999; Green & White, 1997; Haurin, et al., 2002).

Duncan and Raudenbush (2001) proposed three approaches for addressing endogenous membership problems (Duncan & Raudenbush, 2001). Although they proposed the endogenous membership problem in the context of neighborhood research, their discussion of endogenous membership is insightful in understanding the broader nature of the problem. The best way to eliminate bias from omitted variables is to use an experimental or quasi-experimental research framework. Second, including an extensive set of variables to measure an endogenous membership variable (e.g., homeownership) and outcome variables (e.g., civic engagement) —so that differences in observed characteristics can be controlled will also eliminate bias. Another way of controlling bias is to replace the endogenous variable with the instrumental variables (Duncan & Raudenbush, 2001). Lastly, using a longitudinal dataset that involves repeated measures on individuals will better control mechanisms for endogeneity than a cross sectional analyses without any comparisons involved (Lerman & McKernan, 2008).

The evaluation problem, therefore, is how to identify casual effects while controlling for the sources of bias. One response to this problem is to concentrate on the average treatment effect and attempt to estimate it with random sample data by comparing the average outcome among those receiving the treatment with the average outcome of those who do not receive the treatment.

Social experiments such as the Gautreaux program and the Moving to Opportunity (MTO) program are not directly related to homeownership effects per se; but they are good examples of quasi-experimental design focused on mobility. Through the Gautreaux program, a thousand low-income, mostly African American families were relocated from public housing in racially segregated neighborhoods in Chicago (from the 1970s through the 90s) to

private housing in predominantly White suburban areas or to more racially mixed neighborhoods in the city. Since participants were assigned to the first available housing and were not allowed to choose between city and the suburban locations, their assignment to locations qualified as a quasi-experimental design (Rosenbaum, 1995). The MTO experiment randomly assigned residents of housing projects in Baltimore, Boston, Chicago, Los Angeles, and New York City to one of three groups: (1) treatment group: a group receiving housing subsidies to move into low-poverty neighborhoods, (2) Section 8 group: a comparison group receiving a subsidy for moving into higher-rent housing but without restrictions regarding their locations, and (3) a control group receiving no special assistance (Orr, 2003). The MTO analysis adopted treatment-on-treated (TOT) and intent-to-treat analyses to address the issues of selection: a larger portion of families who were offered vouchers did not move during the period until the voucher was valid. Analyses comparing movers to non movers in the experimental and control groups showed that movers were significantly different from non movers. The TOT analysis compared the outcomes of families who actually received the treatment (that is, those who actually moved regardless of whether they were in the treatment group or the section 8 group) to the outcomes of the control-group. The ITT analysis compares the average outcomes for the treatment group (including both the treatment group and the Section 8 group regardless of whether they moved or not) with those of the control group (Katz et al, 2001). Creating a comparison group of households for use in analyzing the impact of treatment is another example of quasi-experimental research designs. One study by Ding, Quercia and Ratcliff (2008) examined the relative risks of default between subprime mortgages and mortgages made primarily for Community Reinvestment Act (CRA) purposes. They used propensity score matching to construct a sample of comparable borrowers with

similar characteristics but different loan products to examine the relative risks of subprime mortgages and loans.

However, an inference problem still exists if there are unobservable factors that influence whether an individual is selected into the treatment group as well as how they behave according to the treatment. Thus econometric analyses tend to explicitly model "the sources of intervention studied (the rule of assigning 'treatment') and sources of un-observables in both treatment assignment and outcome equations." (Heckman, 2004, p. 5). Likewise some empirical research on homeownership effects has used methods aiming to control for the endogenous nature of homeownership either using a comparison group design approach or explicitly modeling the sources of endogenity in the analyses.

In the field of homeownership research, some studies employed a quasi-experimental framework that compared the outcomes of a group of homeowners with a group of renters using repeated measures (Rohe & Basolo, 1997; Rohe, et al., 2007; Rohe & Stegman, 1994). The comparison group was drawn either from Section 8 recipients with some of the demographic characteristics similar to owners or people who did not purchase a home after participating in a homeownership training program. Employing repeated measures and a comparison group design was intended to control for the initial differences between homeowners and renters.

Some studies used an econometric technique that controls for selection on unobservables with a set of controls or instruments. Using a two-step selection model (Heckman, 1979), Haurin and his colleagues (2002) tested homeownership effects on child outcomes such as the home environment, child cognition, and child behavioral problems. They first estimated a tenure choice equation controlling for selection into homeownership

on observable variables including: house price, constraints caused by down payments, maternal wage, father's wage, net worth, interest rate, living in an MSA, population density, child age, race, mother's age, father's age and the number of siblings in the family. Then they estimated child outcome equations separately for renters and homeowners with a set of control variables and then tested for the presence of sample selection bias. The coefficient of the inverse Mill's ratio (λ: Lambda), the product of the standard deviation of the error in the outcomes equation (σ: Sigma) and the correlation coefficient of the errors in the outcomes and tenure choice equations (ρ: Rho) were used. If λ is statistically significant, then there is evidence of selection bias which validates the correction methods. However, there are caveats regarding the Heckman selection approach (DeMaris, 2004). Heckman's approach is sensitive to ρ and sample size. When ρ is very high and the sample size is large, the Heckman approach reduces bias consistently. For example, using a bivariate probit model with the instrumental variable of homeownership as done by Green and White (1997) resulted in finding no selection bias in their sample. The sample size they reported in the selection model was 840 which was much smaller compared to the sample size of the study (N= 4,104) by Haurin and his colleagues .In addition, Green and White included a limited set of variables in their analysis. They included for example, divorce of the head of household, number of weeks worked during the last year by the head of household, female heads of households, family size, parents' educational level, race, age and the relative cost of owning as an instrumental variable measured by the median monthly mortgage payment in a census tract divided by median monthly rent in the tract. In addition to demographic characteristics, previous literatures above suggested that variables affecting respondents' selection into

homeownership should be included in a tenure choice equation. Specifically these variables should highly be correlated with homeownership but not with outcome of interest.

Summary of the Empirical Findings

As the earlier discussion in this paper has demonstrated, proper research methods should be employed to control for the bias drawn from the nature of homeownership. In the field of homeownership research, some studies have employed a quasi-experimental framework where outcomes of a treatment group (homeowners) were compared with a control group (renters) using repeated measures (Rohe & Basolo, 1997; Rohe, et al., 2007; Rohe & Stegman, 1994). The differences were further tested in regression analyses. Another set of studies focused on an econometric technique that controls for selection based on unobservable characteristics with an extensive set of controls on instrumental variables.

Summing up, previous studies suggested that further research needs to document the effects of homeownership on repeated measures of civic engagement between a group of homeowners and a comparison group of renters while controlling for endogeneity. As previously pointed out, the homeownership effect works both directly and indirectly. The homeownership effect is moderated by the lower mobility of the homeowners. In addition to demographic differences, intergenerational transmission of homeownership and housing cost are important factors affecting selection into homeownership.

Research Questions

Drawing on relevant theories and empirical findings of selected studies, homeownership is proposed to independently influence civic engagement. Specifically, this study aimed to answer the following questions:

1. Does homeownership influence formal participation in organizations?

2. Does homeownership influence volunteer hours?

3. Does the homeownership effect moderate with housing mobility?

Accordingly, I tested the following three relationships between homeownership and civic engagement.

Hypothesis 1: Being a homeowner has an independent, positive effect on formal participation in organizations. That is, homeowners are more likely to participate in neighborhood groups; church/religious groups; school related groups; and other charitable groups.

Hypothesis 2: Being a homeowner has an independent and positive effect on volunteering hours.

Hypothesis 3: There is an interaction between homeownership and housing mobility in regard to civic engagement.

CHAPTER IV: METHODS

Source of Data

I tested the hypotheses described above using data collected for a part of the Self-Help Community Advantage Home Loan Secondary Market Program (CAP). The CAP is a secondary market program developed out of a partnership between the Ford Foundation, Fannie Mae and Self-Help to generate affordable mortgages for low-to-moderate income home buyers. The program requires borrowers to meet income must be at below 80 percent of area median income (AMI) or 115 percent of AMI in low-to-moderate income or minority census tracts (Self-Help, 2009)

In 1998, the Ford Foundation provided Self-Help with a $50 million grant to expand the program to nationwide. The CAP program has purchased more than $4.5 billion in affordable mortgage loans, helping more than 50,000 families as of 2009 (Self-Help, 2009).

Since 2003, the Ford Foundation supported the Center for Community Capital (CCC) to conduct an evaluation of the CAP to investigate loan performance and the impacts of homeownership on social outcomes and wealth for low-to-moderate income borrowers by developing the Community Advantage Panel Survey (CAPS) from a sample of CAP mortage borrowers and a group of matched renters (Center for Community Captial, 2005; Riley & Ru, 2010a).

A recent report from the CCC (2009) shows that the characteristics of CAP owners are largely representative of the low-to-moderate income population of new home buyers

below the age of 65 who also have met Self-Help's criteria (Riley & Ru, 2009). Since the CAP homeowner sample is not a random sample, the study authors compared CAP homeowners with a sample of low-income homeowners who had participated in the 2004 Current Population Survey (CPS) in order to assess how CAP homeowners compare to a random national sample of homeowners (Riley & Ru, 2009). The socio-demographic composition of the CAP sample is comparable to the CPS sample. CAP homeowners were more frequently identified as male and as Hispanic. The CAP sample includes more males because the primary respondent to the survey was designated based on the first name to appear on the mortgage deed. The CAP sample also includes more minority respondents since one of the goals of the CAP program is to increase minority homeownership. In addition, CAP owners tend to be young and more educated on average than CPS owners and are considerably more likely to be employed. Some of the differences mentioned above are attributable to the fact that the CAP respondents are recent homeowners and therefore had to have a steady income at the time of home purchase. On the other hand, the CAP homeowners sample likely includes more retirees who purchased homes much earlier. Overall, CAP owners are largely a representative sample of the US low-to-moderate income population of recent homeowners below the age of 65 who also have met Self-Help's criteria as of May 2003.

Sample

This study analyzed social capital modules collected in the first year survey (2004) and the fourth year survey (2007). I used these two waves of data for this study; with the exception that data from other waves of the study were incorporated in constructing variables of interests. The CAPS data is well suited for the purpose of this study. First, the CAP panel

is a unique dataset that contains information on homeowners and their comparison groups of renters over time. Second, the geographical information attached to respondents in the sample allowed me to measure both homeownership choice and mobility in greater detail.

Measures[2]

Dependent Variables

The study analyzed five dichotomous outcomes of formal participation in organizations and one continuous outcome: volunteering hours. The types of organizations are differentiated by five variables indicating formal participation in (1) neighborhood or block associations; (2) other volunteering or charitable group; (3) church or religious associations (other than attending services); (4) PTA or school related organizations; and (5) participation in any of groups listed above. The remaining dependent variable is volunteering hours which is measured by the total number of hours per month served by all respondents for all organizations.

Independent Variables

Homeownership. The key independent variable indicates the tenure status of the household. I used an indicator variable of home ownership status (1= Homeowners, 0= Renter) but this variable was estimated via "probability" throughout the multivariate analyses.

Mobility. The housing mobility and tenure literature posits that owners are unlikely to move and that frequent movers are unlikely to own (Rohe et al., 2002a) A large portion of the homeownership effect may result from the lower mobility rate of homeowners after controlling for the endogeneity of homeownership (DiPasquale & Glaeser, 1999; Glaeser et al., 2002; Lerman & McKernan, 2008; Manturuk, Lindblad & Quercia, 2010). Using CAPS

[2] See Appendix 1 for the full list of variables used in the study and definition of variables

data over a 4 year period, Manturuk and her colleagues (2010) found that homeowners who remained in the same house were more likely to participate in neighborhood groups compared to renters who stayed in the same residence. They also reported that renters who moved were less likely to participate in local groups, while homeowners who moved were not (Manturuk et al., 2010). In this regard, the interactions between homeownership and mobility with regard to civic engagement were further tested in this study. This study tested three measures in relation to mobility and homeownership. First, neighborhood tenure measured by respondents' number of months living in their current neighborhoods was tested to see if there was any interaction effect between homeownership and neighborhood tenure. Categorical measurements of neighborhood tenure (DiPasquale & Glaeser, 1999) were included to test for non-linear relationship effects of neighborhood tenure: (length of tenure less than 1 year vs.); 1-3 years; 4-9 years; and over 10 years. Second, housing mobility measured by the frequency of household moves from the beginning of the survey was tested to see if there was any interaction effect between homeownership and the cumulative effects of moving: (no move); one move; and more than two moves. Lastly, a combined measurement indicating four possible categories in relation to moving and neighborhoods was included to see if there are any moving patterns: (never moved vs.); moved within neighborhood; moved to another neighborhood, and moved to another county. Accordingly, the interaction with homeownership was tested.

Demographic Variables

Demographic variables for the study include both individual and household characteristics.

Gender. Individual demographics included gender (1 = Male, 0 = Female).

Age. Previous research has shown that civic engagement is an inverted u-shape over the life course so the pattern of age relationship is not linear (Glaeser, et al., 2002; Putnam, 2000). Civic engagement tends to fall during the transition from school-related age to young adulthood and rises again to its peak in middle age (Wilson, 2000). I included a set of dummy variables indicating age categories to test non-linear relationship of age: (25 years old or less vs.); 26-39 years old; 40-50 years old; and 51 years old more.

Race. Data from a 2008 supplement to the September Current Population Survey (CPS) show that 27 percent of Whites, 18 percent of Blacks and 14 percent of Hispanics volunteered in 2007 (Bureau of Labor Statistics, 2008). A set of dummy variables indicating race/ethnicity was included: (White vs.) Black, Hispanic, and others.

Education. Level of education is the most consistent predictor of volunteering (K. S. Jones, 2006; Musick, et al., 2000; Tang, 2006; Wilson, 2000). Education may have a curvilinear relationship. For example, volunteers of certain types (e.g., firefighters) are more likely to have graduated from high school but less likely to have a college degree (Thompson, 1993). A set of dummy variables indicating categories of formal educational level was included: (less than a high school diploma vs.), high-school diploma, some college but no degree, Bachelor's degree and more.

Marital status. Civic engagement is frequently organized around family relations such as marital status and parental status (Wilson, 2000). Married people are likely to participate more in civic engagement than single people (Bureau of Labor Statistics, 2008). A set of dummy variables indicating marital status was included in the analysis: (Never been married); married or living with partner and widowed/divorced/separated.

Number of children. According to the Bureau of Labor Statistics (2008), adults with children volunteer substantially more than adults without children. Children in the household are both a constraint given multiple demands on time and an opportunity for civic engagement particularly given concerns about schools and neighborhoods (Wilson, 2000). For example, decisions to participate in school-related groups are different for adults with children, for married couples without children and for single persons (Boraas, 2003). A set of dummy variables indicating categories for the number of children in households was included: (no child vs.), one child, two children, and three children or more.

Number of adults. A set of dummy variables indicating the number of adults living in each household was also included: (one adult vs.), two adults, and three or more adults.

Relative income. The income qualification criterion of the CAP sample is organized by the ratio of annual income and the Area Median Income (AMI) for each Census tract. The relative income measurement was created by using the reported household income divided by the AMI from the 2000 Census. Thus, relative income represents the respondent's income relative to the AMI. For rural residents without MSA, states' median income was used.

Employment status. Employment has an impact on peoples' decisions to engage in civic participation. Those who are employed full time may not actively participate in volunteer activities due to time constraints or because of the opportunity costs associated with employment (Wilson, 2000). In addition, research has also shown that retirement does not automatically draw people into volunteering and participation in volunteer organizations. Rather, retirement increases volunteer time among those who already participated in organizations(J. Wilson & Musick, 1997b). To test the effects of employment status on

volunteering, a set of dummy variables was included: (employed vs.); unemployed; and retired.

Other Variables in Selection of Homeownership

This study treated homeownership as an endogenously defined variable as has been previously has demonstrated in several earlier studies (DiPasquale & Glaeser, 1999; Green & White, 1997; Haurin et al., 2002; Lerman & McKernan, 2008 ; Moffitt, 2001). In social science, the problem of the "endogenous membership" arises when association in a group is determined by choice of individual to join the group (Duncan & Raudenbush, 2001; Moffitt, 2001). The propensity of an individual to behave in some way varies with the behavior of the groups (Manski, 1993). Homeownership was not randomly assigned in the study so we cannot simply use a dummy variable for homeownership and estimate the effect of homeownership by comparing the average outcomes between owners and renters. As discussed, the unobservable individual characteristics (e.g., motivation) are correlated both with the outcome variable (e.g., civic engagement) and with the explanatory variable of interest (e.g., homeownership). The decision to purchase and own a home is in fact made non-randomly by individuals or families. Income and other demographics are also factors in individuals' choice or selection to become homeowners (Haurin et al., 2002). Therefore variables affecting respondents' selection to become homeowners are included. In addition to the demographic variables presented above, study of the previous literature indicates that additional variables affecting homeownership. Exclusion restrictions are applied in selecting variables (Green & White, 1997). Practically speaking, these variables should highly be correlated with homeownership variable but not with outcomes.

Parents owned home. Homeowners' children are significantly more likely to own homes as adults and this suggests that there is an intergenerational component to the ability and the desire to be a homeowner (Boehm & Schlottmann, 1999; Cohen, et al., 2009; Rohe, et al., 2007). A set of dummy variable indicating homeownership status of respondents' parents was included: (1=owned home; 0=No).

Housing cost. This is the ratio of the average user cost of owner-occupied housing to the average rent on rental housing in the area (Green & White, 1997; Haurin, et al., 2002; Turner & Yang, 2006). Specifically the relative cost of owning is a continuous measurement calculated by the median monthly mortgage payment in a census tract divided by median monthly rent in the tract.

Data Analysis Plan

Descriptive Analyses

To describe the study sample, variables regarding formal participation in organizations, volunteering hours, demographic variables and other variables presented in the study were analyzed using descriptive statistics: percentages for categorical variables and means and standard deviations for continuous variables. The independent variables were tested either via *t-tests* or *chi-square* tests to determine differences between homeowners and renters.

Endogenous Regression Analyses

When a single explanatory variable in a regression model is endogenous, it generally results in a biased estimate of the effects of all the explanatory variables in the model (Lerman & McKernan, 2008). That is, the result is a potentially biased estimate of the effects of homeownership and all other explanatory variables (e.g., demographic variables)

on the outcomes of interest (e.g, civic engagement). For example, suppose homeowners systematically differ from renters in terms of specific observable characteristics (e.g., demographic variables) and also by unobservable characteristics (e.g., financial thriftiness or aspiration). The same characteristics that make some people more likely to be homeowners may also make some people more likely to engage in civic affairs. As a result, homeownership is wrongly attributed to the effects of differences in these characteristics.

Figure 1 *Framework controlling for endogenous effect of homeownership*

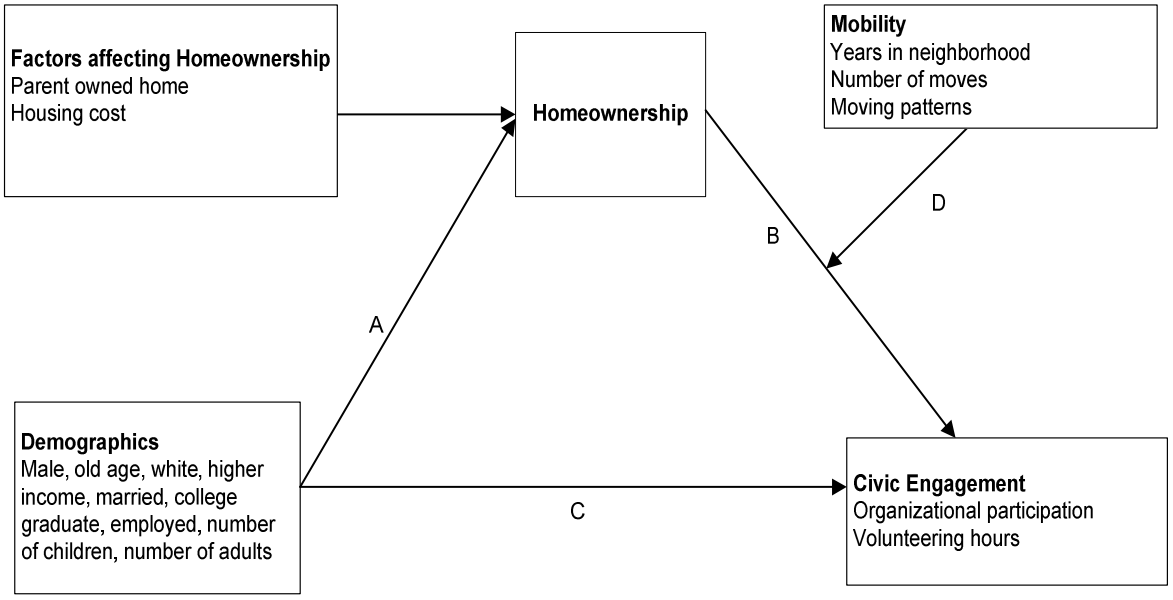


Figure 1 above illustrates a framework controlling for the endogenous effect of homeownership. Homeownership was estimated via link A and other geographical variables in the first stage. The impact of homeownership on civic engagement was estimated via link B, while simultaneously estimating the effect of demographics on volunteering via link C in the second stage. The impact of homeownership on civic engagement moderated by housing mobility status is estimated via link D. This approach measured the independent impact of homeownership on outcomes of interest (link B), separate from the impact of common

covariates shared by homeownership and civic engagement (links A & C). In addition, the effect of mobility status (link D) was estimated. Even though the individual links specifies the relationship between the constructs, econometric estimation processes take place simultaneously. Consequently, the unbiased effects of homeownership were identified in a rigorous manner.

This study employed the treatment effect model and a recursive bivariate probit model (Greene, 2003; Grinstein-Weiss et al., 2010; Guo & Fraser, 2010; A. Jones, 2007; Maddala, 1983; Manturuk, Lindblad, & Quercia, 2009, 2010; Stata Corporation, 2005). These selection models simultaneously estimate the selection (homeownership) and outcomes (civic engagement) and estimate the correlation between outcomes and the error term directly in order to control for selection on unobservables. Specifically, for the dichotomous variable "formal participation in organizations," I used the recursive bivariate probit models to simultaneously estimate respondents' participation in organizations and their choice or selection of homeownership (Greene, 2003, 2008; Stata Corporation., 2005). For continuous measurement of volunteering hours, I used the treatment effects model to simultaneously estimate volunteering hours and homeownership (Greene, 2003, 2008; Stata Corporation., 2005). The relationship between homeownership and volunteering hours was further tested via the Heckman selection model (Heckman, 1979). Finally, throughout the analytical analyses, the survey sampling weights for homeowners and renters who completed 2004 and 2007 surveys were used. The sampling survey weights were developed by the CCC to reduce any bias in the survey data related to the sample attrition (Riley & Ru, 2010a, 2010b).

Recursive bivariate probit. The recursive bivariate model was proposed by Maddala (1983, pp. 123-125) and developed further by Greene (2003, pp. 710-715). The bivariate probit model with an endogenous dummy variable is listed among the recursive models for dichotomous choice (Model 6) by Maddala (1983).

$$y^*(\text{Particpation in organizations}) = X_1\beta_1 + \delta d + \varepsilon_1\,, Y = 1 \text{ if } Y^* > 1$$
$$d^*(\text{Homeownership}) = X_2\beta_2 + \varepsilon_2, \qquad d_i = 1 \text{ if } d_i^* > 0$$

where y is a binary dependent variable of interest (e.g., group participation), d is the binary treatment variable (1=homeowners; 0=renters) included in the first equation as an endogenous independent variable, and x_1 and x_2 are the vectors of regressors. The error terms $\varepsilon_1$and ε_2 are normally distributed with a correlation of ρ. It is necessary to have variation in the set of exogenous regressors to avoid identification problems (A. Jones, 2007; Moffitt, 2001). The model is identified if there is at least one exogenous variable in x_2 that is not included in x_1 (Maddala, 1983). The model is identified even with same sets of exogenous regressors appear in both equations (Wilde, 2000). However, it is commonly recommended to impose exclusion restrictions, exploring the presence of variables that causally affect the treatment status (e.g., homeownership) but do not have a direct causal effect on the outcome (e.g., participation), to improve the model (A. Jones, 2007). In this regards, the variables listed as additional variables affecting homeownership (e.g., parent owned home and housing cost) were used as the set of additional exogenous regressors for homeownership equation.

Each dichotomous dependent variable was estimated by five models: (1) model I included demographic variables; (2) model II included a measure of the length of residency in neighborhoods as well as demographics; (3) model III included a measure of number of

moves between 2004 and 2007 as well as demographic variables; (4) model IV included a measure of moving patterns as well as demographics; and (5) model V included a lagged control of 2004 participation level. Specifically, models were identified as follows:

Model I:
$$\text{Group particiation} = X_1\beta_1 + \text{Homeownership} + \varepsilon_1$$
$$\text{Homeownership} = X_2\beta_2 + \varepsilon_2$$

Model II:
$$\text{Group Participation} = X_1\beta_1 + \text{Mobility1} + \text{Homeownership} + \varepsilon_1$$
$$\text{Homeownership} = X_2\beta_2 + \varepsilon_2$$

Model III:
$$\text{Group Participation} = X_1\beta_1 + \text{Mobility2} + \text{Homeownership} + \varepsilon_1$$
$$\text{Homeownership} = X_2\beta_2 + \varepsilon_2$$

Model IV:
$$\text{Group Participation} = X_1\beta_1 + \text{Mobility3} + \text{Homeownership} + \varepsilon_1$$
$$\text{Homeownership} = X_2\beta_2 + \varepsilon_2$$

Model V:
$$\text{Group Participation} = X_1\beta_1 + \text{Participation in 2004} + \text{Homeownership} + \varepsilon_1$$
$$\text{Homeownership} = X_2\beta_2 + \varepsilon_2$$

where the set of X_1 variables included age, sex, race, marital status, education, relative income, employment, number of children, number of adults; mobility variables included years in the neighborhood at Year 1; and the set of X_2 variables included the set of X_1variables in 2004, parent owned home and housing cost.

Treatment effect model. The treatment effect model is an econometric model that incorporates an endogenous binary variable of the treatment into the regression equation (Greene, 2003; Maddala, 1983; Stata Corporation, 2005). The treatment effect model also consists of two equations: a regression equation to estimate the impact of treatment and a treatment equation to indicating receiving the program or not:

$$y_i(\text{Volunteer Hours}) = x_i\beta + \delta d_i + u_i$$
$$d_i^* \quad (\text{Homeownership}) = w_i\gamma + \upsilon_i, \qquad d_i = 1 \text{ if } d_i^* > 0,\ d_i^* = 0\ otherwise$$

where y is a continuous dependent variable (volunteer hours); x and w are vectors of regressors; d is the binary variable of treatment (homeownership); β, γ, and δ are vectors of parameters; and μ and ν are normally distributed errors with a correlation of ρ. Unlike Heckman's selection model, where outcome is only observed for who get treatment (d=1), the treatment effects model uses both owners (d=1) and renters (d=0) in the analysis. The difference in volunteer hours between homeowners and renters is estimated by

$$\delta + \rho\sigma_u \left(\frac{\phi_i}{\Phi_i(1-\Phi_i)}\right)$$

where □ is the standard normal density and Φ is the standard normal cumulative distribution. The second term of the above equation indicates the influence of homeownership selection to be adjusted by the formula. If the correlation between error terms (μ and ν) is not different from zero (ρ=0), the difference in volunteer hours between homeowners and renters becomes δ as in OLS regression (Greene, 2003, pp. 780-790; Maddala, 1983, pp. 117-122; Stata Corporation, 2005, pp. 456-465).

With the same set of variables specified in participation in organizations, the continuous measurement of volunteering hours was estimated by the same models specified in the models above used in the bivariate probit analyses. Further, the Heckman selection model was employed to investigate the influence of participation in groups on the number of hours volunteered. The rationale for the Heckman selection analysis was to test potential bias in sample selection or results being affected by the qualitative difference those who did not participate in any groups and those who did participate in any of groups.

I used the computer software Stata® to analyze the models specified above. Specifically I used the *biprobit* command to estimate the homeownership effect on group

participations and used *treatreg* command to estimate the homeownership effect on volunteering hours. Finally, *heckman* command was used to estimate volunteering hours to any group participation. Additional Stata® standard functions were used in addition to three commands specified above. The *robust and cluster* options to control of clustering effects of census tracts using the Huber-White sandwich estimator of variance. The Huber-White estimator corrects standard errors associated with regression coefficients (Guo & Fraser, 2010). Throughout the analyses, the sampling weights were used by the *pweights* in Stata® (Stata Corporation, 2005).

The next section focuses on the results of the analyses proposed above. The chapter begins with sample description and moves to descriptive statistics and results of multivariate analyses.

CHAPTER V: RESULTS

Sample Description

In this study, I compared civic engagement outcomes between owners and renters in the CAP panel study using data collected in 2004 and again in 2007. The sample was restricted to those respondents who completed surveys in both years. A total of 1,746 owners and 902 renters completed both the 2004 and the 2007 surveys. For homeowners, 157 out of 1,746 changed their tenure status to renter during the period studied. On the other hand, 188 renters out of 902 changed their status to owners. Clearly, including those who changed tenure status in this way would have potential to introduce bias since they are likely to be different from those who did not change their tenure status (Spader & Quercia, 2008). Consequently, the study excluded observations from respondents whose tenure status changed from 2004 to 2007. Finally, with these adjustments and with the subtraction of records which had data missing on one more of the variables of interest, the total sample used in the analysis was N=2,254 which included 1,565 owners and 689 renters.

In order to investigate the possibility of bias, those respondents who changed tenure status over the period of the study from 2004 to 2007 were examined descriptively to document how the outcomes for these respondents compared to those included in the study sample. Table 1 presents the number of respondents by outcome variables of the study according to their tenure status. There were no statistically significant differences in outcomes between two groups[3].

[3] See Appendices 19 and 20 for sample comparison by tenure status

Table 1. *Sample Comparison Between In-Sample and Out-Sample*

	In-sample		Out-sample	
	N	%/M (s.d.)	n	%/M (s.d.)
Neighborhood group participation				
Yes	422	81.26	65	81.16
No	1,832	18.72	280	18.84
	2,254		345	
Other group participation				
Yes	523	23.30	81	23.48
No	1731	76.80	264	76.52
	2,254		345	
Church group participation				
Yes	708	61.46	107	59.78
No	444	38.54	72	40.22
	1,152		179	
PTA participation				
Yes	291	22.86	44	24.31
No	982	77.14	137	75.69
	1,273		181	
Volunteering hours				
Hours in month	2,254	5.69 (12.82)	345	4.98 (10.00)
Hours in month (log)	2,254	1.08 (1.167)	345	1.09 (1.113)

Descriptive Statistics

Table 2 presents unweighted descriptive statistics from 2,254 respondents in 2007. The variables listed in Table 2 include demographic variables and mobility variables used in the analytic models of the subsequent analyses as well as dependent variables in 2007. These results indicate several differences between owners and renters with regard to mobility, demographics, intergenerational tenure status, and census tract information as well as dependent variables using *chi-square* tests and *t*-tests as appropriate. Among five dichotomous dependent variables – (1) participation in neighborhood based groups, (2) participation in other volunteering and charitable groups, (3) participation in religious groups, (4) participation in PTAs, and (5) participation of homeowners in any groups – homeowners

and renters were statistically different in three outcomes ($p < .01$). Specifically, homeowners were more likely to participate in neighborhood based groups (20.6% in the owner sample vs. 14.5% in the sample of renters), in other volunteering and charitable groups (24.7% vs. 19%), and in the category "any group participation" (58.4% vs. 45.1%). There were, however, no statistically significant differences in regards to religious group participation and PTA group participation. Volunteering hours per month (logged), a continuous dependent variable, showed statistically significant difference between the two groups ($p < .01$).

Homeowners were longer "stayers" than renters. Eighty-three percent of owners lived in their same neighborhoods over the 4 years whereas 50.5 percent of the renters lived in their same neighborhoods over the same period. Over 80 percent of owners never moved between 2004 and 2007, in comparison to 46.7 percent of renters who did not move. Only about 10 percent of owners moved to a different neighborhood whereas 34.1 percent of renters moved to a different neighborhood ($p < .01$).

There also were consistent differences between owners and renters with regard to demographic characteristics. Homeowners were more likely to be younger than renters. More than 89 percent of homeowners were under the age of 50 compared to 71.3 percent of renters in that age group. Homeowners were more likely to be male (50.2% vs. 25.3%), White (65.8% vs. 47.9%), married or living with a partner (62.9% vs. 28.0%), college graduates (31.3% vs. 16.6%), in a higher relative income status (.97 vs. .67) and employed (88.4% vs. 55.7%). Homeowners were more likely to have a child (61.8% vs. 44.4%) and more likely to have additional adults in their households (69.6% vs. 14.9%). Current homeowners were more likely to have been raised in a home owned by their parents (82.9% vs. 70.5%). Finally, housing costs were higher for owners compared to renters (1.10 vs. 1.08). Specifically,

homeowners were found more in census tracts where the relative price of owning to renting was higher. These differences between owners and renters were statistically significant ($p<.01$). The two variables above, intergenerational tenure status and housing cost were included in the study's homeownership selection equations as factors affecting homeownership.

Table 3 presents unweighted descriptive statistic of the 2,254 respondents measured in 2004. The demographic variables listed in the result were included in the homeownership selection equations employed in the subsequent analyses. Previous levels of participation or volunteering measured in 2004 were used as control variables in the analytic models of the subsequent analyses. The results show initial differences between the two groups.

Homeowners were found to participate more in neighborhood groups (19.0% in the owner sample vs. 14.5% in the sample of renters), in other groups (23.9% vs. 16.1%) and in any group (43.2% vs. 29.2%). Apparent differences in demographic characteristics between the two groups were also statistically significant. Homeowners were more like to be married or living with a partner (55.3% vs. 28.9%), be college graduates (26.7% vs. 14.2%), have higher relative income (.85 vs. .63) and to be employed (92.3% vs. 57.5%). Homeowners were more likely to have a child (51.8% vs. 42.5%) and more likely to be residing with additional adults (61.8% vs. 36.3%). These differences between owners and renters were statistically significant ($p<.01$). In 2004 no statistically significant differences were found in regards to religious group participation, PTA group participation and logged monthly volunteering hours.

Table 2. *Descriptive Statistics for Sample Characteristics in Year 4*

	Owner		Renter	
	N	%/M (s.d.)	n	%/M (s.d.)
Dependent variable				
Neighborhood group participation***				
Yes	322	20.6	100	14.5
No	1,243	79.4	589	85.5
Other group participation***				
Yes	387	24.73	136	19.74
No	1,178	75.27	553	80.26
Religious group participation				
Yes	525	62.8	183	57.9
No	311	37.2	133	42.1
PTA group participation				
Yes	226	23.4	65	21.2
No	741	76.6	241	78.8
Any group participation***				
Yes	914	58.40	311	45.14
No	651	41.60	378	54.86
Volunteering hours in a month				
all respondents (log)***	1,565	1.56 (1.16)	689	.94 (1.16)
participants only (log)***	914	1.91 (.97)	311	1.95 (1.05)
Mobility				
Years in neighborhood***				
Less than 1 year	79	5.1	124	18.0
1-3 years	185	11.8	217	31.5
4-9 years	1,163	74.3	238	34.5
Over 10 years	138	8.8	110	16.0
Number of moves***				
Never moved	1,256	80.3	322	46.7
One move	247	15.8	161	23.4
Two or more moves	62	3.9	206	29.9
Moving pattern***				
Never moved	1,256	80.3	322	46.7
Moved within neighborhood	43	2.8	39	5.7
Moved to a different neighborhood	148	9.5	235	34.1
Moved to a different county	118	7.5	93	13.5
Demographic variables				
Age ***				
25 years old or less	272	17.4	95	13.8
26-39 years old	782	50.0	196	28.5
40-50 years old	353	22.5	200	29.0
51 years old or older	158	10.1	198	28.7

	Owner		Renter	
	N	%/M (s.d.)	n	%/M (s.d.)
Sex***				
Male	786	50.2	174	25.3
Female	779	49.8	515	74.7
Race***				
White	1030	65.8	330	47.9
Black	296	18.9	256	37.2
Hispanics	193	12.3	81	11.7
Other	46	3.0	22	3.2
Marital status***				
Married or living with partner	984	62.9	193	28.0
Widowed, divorced or separated	313	20.0	277	4.2
Never married	268	17.1	219	21.8
Education***				
11th grade or less	126	8.1	127	18.4
High school graduate/GED	407	26.0	218	31.6
Some college	542	34.6	230	33.4
Bachelor's degree or more	490	31.3	114	16.6
Relative Income (Square root)***	1,565	.97 (.24)	689	.67 (.18)
Employment Status***				
Employed	1384	88.4	384	55.7
Unemployed	51	3.3	69	10.0
Retired or Not in labor force	130	8.3	236	34.3
Number of children***				
No child	598	38.2	383	55.6
One child	399	25.5	148	21.5
Two children	359	22.9	92	13.3
Three or more children	275	13.4	66	9.6
Number of adults***				
One adult	475	30.4	400	58.1
Two adults	1197	63.1	209	3.3
Three or more adults	182	6.5	80	11.6
Intergenerational tenure status				
Parent owned home***				
Yes	1,298	82.9	486	70.5
No	267	29.1	203	29.5
Census tract info				
Housing cost (log)***	1,565	1.10(.15)	689	1.08 (.15)

*** P <.01 ** P<.05 * P<.1; percentages are column percentages

Summing up, the noteworthy aspect of the descriptive results in Tables 2 and 3 is the difference between homeowner and renter groups on a wide range of characteristics. The two groups are different with regard to age, sex, race, marital status, education, relative income, employment status, number of children per household and number of adults in per household.

Multivariate Statistics

When selectivity is inevitable, alternative analytic strategies that model selection must be explored (Guo & Fraser, 2009, p. 91). Systematic differences between homeowners and renters result in a biased estimate of the effects of all the explanatory variables and the effects of homeownership. Since homeownership variable is an endogenous variable (Lerman & McKernan, 2008), I employed an alternative analysis approach. Specifically, I analyzed the data using bivariate probit model and the treatment effect model. These selection models simultaneously estimated the selection (homeownership) and outcomes (civic engagement or volunteering) and also estimate correlation between outcomes and errors terms directly in order to control for selection on unobservables. In addition, I also conducted the Heckman selection model analysis where applicable. Following sections of this chapter presents results from these analyses. I limit my interpretation of parameter estimates to the preferred models.

Who Attains Homeownership?

Throughout the analyses in the chapter, either the bivariate probit model or treatment regression was used to estimate the selection (homeownership) and the outcome (civic engagements or volunteering). Since the selection aspects of the results are repeated in all models, a general explanation of who attains homeownership status is conducted here.

Table 3. *Descriptive Statistics for Sample Characteristics in Year 1*

	Owner		Renter	
	n	%/M (s.d.)	n	%/M (s.d.)
Control variables				
Neighborhood group participation***				
Yes	298	19.0	75	10.9
No	1,267	81.0	614	89.1
Other group participation***				
Yes	374	23.9	111	16.1
No	1,191	76.1	578	83.9
Religious group participation				
Yes	480	66.5	170	65.9
No	242	33.5	88	34.1
PTA group participation				
Yes	191	19.8	49	16.0
No	776	80.2	257	84.0
Any group participation***				
Yes	676	43.2	201	29.2
No	889	56.8	488	70.8
Volunteering hours in a month				
all respondents (log)	1,565	1.32 (1.13)	689	1.31 (.74)
participants only (log)	914	1.80 (1.23)	311	1.74 (1.13)
Demographic variables				
Marital status***				
Married or living with partner	866	55.3	199	28.9
Widowed, divorced or separated	339	21.7	270	39.2
Never married	360	23.0	220	31.9
Education***				
11th grade or less	124	7.9	133	19.3
High school graduate/GED	376	24.0	241	35.0
Some college	648	41.4	217	31.5
Bachelor's degree or more	417	26.7	98	14.2
Relative Income (Square root)***	1,565	.85 (.15)	689	.63 (.15)
Employment Status***				
Employed	1,444	92.3	393	57.0
Unemployed	46	2.9	79	11.5
Retired or Not in labor force	75	4.8	217	31.5
Number of children***				
No child	755	48.2	396	57.5
One child	367	23.5	149	21.6
Two children	288	18.4	84	12.2
Three or more children	155	9.9	60	8.7
Number of adults***				
One adult	597	38.2	439	63.7
Two adults	866	55.3	203	29.5
Three or more adults	102	6.5	47	6.8

*** P <.01 ** P<.05 * P<.1; percentages are column percentages

Table 4 shows the results of the bivariate probit regression model analysis on neighborhood group participation. The model simultaneously estimated the selection (homeownership) and the outcome (neighborhood group participation). The first two columns of the table illustrate the results of the first stage model estimating homeownership status.

Respondents who were male, have higher relative income, have more children and reside in areas that have higher housing costs were more likely to be a homeowners ($p<.01$). Specifically, being male was associated with a .360 unit increase in homeownership. One unit increase in income was associated with a 5.26 unit increase in homeownership. Compared to the 'no child in household' category, having a child was associated with a .235 unit increase, and having two children with a .497 unit increase. Having three children or more was associated with a .535 unit increase in homeownership. The relative price of owning to renting (housing cost) was positively related to homeownership.

One unit increase in housing cost was associated with a .363 unit increase in homeownership. Respondent characteristics that were negatively related to homeownership included being Black, married or partnered, and unemployed or retired. Specifically, compared to White, being Black was associated with a .482 unit decrease in homeownership. Being married or partnered, compared to 'never married', was associated with a .366 unit decrease in homeownership. Those who were unemployed (-.722) and retired (-.525) were less likely to be homeowners compared to employed respondents.

Summing up, influential factors determining selection into homeownership are as follows: being male, White, never married compared to married or partnered, higher relative income, employed, additional child in a household, and relative price of owning to renting.

Table 4. *Neighborhood Group Participation: Bivariate Probit Regression, Model I*

	Estimating Homeownership		Estimating neighborhood group participation	
	Coef	Robust SE	Coef	Robust SE
Homeownership			.539**	.201
Age (25 years old or less)				
Age 26-39	.145	.130	.049	.117
Age 40-50	.182	.141	.318***	.129
Age 51 or older	.111	.163	.474***	.149
Male	.360***	.113	-.243***	.086
Race (White)				
Black	-.482***	.110	.560***	.092
Hispanic	-.123	.146	-.063	.129
Other	-.375	.203	.337	.209
Marital status (Never married)				
Married & partnered	-.366**	.158	.120	.143
Widowed, Divorced & Separated	-.252*	.146	-.048	.107
Education (HS grad.)				
11th grade	-.195	.161	.143	.157
Some college	.119	.111	.292***	.096
Bachelor's degree or more	.033	.145	.332***	.103
Income	5.26***	.366	.325	.216
Employment (Employed)				
Unemployed	-.722***	.185	.113	.164
Retired	-.525***	.152	.196*	.115
Number of children (No child)				
One child	.235**	.118	-.188**	.093
Two children	.497***	.134	-.170	.106
Three children or more	.525***	.174	-.026	.137
Number of adults (One adult)				
Two adults	.096	.154	-.187	.129
Three adults or more	-.125	.215	-.379**	.156
Intergenerational tenure status				
Parent owned home	.147	.113		
Tract-level characteristics				
Housing cost	.363**	.179		
Constant	-3.902	.348	-1.902	.225
N	2,254		2,254	
Rho	-.103			
P-value	.445			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Neighborhood Group Participation

The last two columns of Table 4 present the results of the second stage of the model which estimates neighborhood group participation. The estimated ρ=-.103 was not significant in the ratio test χ^2 = .583 (p=.445) and the null hypothesis was retained which could not confirm that ρ was significantly different from 0. This suggests that selection bias is not severe in the model.

Homeownership was a positive predictor in neighborhood group participation. Being a homeowner was associated with a .539 unit increase in participation (p<.05). Demographic variables were significant. Respondent characteristics were positively related to neighborhood group participation include the older age groups, being Black, some college education, Bachelor's degree or more and being retired. Racial differences in participation also existed. Blacks were more likely to participate in neighborhood groups compared to Whites. The relationship between neighborhood group participation and additional people in the household was negative. Both households with a child and three adults or more per household were negatively associated with participation in neighborhood groups.

Table 5 provides subsequent results of the bivariate probit regression models for neighborhood group participation when each measurement of mobility and previous level of participation was included. A measure of the length of residency was included in model II and a measure of number of moves between 2004 and 2007 was included in model III. Model IV included a measure of 'moving patterns' which is the interaction of housing mobility and neighborhood mobility. Model V, the final model, included a dichotomous measurement of 2004 participation.

Table 5. *Neighborhood Group Participation: Bivariate Probit Regression, Models II – V*

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Neighborhood group participation								
Homeownership	.494**	.219	.502**	.217	.519**	.218	.405*	.216
Length of residency (Less than 1 year)								
1-4 years	.010	.151						
4-9 years	.105	.139						
Over 10 years	.232	.178						
Number of moves (No moves)								
One move			-.023	.100				
Two or more moves			-.132	.129				
Moving pattern (No moves)								
Within neighborhood					.089	.198		
Across neighborhood					-.029	.107		
County level move					-.154	.148		
Year 1 Participation							1.194***	.090
Age (25 years old or less)								
Age 26-39	.040	.117	.038	.117	.042	.116	.038	.124
Age 40-50	.289**	.130	.304**	.129	.306**	.128	.279**	.133
Age 51 or older	.441***	.148	.453***	.149	.457***	.148	.438***	.158
Male	-.245***	.086	-.246***	.085	-.247***	.086	-.198**	.090
Race (White)								
Black	.581***	.093	.583***	.092	.572***	.092	.465***	.096
Hispanic	-.057	.130	-.060	.129	-.068	.129	-.007	.138
Other	.348*	.209	.349*	.209	.333*	.208	.219	.221

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	.127	.144	.117	.144	.128	.142	.101	.154
Widowed, Divorced & Separated	-.045	.108	-.053	.108	-.048	.108	-.043	.116
Education (HS grad.)								
11th grade	.146	.156	.144	.156	.147	.157	.170	.166
Some college	.300***	.095	.298***	.095	.300***	.095	.215**	.101
B.A and more	.348***	.103	.332***	.104	.346***	.104	.203*	.111
Income	.351	.220	.334	.221	.340	.221	.391*	.217
Employment (Employed)								
Unemployed	.110	.164	.113	.164	.115	.163	-.063	.168
Retired	.196**	.116	.196*	.116	.201*	.116	.207*	.120
Number of children (No child)								
One child	-.185**	.093	-.185**	.093	-.187**	.093	-.178*	.098
Two children	-.173*	.106	-.169	.107	-.178*	.107	-.139	.113
Three children or more	-.032	.137	-.029	.137	-.034	.137	-.003	.143
Number of adults (One adult)								
Two adults	-.180	.129	-.182	.129	-.182	.128	-.166	.142
Three adults or more	-.373**	.158	-.377**	.157	-.372*	.157	-.390*	.166
Constant	-1.990	.255	-1.857	.227	-1.883	.225	-2.038	.234
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.145	.130	.145	.130	.145	.130	.145	.130
Age 40-50	.182	.141	.181	.141	.182	.141	.181	.141
Age 51 or older	.111	.163	.110	.163	.111	.163	.109	.163
Male	.360***	.113	.360***	.113	.360***	.113	.361***	.113
Race (White)								
Black	-.482***	.110	-.482***	.110	-.482***	.110	-.482***	.109
Hispanic	-.123	.146	-.123	.146	-.123	.146	-.126	.146
Other	-.374*	.203	-.374*	.203	-.375*	.203	-.374*	.202

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.366**	.158	-.366**	.158	-.366**	.158	-.368**	.158
Widowed, Divorced & Separated	-.252*	.147	-.252*	.146	-.252*	.147	-.254*	.146
Education (HS grad.)								
11th grade	-.195	.161	-.195	.161	-.195	.161	-.194	.160
Some college	.119	.111	.119	.111	.119	.111	.118	.111
Bachelor's degree or more	.032	.145	.033	.145	.033	.145	.034	.145
Income	5.257***	.367	5.258***	.367	5.258***	.367	5.265***	.365
Employment (Employed)								
Unemployed	-.722***	.185	-.722***	.185	-.722***	.185	-.716***	.185
Retired	-.526***	.152	-.525***	.151	-.526***	.151	-.522***	.149
Number of children (No child)								
One child	.235**	.118	.235***	.118	.235**	.118	.237**	.118
Two children	.496***	.135	.497***	.134	.497***	.134	.502***	.134
Three children or more	.523***	.174	.524***	.174	.524***	.174	.530***	.174
Number of adults (One adult)								
Two adults	.097	.154	.096	.154	.096	.154	.098	.153
Three adults or more	-.125	.215	-.125	.215	-.125	.215	-.125	.214
Intergenerational tenure status								
Parent owned home	.148	.113	.147	.113	.147	.113	.144	.113
Tract-level characteristics								
Housing cost	.363**	.179	.363***	.179	.363**	.179	.356**	.178
Constant	-3.901	.348	-3.902	.348	-3.901	.348	-3.901	.348
N	2,254		2,254		2,254		2,254	
Rho	-.097		-.106		-.104		-.155	
P-value	.482		.438		.448		.271	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

The estimated values of ρ in models II through V were not significant in the chi-square ratio test and this suggested that selection bias was not severe. The following section continues with interpretation of important predictors in the models.

First, being a homeowner was associated with a positive increase in participation throughout the models. Second, mobility measures were not significant. Unlike previous research (DiPasquale & Glaeser, 1999; Rohe, Van Zandt, & McCarthy, 2002a) which reported positive homeownership effects on social outcomes through lower housing mobility, neighborhood and residential mobility variables were not significant in the models. Third, the direction and significance of the covariates illustrates the same pattern across the models. The older age groups, Blacks, and respondents with higher education levels were more likely to participate in neighborhood groups. Characteristics of being male or living with additional people in households were both associated with being less likely to participate in neighborhood groups. Lastly, the final model V indicates homeownership was a marginally significant predictor when the 2004 participation level was controlled for. The significance of 2004 participation levels suggests that initial differences in participation had a strong impact on later participation. Demographic variables were significant predictors in neighborhood group participation. Older age groups were associated with an increase in participation. Compared to the younger age group (25 years old or less), the 40-50 year old group was associated with an increase in participation by .28 unit ($p<.05$). The increase associated with those age 51 years old was much greater. They were associated with a .438 unit increase in participation compared to the younger age group ($p<.01$). Racial difference existed in neighborhood group participation. Compared to Whites, Blacks were associated with a .465 unit increase in participation ($p<.01$). Education was also an important factor in

neighborhood group participation. Respondents with some college education were associated with a .215 positive unit increase in participation ($p<.05$). Those with a Bachelor's or more education were also positive related to the outcome ($p<.1$). Among other covariates, those with higher relative income and those who were retired were associated with an increase in participation ($p<.1$). To the contrary, having additional people in households was associated with decreases in participation ($p<.1$).

Summing up, the significance of homeownership in the final model was marginal but homeownership was a positive predictor in neighborhood participation throughout the models. Other things being equal, the greatest effect on current participation in neighborhood groups was respondents' previous participation levels. This study also found following demographic characteristics were significant in neighborhood group participation. Older age groups were more likely to participate in neighborhood groups. Being Black was associated with a greater increase in participation. Finally, respondents with higher education levels were associated with higher participation.

The next section focuses on the results of other volunteering and charitable group participation employing the same analytical approaches used to assess neighborhood group participation.

Other Volunteering and Charitable Group Participation

Table 6 shows the results of the bivariate probit regression analysis on other volunteering and charitable group participation. The estimated $\rho=-.199$ was significant in the ratio test $\chi^2 = 2.893$ ($p < .1$) and this suggested that selection bias was not ignorable. Homeownership was a positive significant predictor in a one-tailed test ($p<.1$). Older age groups were more likely to participate in other groups. Males were less likely to participate in

Table 6. *Other Group Participation: Bivariate Probit Regression, Model I*

	Estimating homeownership		Estimating other group participation	
	Coef	Robust SE	Coef	Robust SE
Homeownership			.329*	.187
Age (25 years old or less)				
Age 26-39	.155	.129	.288**	.116
Age 40-50	.188	.141	.279**	.124
Age 51 and older	.114	.162	.413***	.143
Male	.354***	.113	-.225***	.080
Race (White)				
Black	-.483***	.109	.118	.093
Hispanic	-.125	.146	.034	.132
Other	-.394*	.203	.158	.199
Marital status (Never married)				
Married & partnered	-.342**	.159	.171	149
Widowed, Divorced & Separated	-.238*	.145	.117	.111
Education (HS grad.)				
11th grade	-.199	.160	-.435***	.154
Some college	.110	.111	.408***	.098
Bachelor's degree or more	.251	.146	.622***	.104
Income	5.26***	.363	.077	.230
Employment (Employed)				
Unemployed	-.715***	.188	-.046	.155
Retired	-.526***	.143	.062	.119
Number of children (No child)				
One child	.222*	.118	.076	.088
Two children	.494***	.131	.147	.106
Three children or more	.493***	.172	.223*	.130
Number of adults (One adult)				
Two adults	.087	.154	-.359**	.141
Three adults or more	-.134	.214	-.240	.183
Intergenerational tenure status				
Parent owned home	.149	.112		
Tract-level characteristics				
Housing cost	.357**	.178		
Constant	-3.896	.349	-1.54	.229
N	2,254		2,254	
Rho	-.199			
P-Value	.089			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

other groups. Higher educated respondents reported higher participation compared to high school graduates. The relationship between other group participation and additional people in the household was mixed. Having three children or more was associated with a positive increase compared to 'no child households' ($p<.1$). Households with two adults were negatively associated with the outcome.

Table 7 presents subsequent results of the bivariate probit regression models for other volunteering and charitable group participation when each measurement of mobility and previous level of participation was included. The estimated ρ in model III ($\rho= -.208$) and the Model IV ($\rho= -.200$) was significant in the ratio test $\chi^2 = 3.119$ ($p<.1$) and $\chi^2 = 2.929$ ($p<.1$), respectively. However, selection bias was not detected in models II and the final model. This indicated that selection bias was present in some of the models, though not severe. The following section continues with interpretation of important predictors in the models.

First of all, though the significance level was marginal, homeownership was a positive significant predictor in models III and IV ($p <.1$). Second, mobility measures were not significant throughout the models. Third, the direction and significance of the covariates illustrates the similar patterns across the models. Older age groups were more likely to participate compared to the younger age group (25 years old or less). Males were less likely to participate in other group. Respondent with higher education levels were more likely to participate. The relationship between other group participation and additional people in the household was mixed. Households with three children or more were more likely to participate compared to households without a child. To the contrary, households with two adults were less likely to participate compared to single adult households. Lastly, final model indicates homeownership was not a

Table 7. *Other Group Participation: Bivariate Probit Regression, Models II - V*

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Other group participation								
Homeownership	.269	.197	.314*	.195	.328*	.194	.233	.182
Length of residency (< 1 year)								
1-4 years	-.136	.162						
4-9 years	.023	.148						
Over 10 years	-.183	.170						
Number of moves (No moves)								
One move			.045	.105				
Two or more moves			-.128	.139				
Moving pattern (No moves)								
Within neighborhood					.138	.197		
Across neighborhood					.045	.109		
County level move					-.245	.161		
Year 1 Participation							1.076***	.078
Age (25 years old or less)								
Age 26-39	.284**	.118	.280**	.116	.282**	.116	.266**	.119
Age 40-50	.293**	.125	.273**	.124	.271**	.124	.172	.127
Age 51 or older	.431***	.145	.399***	.144	.397***	.144	.351**	.144
Male	-.230***	.081	-.227***	.080	-.227***	.081	-.149*	.081
Race (White)								
Black	.111	.093	.122	.093	.105	.094	.107	.096
Hispanic	.030	.132	.033	.132	.024	.132	.092	.137
Other	.152	.200	.170	.199	.142	.200	.146	.189

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	.182	.148	.164	.149	.180	.149	.181	.149
Widowed, Divorced & Separated	.102	.111	.111	.111	.120	.110	.095	.117
Education (HS grad.)								
11th grade	-.438***	.153	-.432***	.152	-.433***	.153	-.381**	.161
Some college	.415***	.099	.414***	.098	.415***	.098	.359***	.103
Bachelor's degree or more	.616***	.105	.620***	.104	.637***	.104	.465***	.106
Income	.114	.235	.064	.240	.074	.239	.023	.237
Employment (Employed)								
Unemployed	-.051	.155	-.047	.154	-.040	.154	-.087	.162
Retired	.065	.120	.061	.119	.066	.119	.102	.123
Number of children (No child)								
One child	.080	.088	.079	.088	.071	.087	.120	.091
Two children	.146	.107	.147	.105	.133	.106	.169	.114
Three children or more	.232*	.130	.216*	.130	.209*	.130	.235*	.135
Number of adults (One adult)								
Two adults	-.378***	.140	-.355**	.141	-.351**	.141	-.391***	.147
Three adults or more	-.251	.182	-.241	.184	-.234	.185	-.221	.197
Constant	-1.500	.271	-1.503	.230	-1.531	.224	-1.650	.237
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.155	.130	.155	.130	.154	.130	.155	.130
Age 40-50	.189	.141	.189	.141	.188	.141	.189	.141
Age 51 or older	.116	.162	.114	.162	.114	.162	.115	.162
Male	.354***	.113	.353***	.113	.354***	.113	.357***	.113
Race (White)								
Black	-.483***	.109	-.483***	.109	-.483***	.109	-.484***	.109
Hispanic	-.125	.146	-.125	.146	-.125	.146	-.126	.146
Other	-.393*	.204	-.395*	.203	-.395*	.203	-.389*	.203

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.343**	.160	-.340**	.159	-.342**	.160	-.341**	.161
Widowed, Divorced & Separated	-.239	.145	-.237	.145	-.238*	.145	-.236*	.145
Education (HS grad.)								
11th grade	-.199	.160	-.200	.160	-.200	.160	-.200	.161
Some college	.111	.112	.110	.111	.110	.111	.113	.112
Bachelor's degree or more	.025	.146	.024	.146	.025	.146	.024	.147
Income	5.255***	.363	5.256***	.363	5.256***	.363	5.255***	.364
Employment (Employed)								
Unemployed	-.715***	.188	-.713***	.188	-.715***	.188	-.717***	.187
Retired	-.528***	.143	-.525***	.143	-.526***	.143	-.532***	.143
Number of children (No child)								
One child	.222*	.118	.220*	.118	.221*	.118	.223*	.118
Two children	.494***	.132	.494***	.131	.494***	.131	.486***	.132
Three children or more	.495***	.172	.492***	.172	.494***	.172	.494***	.173
Number of adults (One adult)								
Two adults	.087	.154	.087	.154	.086	.154	.087	.154
Three adults or more	-.134	.214	-.135	.214	-.136	.214	-.132	.215
Intergenerational tenure status								
Parent owned home	.149	.112	.149	.112	.148	.112	.146	.112
Tract-level characteristics								
Housing cost	.359**	.178	.357**	.178	.358**	.178	.358**	.178
Constant	-3.898	.349	-3.895	.349	-3.895	.349	-3.896	.350
N	2,254		2,254		2,254		2,254	
Rho	-.191		-.208		-.200		-.171	
P-value	.108		.077		.087		.132	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

significant predictor. The significance of 2004 participation levels suggests that initial differences in participation had a strong impact on later participation.

Summing up, homeownership was not a significant predictor when respondents' previous participation levels were included. This study also found following variables were significant in other group participation. The older age groups, respondents with higher education levels and households with three or more children were more likely to participate. Characteristics of being male or two adults per household were associated with being less likely to participate in other groups.

The next section focuses on the results of church group participation employing the same analytical approaches used to assess other volunteering and charitable group participation.

Church Group Participation

Table 8 shows the results of the bivariate probit regression analysis on church group participation. The sample for church group participation was smaller than the full sample. Respondents who reported they attended a church or a religious organization in 2007 were used in the analysis from model I through model IV (N=1,152). In model V, the sample was further restricted to those who also attended a church or religious organization in 2004 to test the effect of 2004 participation in the model (N=980).

The estimated ρ= -.306 was not significant in the ratio test χ^2 = 2.289 (p= .130) and suggested that selection bias was not a severe problem. Homeownership was not a significant predictor in explaining church group participatipon. Hispanics were less likely to participate compared to Whites. Being married or partnered, compared to never married, was associated with a .360 unit increase in participation (p<.1). Higher educated respondents were more

Table 8. *Church Group Participation: Bivariate Probit Regression, Model I*

	Estimating homeownership		Estimating church group participation	
	Coef	Robust SE	Coef	Robust SE
Homeownership			.460	.305
Age (25 years old or less)				
Age 26-39	.017	.173	.049	.141
Age 40-50	.243	.194	.152	.167
Age 51 or older	.080	.218	.197	.197
Male	.378**	.174	-.092	.115
Race (White)				
Black	-.588***	.141	.164	.116
Hispanic	-.328*	.197	-.394***	.151
Other	-.500*	.297	.035	.253
Marital status (Never married)				
Married & partnered	-.167	.238	.360*	.191
Widowed, Divorced & Separated	-.233	.156	.123	.140
Education (HS grad.)				
11th grade	-.360	.231	-.262	.184
Some college	.175	.140	.213*	.118
Bachelor's degree or more	.143	.177	.315**	.129
Income	5.274***	.501	-.256	.267
Employment (Employed)				
Unemployed	-.891***	.264	.135	.227
Retired	-.361*	.214	.050	.157
Number of children (No child)				
One child	.244	.153	-.096	.118
Two children	.357*	.183	.067	.140
Three children or more	.483**	.236	.143	.169
Number of adults (One adult)				
Two adults	-.065	.202	-.208	.174
Three adults or more	-.105	.254	-.498**	.214
Intergenerational tenure status				
Parent owned home	-.026	.150		
Tract-level characteristics				
Housing cost	.545**	.244		
Constant	-3.627	.465	-.088	.272
N	1,152		1,152	
Rho	-.306			
P-value	.130			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

likely to participate in church groups. Three adults or more per household was associated with decrease in participation ($p<.05$).

Table 9 presents subsequent results of the bivariate probit regression models for church group participation when each measurement of mobility and previous level of participation was included.

The estimated ρ was not significant in all models and suggested that selection bias was not a severe problem. The following section continues with interpretation of important predictors in the models. First of all, Homeownership was not a significant predictor in all models. Second, one of the moving patters was marginally significant. Respondents who moved to different neighborhoods were less likely to participate in church groups compared to those who did not move ($p<.1$). This was also true when year1 participation was controlled for in the final model ($p<.1$). Third, respondent characteristics that were significantly related to church group participation included being Hispanic, married or partnered, some college education and Bachelor's degree or more education. The significance of the variables, however, disappeared in the final model. Only one covariate, three adults or more per households, was negatively related to church group participation throughout the models. Lastly, final model indicated the greatest effect on current participation in church groups was respondents' previous participation levels.

The next section focuses on the results of participation in PTAs employing the same analytical approaches used to assess church group participation.

Table 9. *Church Group Participation: Bivariate Probit Regression, Models II - V*

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Church group participation								
Homeownership	.375	.315	.364	.320	.362	.323	.437	.411
Length of residency (<1 year)								
1-4 years	-.109	.194						
4-9 years	.099	.178						
Over 10 years	.110	.226						
Number of moves (No moves)								
One move			-.153	.127				
Two or more moves			-.162	.175				
Moving pattern (No moves)								
Within neighborhood					.171	.260	.122	.283
Across neighborhood					-.210*	.134	-.261*	.157
County level move					.024	.197	-.069	.219
Year 1 participation							1.169***	.112
Age (25 years old or less)								
Age 26-39	.044	.141	.041	.141	.042	.141	-.015	.151
Age 40-50	.131	.167	.131	.168	.133	.167	.242	.186
Age 51 or older	.178	.198	.175	.198	.175	.198	.253	.224
Male	-.092	.116	-.093	.116	-.091	.116	.003	.137
Race (White)								
Black	.161	.117	.161	.117	.163	.116	.173	.134
Hispanic	-.395***	.150	-.394***	.151	-.385***	.151	-.248	.167
Other	.029	.253	.027	.254	.042	.255	.100	.316

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	.367*	.192	.361*	.193	.361	.194	.426**	.200
Widowed, Divorced & Separated	.114	.140	.120	.140	.113	.141	-.002	.153
Education (HS grad.)								
11th grade	-.264	.184	-.266	.185	-.278	.185	-.263	.238
Some college	.232**	.118	.230**	.118	.232**	.118	.131	.136
Bachelor's degree or more	.322**	.131	.326**	.131	.321**	.131	.233	.151
Income	-.203	.274	-.205	.277	-.202	.279	-.302	.306
Employment (Employed)								
Unemployed	.155	.234	.148	.231	.132	.219	.204	.291
Retired	.055	.157	.054	.158	.054	.159	.056	.185
Number of children (No child)								
One child	-.090	.118	-.085	.119	-.077	.119	-.006	.127
Two children	.069	.139	.080	.140	.074	.139	.211	.147
Three children or more	.138	.169	.147	.170	.130	.170	.142	.183
Number of adults (One adult)								
Two adults	-.206	.174	-.197	.175	-.199	.175	-.258	.188
Three adults or more	-.486**	.214	-.477**	.216	-.477**	.217	-.465**	.232
Constant	-.133	.312	-.029	.282	-.026	.279	-.654	.331
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.018	.173	.017	.174	.017	.174	.067	.196
Age 40-50	.243	.194	.243	.194	.243	.194	.158	.219
Age 51 or more	.080	.219	.079	.219	.080	.219	-.139	.239
Male	.378**	.174	.378**	.174	.377**	.174	.412**	.188
Race (White)								
Black	-.587***	.141	-.587***	.141	-.586***	.141	-.562***	.149
Hispanic	-.328*	.197	-.328*	.197	-.328*	.197	-.468**	.197
Other	-.500*	.297	-.499*	.297	-.497*	.297	-.385	.320

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.166	.239	-.167	.239	-.162	.239	-.112	.252
Widowed, Divorced & Separated	-.231	.157	-.230	.157	-.229	.157	-.102	.167
Education (HS grad.)								
11th grade	-.362	.232	-.361	.232	-.360	.232	-.196	.240
Some college	.172	.140	.173	.140	.172	.140	.073	.162
Bachelor's degree or more	.140	.176	.141	.176	.140	.177	.084	.193
Income	5.277***	.500	5.278***	.500	5.279***	.500	5.160***	.528
Employment (Employed)								
Unemployed	-.891***	.264	-.889***	.264	-.889***	.264	-.585**	.251
Retired	-.367*	.214	-.367*	.214	-.368*	.215	-.366*	.220
Number of children (No child)								
One child	.242	.153	.243	.153	.241	.153	.128	.158
Two children	.356**	.183	.356**	.183	.356**	.183	.185	.194
Three children or more	.479**	.236	.480**	.236	.474**	.236	.287	.241
Number of adults (One adult)								
Two adults	-.064	.203	-.064	.203	-.065	.203	-.102	.212
Three adults or more	-.105	.256	-.103	.255	-.105	.256	.070	.299
Intergenerational tenure status								
Parent owned home	-.024	.150	-.025	.150	-.022	.150	-.151	.154
Tract-level characteristics								
Housing cost	.541**	.244	.541**	.245	.540**	.245	.526**	.253
Constant	-3.625	.465	-3.628	.465	-3.630	.466	-3.328	.518
N	1,152		1,152		1,152		980	
Rho	-.293		-.293		-.289		-.376	
P-value	.147		.149		.157		.153	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Participation in PTAs

Table 10 shows the results of the bivariate probit regression analysis on participation in PTAs. The sample for PTA participation was smaller than the full sample. Respondents with children were analyzed through models I to model IV (N=1,273). In model V, the sample was further restricted to those who also had had children in 2004 to test the effect of 2004 participation in the model (N=980).

The estimated ρ= .066 was not significant in the ratio test $\chi^2 = 2.289$ (p= .648) and suggested that selection bias was not a problem. Homeownership was not significant. Respondents aged 26-50 were more likely to participate in PTAs compared to the younger age group. Males were less likely to participate.in PTAs. Respondents characteristics that was positively related to PTA participation included being Black, Bachelor's degree or more education and having more than two children per household.

Table 11 illustrates subsequent results of the bivariate probit regression models for participation in PTAs when each measurement of mobility and previous level of participation was included.

Throughout the models, the estimated ρ was not significant in the ratio test χ^2 and this suggested that selection bias was not a severe problem. The following section continues with interpretation of important predictors in the models. First, homeownership was not significant in all models. Second, number of moves was a significant predictor in model II. Respondents who moved once were positively associated with participation in PTAs compared to respondents who never moved ($p < .05$). Also, model III indicated that one of the moving patterns was significant ($p < .05$). Respondents who moved to a different

Table 10. *PTA Participation: Bivariate Probit Regression, Model I*

	Estimating homeownership		Estimating PTA group participation	
	Coef	Robust SE	Coef	Robust SE
Homeownership			-.102	.268
Age (25 years old or less)				
Age 26-39	.200	.167	.365***	.138
Age 40-50	.099	.190	.363**	.170
Age 51 or more	.201	.262	-.029	.251
Male	.512***	.184	-.301**	.145
Race (White)				
Black	-.729***	.160	.418***	.132
Hispanic	-.327*	.177	.198	.137
Other	-.355	.340	.237	.277
Marital status (Never married)				
Married & partnered	-.314	.275	.058	.243
Widowed, Divorced & Separated	-.064	.181	-.270	.184
Education (HS grad.)				
11th grade	.022	.210	.068	.187
Some college	.329**	.153	.118	.133
Bachelor's degree or more	.288	.190	.470***	.144
Income	5.364***	.515	.227	.282
Employment (Employed)				
Unemployed	-.650**	.269	-.227	.221
Retired	-.797***	.215	-.185	.189
Number of children (One child)				
Two children	.280*	.154	.354***	.112
Three children or more	.377**	.193	.456***	.134
Number of adults (One adult)				
Two adults	.096	.243	-.296	.226
Three adults or more	.028	.306	-.172	.247
Intergenerational tenure status				
Parent owned home	.282*	.164		
Tract-level characteristics				
Housing cost	.617**	.247		
Constant	-4.187	.510	-1.301	.312
N	1,273		1,273	
Rho	.0659			
P-value	.648			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Table 11. *PTA Participation: Bivariate Probit Regression, Models II – V*

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
PTA group participation								
Homeownership	-.056	.275	-.011	.272	.031	.273	-.173	.352
Length of residency (<1 year)								
1-4 years	.265	.228						
4-9 years	.059	.206						
Over 10 years	.168	.253						
Number of moves (No moves)								
One move			.261**	.134				
Two or more moves			.072	.200				
Moving pattern (No moves)								
Within neighborhood					.176	.241	.238	.301
Across neighborhood					.272*	.148	.428**	.183
County level move					-.223	.206	-.083	.254
Year 1 Participation							1.267***	.126
Age (25 years old or less)								
Age 26-39	.368***	.139	.374***	.137	.374***	.137	.132	.172
Age 40-50	.364**	.171	.389***	.172	.384**	.170	.101	.203
Age 51 or older	-.027	.250	-.010	.255	-.003	.253	-.160	.290
Male	-.304**	.140	-.312***	.144	-.314**	.139	-.114	.181
Race (White)								
Black	.419***	.132	.438***	.133	.421***	.133	.245*	.152
Hispanic	.193	.138	.192	.136	.175	.137	.234	.160
Other	.265	.278	.272	.281	.242	.282	.221	.294

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	.065	.248	.073	.240	.087	.239	-.002	.280
Widowed, Divorced & Separated	-.236	.181	-.255	.185	-.252	.181	-.351	.199
Education (HS grad.)								
11th grade	.068	.186	.083	.183	.089	.182	.127	.197
Some college	.101	.134	.100	.134	.106	.134	.059	.157
Bachelor's degree or more	.476***	.146	.453***	.145	.474***	.147	.488***	.176
Income	.179	.285	.150	.285	.137	.286	.122	.324
Employment (Employed)								
Unemployed	-.244	.223	-.235	.219	-.233	.220	-.121	.247
Retired	-.207	.187	-.197	.187	-.188	.187	-.153	.216
Number of children (One child)								
Two children	.366***	.111	.358***	.112	.358***	.112	.176	.137
Three children or more	.461***	.132	.453***	.131	.467***	.131	.318**	.148
Number of adults (One adult)								
Two adults	-.276	.226	-.303	.223	-.294	.222	-.081	.260
Three adults or more	-.184	.250	-.209	.246	-.195	.245	-.131	.290
Constant	-1.417	.369	-1.367	.298	-1.410	.300	-1.318	.354
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.200	.167	.199	.168	.199	.168	.158	.195
Age 40-50	.099	.190	.098	.190	.098	.190	.068	.223
Age 51 or older	.201	.262	.201	.262	.201	.262	.090	.306
Male	.513***	.184	.514***	.184	.514***	.184	.717	.224
Race (White)								
Black	-.729***	.160	-.728***	.160	-.728***	.160	-.852***	.176
Hispanic	-.327*	.177	-.327*	.177	-.327*	.177	-.432**	.192
Other	-.355	.340	-.355	.341	-.354	.340	-.512	.384

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.314	.275	-.315	.275	-.315	.275	-.461	.363
Widowed, Divorced & Separated	-.064	.181	-.064	.181	-.063	.181	-.154	.221
Education (HS grad.)								
11th grade	.022	.210	.021	.210	.021	.210	.087	.214
Some college	.329**	.153	.328**	.153	.328**	.153	.392**	.166
Bachelor's degree or more	.287	.190	.286	.190	.286	.190	.457*	.239
Income	5.363***	.515	5.362***	.515	5.363***	.515	4.986***	.561
Employment (Employed)								
Unemployed	-.648**	.269	-.643**	.267	-.644**	.267	-.570**	.289
Retired	-.796***	.215	-.793***	.216	-.794***	.216	-.791***	.229
Number of children (One child)								
Two children	.281*	.154	.284*	.153	.283*	.154	.271*	.165
Three children or more	.377**	.193	.376**	.193	.376*	.193	.386**	.195
Number of adults (One adult)								
Two adults	.096	.243	.096	.243	.096	.243	-.013	.299
Three adults or more	.028	.306	.030	.306	.030	.306	.150	.398
Intergenerational tenure status								
Parent owned home	.283	.164	.285*	.164	.285	.164	.242	.179
Tract-level characteristics								
Housing cost	.617**	.247	.617**	.247	.617*	.247	.595**	.265
Constant	-4.188	.510	-4.188	.510	-4.189	.510	-3.714	.557
N	1,273		1,273		1,273		973	
Rho	.062		.043		.047		.101	
P-value	.671		.767		.746		.594	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

neighborhood were associated with a positive increase in participation compared to those who did not move. This finding suggests that respondents who moved one time or changed their neighborhoods participated more in PTAs compared to those who did not move. Third, the direction and significance of the covariates illustrates the similar patterns in models II through IV. Respondent characteristics that were significantly related included respondents aged 26-50, being male and two children per household. These significances, however, disappeared in the final model. Lastly, final model illustrates the initial difference in participation had a strong impact on later participation. The significance of 'across neighborhood' persisted even when year1 participation was controlled ($p<.05$). Among other covariates, characteristics such as being Black, Bachelor's degree or more and three children or more were positively related to PTA participation.

Summing up, homeownership was not a significant predictor in PTA participation. Though respondents' previous participation levels were the greatest in magnitude, respondents who moved to a different neighborhood were associated with a positive increase in participation. In addition, other covariates such as race, education and the number of children were also positively related to participation in PTAs.

The next section focuses on the results of participation in any groups. The dependent variable of the next section is a dichotomous variable indicating whether a respondent participated or not in any of groups analyzed above sections.

Participation in Any Groups

Table 12 shows the results of the bivariate probit regression analysis on any group participation. The estimated $\rho= -.111$ was not significant in the ratio test $\chi^2 = .900$ ($p= .343$) and suggested that selection bias was not a problem. Homeownership was a significant

predictor in explaining any group participation. Demographic characteristics were positively related to any group participation included older age groups, being Black, being married or partnered, some college education, Bachelor's degree or more education and more children in

Table 12 *Any Group Participation: Bivariate Probit Regression, Model I*

	Estimating Homeownership		Estimating any group participation	
	Coef	Robust SE	Coef	Robust SE
Homeownership			.478**	.186
Age (25 years old or less)				
Age 26-39	.148	.130	.239**	.098
Age 40-50	.182	.141	.227**	.114
Age 51 or older	.113	.163	.358**	.141
Male	.360***	.113	-.322***	.080
Race (white)				
Black	-.481***	.110	.501***	.090
Hispanic	-.120	.146	.048	.115
Other	-.371*	.202	.177	.180
Marital status (Never married)				
Married & partnered	-.355**	.159	.319**	.143
Widowed, Divorced & Separated	-.250*	.146	.065	.110
Education (HS grad.)				
11th grade	-.199	.161	-.206	.131
Some college	.118	.111	.278***	.088
Bachelor's degree or more	.033	.146	.456***	.096
Income	5.242***	.364	-.012	.194
Employment (Employed)				
Unemployed	-.726***	.186	-.226	.151
Retired	-.529***	.146	.042	.120
Number of children (No child)				
One Child	.245**	.119	.162*	.091
Two children	.503***	.135	.280***	.100
Three children or more	.517***	.172	.467***	.128
Number of adults (One adult)				
Two adults	.088	.155	-.300**	.134
Three adults or more	-.136	.217	-.380**	.165
Intergenerational tenure status				
Parent owned home	.144	.113		
Tract-level characteristics				
Housing cost	.364**	.179		
Constant	-3.891	.349	-.765	.196
N	2,254		2,254	
Rho	-.111			
P-value	.343			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

households. To the contrary, both being male and additional adults in households were negatively related to any group participation.

Table 13 represents subsequent results of the bivariate probit regression models for participation in any group when each measurement of mobility and previous level of participation was included.

Throughout the models, estimated ρ was not significant in the ratio test χ^2 and this suggested that selection bias was not a severe problem. The following section continues with interpretation of important predictors in the models. First, homeownership was a significant predictor in all models. Second, mobility measures were not significant in all models. Third, the direction and significance of the covariates shows the similar pattern across the models.

Characteristics of respondents were positively related to any group participation included older age groups, being Black, being married or partnered, some college education, Bachelor's degree or more education and additional children in households. Both being male and additional adults were negatively related to participation. Lastly, the final model indicates initial differences in participation had a strong impact on current participation. Homeownership was also a significant predictor. A couple of changes in significance of variables were identified in the final model. The significance of characteristics such as the age group 40-50 and one child disappeared. To the contrary, being unemployed became significant in the negative direction.

Summing up, other covariates controlled for, homeownership was a positive predictor in any group participation. The greatest effect on current participation was respondents' previous participation levels. In addition, demographic characteristics were also significantly associated with participation in any groups.

Table 13. *Any Group Participation: Bivariate Probit Regression, Models II - V*

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Any group participation								
Homeownership	.437**	.192	.459**	.193	.472**	.193	.351*	.184
Length of residency (<1 year)								
1-4 years	.004	.143						
4-9 years	.083	.130						
Over 10 years	.130	.161						
Number of moves (No moves)								
One move			.004	.095				
Two or more moves			-.075	.129				
Moving pattern (No moves)								
Within neighborhood					.176	.193		
Across neighborhood					.023	.104		
County level move					-.212	.136		
Year 1 participation							.891***	.071
Age (25 years old or less)								
Age 26-39	.235**	.098	.235**	.098	.233**	.098	.205**	.100
Age 40-50	.213*	.115	.221*	.116	.218*	.115	.162	.118
Age 51 or older	.343**	.141	.349**	.142	.344**	.142	.323**	.143
Male	-.323***	.081	-.322***	.081	-.327***	.080	-.213***	.082
Race (White)								
Black	.499***	.090	.503***	.090	.489***	.090	.451***	.092
Hispanic	.051	.116	.047	.115	.037	.115	.071	.119
Other	.183	.180	.182	.180	.168	.179	.140	.185

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	.325**	.144	.316**	.143	.326**	.142	.319**	.143
Widowed, Divorced & Separated	.063	.110	.061	.110	.066	.110	.036	.116
Education (HS grad.)								
11th grade	-.205	.132	-.204	.131	-.204	.131	-.158	.136
Some college	.284***	.089	.282***	.089	.285***	.089	.211**	.092
Bachelor's degree or more	.464***	.097	.456***	.097	.473***	.097	.288***	.098
Income	.009	.196	-.011	.198	-.013	.198	-.084	.197
Employment (Employed)								
Unemployed	-.227	.153	-.224	.152	-.230	.147	-.337**	.158
Retired	.039	.120	.041	.120	.046	.121	.022	.120
Number of children (No child)								
One child	.167*	.091	.166*	.090	.163*	.089	.154	.095
Two children	.280***	.100	.282***	.100	.271***	.100	.199**	.103
Three children or more	.463***	.128	.465***	.129	.457***	.128	.435***	.130
Number of adults (One adult)								
Two adults	-.298**	.134	-.297**	.135	-.291**	.134	-.273**	.137
Three adults or more	-.376**	.166	-.378**	.167	-.370**	.167	-.369**	.172
Constant	-.822	.229	-.741	.199	-.751	.197	-.836	.199
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.148	.130	.148	.130	.148	.130	.148	.130
Age 40-50	.182	.141	.182	.141	.181	.141	.181	.141
Age 51 or older	.113	.163	.113	.163	.113	.163	.113	.163
Male	.360***	.113	.360***	.113	.360***	.113	.361***	.113
Race (White)								
Black	-.481***	.110	-.481***	.110	-.481***	.110	-.481***	.110
Hispanic	-.120	.146	-.120	.146	-.120	.146	-.123	.146
Other	-.371*	.202	-.371*	.202	-.372*	.202	-.372*	.202

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.356**	.159	-.355**	.159	-.355**	.159	-.354**	.159
Widowed, Divorced & Separated	-.250*	.146	-.250*	.146	-.250*	.146	-.247*	.145
Education (HS grad.)								
11th grade	-.199	.161	-.200	.161	-.200	.161	-.199	.161
Some college	.118	.112	.118	.112	.118	.112	.118	.112
Bachelor's degree or more	.032	.146	.033	.146	.033	.146	.033	.146
Income	5.243***	.364	5.242***	.364	5.242***	.364	5.242***	.364
Employment (Employed)								
Unemployed	-.726***	.186	-.726***	.186	-.726***	.186	-.726***	.185
Retired	-.530***	.146	-.529***	.146	-.529***	.146	-.534***	.145
Number of children (No child)								
One child	.245**	.119	.245**	.119	.245**	.119	.245**	.119
Two children	.502***	.135	.503***	.135	.503***	.135	.499***	.134
Three children or more	.517***	.172	.517***	.172	.517***	.172	.518***	.172
Number of adults (One adult)								
Two adults	.088	.155	.088	.155	.087	.155	.090	.155
Three adults or more	-.135	.218	-.136	.217	-.137	.218	-.131	.216
Intergenerational tenure status								
Parent owned home	.144	.113	.144	.113	.143	.113	.144	.113
Tract-level characteristics								
Housing cost	.363**	.179	.541**	.364	.364**	.179	.365**	.179
Constant	-3.891	.349	-3.628	-3.890	-3.890	.349	-3.893	.348
N	2,254		2,254		2,254		2,254	
Rho	-.106		-.293		-.111		-.105	
P-value	.343		.336		.3.44		.368	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

The next section focuses on the results of volunteering hours. The dependent variable, a continuous measure of volunteering hours per month (logged), was analyzed by treatment regression model.

Volunteering Hours

Table 14 presents the results of the treatment regression analysis for volunteering hours per month (logged). The goodness of fit test reported model $\chi^2 = 196.89$ ($p<.001$) and this indicated the model was appropriate. With $p<.001$, this suggested that the covariates used in the regression model were appropriate and at least one of the covariates has an effect that is not equal to zero (Guo & Fraser, 2010). The estimated $\rho=-.089$, however, was not significant in the ratio test $\chi^2 = 1.26$ ($p=.26$) and the null hypothesis was retained which did not confirm that ρ was significantly different from 0.

First of all, homeownership was a positive predictor in volunteering hours. Being a homeowner was associated with a .294 unit increase in volunteering hours. Demographic variables were significant. The oldest age group (age 51 or more) was associated with a positive increase in volunteering hours compared to the younger age group (25 years old or less). The relationship between being male and volunteering hours was negative. Blacks were positively related to volunteering hours compared to Whites. Higher educated respondents showed a greater investment of time in volunteering compared to high school graduates. The relationship between volunteering hours and additional people in the household was mixed. Compared households without children, households with two children or more was associated with a positive increase in volunteering hours. To the contrary, three adults or more per household was negatively related.

Table 14. *Volunteering Hours: Treatment Regression, Model I (All)*

	Estimating homeownership		Estimating volunteering hours	
	Coef	Robust SE	Coef	Robust SE
Homeownership			.294**	.134
Age (25 years old or less)				
Age 26-39	.149	.128	.127	.081
Age 40-50	.182	.142	.114	.091
Age 51 or older	.118	.161	.199*	.113
Male	.356***	.112	-.164**	
Race (White)				
Black	-.482***	.116	.384***	.073
Hispanic	-.118	.147	-.011	.099
Other	-.376	.203	.208	.160
Marital status (Never married)				
Married & partnered	-.352**	.164	.159	.103
Widowed, Divorced & Separated	-.243*	.148	.115	.084
Education (HS grad.)				
11th grade	-.196	.156	-.309***	.102
Some college	.122	.113	.252***	.072
Bachelor's degree or more	.039	.143	.363***	.080
Income	5.230***	.363	.003	.169
Employment (Employed)				
Unemployed	-.731***	.186	-.059	.118
Retired	-.538***	.144	.015	.094
Number of children (No child)				
One child	.242**	.116	.076	.067
Two children	.493***	.134	.285***	.081
Three children or more	.518***	.173	.328***	.100
Number of adults (One adult)				
Two adults	.096	.157	-.118	.102
Three adults or more	-.125	.215	-.218*	.126
Intergenerational tenure status				
Parent owned home	.148	.111		
Tract-level characteristics				
Housing cost	.376**	.177		
Constant	-3.900	.346	-.765	.196
N	2,254		2,254	
Rho	-.0891			
P-value	.262			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Table 15 shows subsequent results of the treatment regression analysis for volunteering hours per month (logged) when each measurement of mobility and previous level of volunteering hours was included. A measure of the length of residency was included in model II and a measure of number of moves between 2004 and 2007 was included in model III. Model VI included a measure of 'moving patterns' which is the interaction of housing mobility and neighborhood mobility. Model V included a continuous measurement of 2004 volunteering hours per month (logged).

Throughout the models, the goodness of fit test statistics and chi-square indicated models were appropriate. With $p<.001$, this suggested that the covariates used in the regression models were appropriate. However, the estimated ρ was not significant in the ratio test chi-square and the null hypothesis was retained which did not confirm that ρ was significantly different from 0. Consequently, this suggested selection bias was not a severe problem in the models. The following section continues with interpretation of important predictors in the models.

First, homeownership was a positive predictor in volunteering hours in all models. Being a homeowner was associated with a positive increase in volunteering hours. Second, mobility measures were not significant in all models. Third, respondents' demographic characteristics were positively related to volunteering hours included being Black, some college education, Bachelor's degree or more education, two children in households and three children or more per household. To the contrary, both being male and three adults or more per household were negatively related to volunteering hours. Lastly, the final model suggested that homeownership was a positive predictor. Also, initial differences in volunteering hours had a strong impact on current volunteering hours.

Table 15. *Volunteering Hours: Treatment Regression, Models II - V (All)*

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Volunteering hours (log)								
Homeownership	.249*	.142	.256*	.143	.273*	.141	.278**	.114
Length of residency (<1 year)								
1-4 years	.008	.117						
4-9 years	-.049	.139						
Over 10 years	-.131	.123						
Number of moves (No moves)								
One move			.013	.081				
Two or more moves			-.156	.101				
Moving pattern (No moves)								
Within neighborhood					-.012	.119		
Across neighborhood					-.007	.085		
County level move					-.139	.116		
Year 1 volunteering hours							.459***	.024
Age (25 years old or less)								
Age 26-39	.125	.081	.118	.081	.120	.081	.056	.071
Age 40-50	.114	.090	.104	.090	.103	.090	.047	.082
Age 51 or older	.202*	.112	.180	.113	.182	.113	.081	.097
Male	-.168***	.061	-.166***	.061	-.167***	.061	-.092***	.054
Race (White)								
Black	.380***	.075	.389***	.075	.375***	.076	.223***	.067
Hispanic	-.013	.098	-.014	.098	-.020	.098	.063	.082
Other	.210	.158	.216	.159	.202	.159	.144	.143

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	.166	.107	.153	.106	.163	.106	.042	.088
Widowed, Divorced & Separated	.105	.085	.108	.085	.115	.085	.047	.076
Education (HS grad.)								
11th grade	-.307***	.102	-.305***	.102	-.304***	.103	-.232**	.095
Some college	.257***	.073	.260***	.073	.259***	.073	.116*	.064
Bachelor's degree or more	.363***	.082	.363***	.082	.374***	.082	.150**	.072
Income	.036	.176	.003	.177	.014	.176	.011	.146
Employment (Employed)								
Unemployed	-.061	.119	-.056	.117	-.057	.118	-.032	.104
Retired	.017	.097	.013	.097	.020	.097	.052	.086
Number of children (No child)								
One child	.079	.068	.084	.067	.077	.068	.054	.059
Two children	.286***	.082	.289***	.082	.280***	.082	.214***	.071
Three children or more	.331***	.101	.324***	.102	.324***	.102	.219**	.093
Number of adults (One adult)								
Two adults	-.127	.099	-.112	.099	-.110	.099	-.074	.083
Three adults or more	-.220*	.119	-.214*	.120	-.207*	.120	-.223**	.107
Constant	.450	.205	.470	.166	.442	.163	.079	.148
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.149	.130	.148	.130	.149	.130	.150	.130
Age 40-50	.182	.141	.182	.141	.182	.141	.182	.141
Age 51 or older	.118	.162	.118	.162	.118	.162	.119	.162
Male	.357***	.114	.356***	.114	.356***	.114	.359***	.114
Race (White)								
Black	-.482***	.110	-.482***	.110	-.482***	.110	-.483***	.110
Hispanic	-.118	.146	-.117	.146	-.118	.146	-.124	.146
Other	-.376*	.203	-.376*	.203	-.376*	.203	-.377*	.202

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.353**	.159	-.351**	.159	-.353**	.159	-.359	.159
Widowed, Divorced & Separated	-.244*	.146	-.243*	.146	-.243*	.146	-.241	.147
Education (HS grad.)								
11th grade	-.196	.161	-.196	.160	-.196	.161	-.192	.161
Some college	.122	.112	.122	.112	.122	.112	.121	.112
Bachelor's degree or more	.038	.146	.039	.146	.039	.146	.037	.146
Income	5.23***	.364	5.23***	.364	5.23***	.364	5.23***	.364
Employment (Employed)								
Unemployed	-.730***	.184	-.731***	.185	-.731***	.185	-.734***	.185
Retired	-.539***	.145	-.539***	.145	-.539***	.145	-.545***	.144
Number of children (No child)								
One child	.241**	.118	.241**	.118	.241**	.118	.241**	.118
Two children	.492***	.133	.493***	.133	.493***	.133	.495***	.133
Three children or more	.518***	.172	.518***	.172	.518***	.172	.523***	.174
Number of adults (One adult)								
Two adults	.097	.154	.096	.154	.096	.154	.100	.154
Three adults or more	-.125	.213	-.126	.213	-.125	.213	-.116	.212
Intergenerational tenure status								
Parent owned home	.148	.113	.147	.113	.147	.113	.152	.113
Tract-level characteristics								
Housing cost	.376**	.179	.377**	.079	.377**	.179	.372**	.178
Constant	-3.901	.348	-3.900	.348	-3.900	.348	-3.900	.348
N	2,254		2,254		2,254		2,254	
Rho	-.085		-.141		-.088		-.082	
P-value	.292		.241		.269		.291	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Summing up, homeownership was a positive predictor in all models. Respondents' previous volunteering levels were positive and had a strong effect on current levels of volunteering. Other things being equal, respondents' characteristics such as being male, being race, education and additional people in households were significant predictors in volunteering.

However, the interpretation of results from treatment regression needed some caution and required additional analysis to avoid item non-response bias (Heckman, 1979; Heckman, Ichimura, Smith, & Todd, 1996; K. Jones, 2006; Maddala, 1983; Vella, 1998). Selection bias from item non-response occurs when observations with missing values are systematically different from those who responded to the question (A. Jones, 2007). Data on hours of volunteering per month were only available for those who actually participated in any of organizations and this could create non-response bias. If selection bias from item non-response exists and suggested selection into any of group participations is not random, assigning zero value on volunteering hours and include in the models (Table 14 and 15) may produce biased results. In this case, coding non-response volunteer hours as 'missing' and censored in the models (Tables 14 and 15 in Appendices) are likely to produce biased results. Consequently additional analysis was conducted in the following section.

The next section focuses on the results of volunteering hours per month (logged) analyzed by the Heckman selection model.

Table 16 presents the result of the full-information maximum likelihood (FIML) of the Heckman selection model based on estimating the joint model for both selection and the outcome equation. The dependent variable of the analysis was the logged hours of volunteering per month and the selection variable of interest was any group participation.

Table 16. *Volunteering Hours to Any Group Participation: Heckman Selection Model*

	Estimating Any group participation		Estimating Volunteering hours	
	Coef	Robust SE	Coef	Robust SE
Homeownership	.315***	.096	.126	.126
Age (25 years old or less)				
Age 26-39	.239**	.094	.112	.122
Age 40-50	.230**	.111	.119	.135
Age 51 or older	.371***	.137	.141	.177
Male	-.292***	.077	-.094	.104
Race (White)				
Black	.478***	.084	.388***	.103
Hispanic	.055	.114	-.056	.143
Other	.144	.173	.250	.215
Marital status (Never married)				
Married & partnered	.308**	.137	.064	.172
Widowed, Divorced & Separated	.056	.107	.174	.121
Education (HS grad.)				
11th grade	-.199	.133	-.645***	.193
Some college	.283***	.086	.317***	.113
Bachelor's degree or more	.429***	.096	.423***	.128
Income	.029	.179	.127	.228
Employment (Employed)				
Unemployed	-.208	.163	.098	.208
Retired	.029	.114	.031	.138
Number of children (No child)				
One child	.159*	.087	.064	.100
Two children	.266***	.096	.387***	.116
Three children or more	.487***	.125	.354***	.147
Number of adults (One adult)				
Two adults	-.277**	.128	-.002	.154
Three adults or more	-.362**	.159	-.209	.179
Constant	-.705	.195	.352	.365
N	2,254		1,225	
Log likelihood	-53930.71			
Rho	.8435			
Sigma	1.285			
Lambda	1.084			
Wald test of $\rho = 0$: χ^2 (*df*=1)		21.11***		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Since selection bias from the status of homeownership was not severe in the previous results (Table 14 and Table 15), homeownership was included as an independent variable in both equations. The left two columns of results are for the any group participation and the last two columns are for volunteering hours (logged). First of all, a significant Wald chi-square of 62.04 in this model illustrated that the model was significant and the independent variables affected the number of hours volunteered. The ρ statistics represented the correlation of the error terms of the selection equation (whether or not one volunteer) and the outcome equation (how much they actually volunteer). The estimated ρ was .844, was significant in the Wald test of independent equation test $\chi^2 = 21.22$ ($p<.001$) and suggested ρ was significantly different from 0 and rejected null hypothesis. This suggested that, in this case, how much individuals spent time in volunteering was indeed dependent on the choice to volunteer.

The direction and significance of the covariates in selection equation illustrates the results that are similar to the last two columns of bivariate probit analysis on any group participation in Table 12. Among covariates, following variables were associated with a positive increase in the participation compared to the reference group: homeownership, age groups, being Black, married and partnered, some college, B.A. and more, one child, two children and three children. Being male, two adults per household and three adults or more per household were negatively related to any group participation compared to reference groups.

When controlled selection into group participation, one noteworthy difference compared to Table 14 was that homeownership became insignificant. Being Black was significant and associated with .388 unit increase in volunteering hours ($p<.01$). Respondents

with higher level of education were associated with greater hours of volunteering. Compared to high school graduates, having some college education was associated with .317 unit increase in volunteering hours. Having a Bachelor's degree or more education was associated with .423 unit increase in volunteering hours. Respondents with less than high school education were associated with .643 unit decrease in volunteering hours compared to high school graduates ($p<.01$). Compared to household without children, having two children per household was associated with .387 unit increase and having three or more children per household was associated with .354 unit increase in volunteering hours ($p<.01$). The results suggested that the impact of selection bias, participation in any groups in this case, should be neither ignored nor assumed to be random but should be explicitly used and modeled in the equation estimating the outcome regression (Guo & Fraser, 2009, p. 96). The major findings shown in the Table 18 are summarized below: First, selection into any group participation was not random. Second, homeownership was a positive predictor in any group participation. When selection was controlled for, however, homeownership was not a significant predictor of volunteering hours.

Summary of the Chapter

What Predicts Homeowners?

As the previous literature review indicated, this study confirmed that those who were traditionally marginalized were less likely to be homeowners (Glaster & Santiago, 2008; Oliver & Shapiro, 2006). Respondent demographic characteristics such as being female or Black were negatively related to homeownership. This negative association between homeownership and Blacks was suggested as evidence of the fact that differential access to homeownership for Blacks in the United States has always meant that they were less able to

accumulate wealth than Whites (Oliver & Shapiro, 2006). Income and employment, which are regarded as indispensible conditions for homeownership to enable repayment of a mortgage or debts (Doling, Horsewood, Kassanis, & Vasilakos, 2006) , were positively related to homeownership. Homeowners were more likely to be male. Family structures were also important factors in homeownership. Being married or partnered was negatively related to homeownership compared to never been married. In contrast, having an additional child in a household was a positive factor in homeownership.

Age and education levels were not significant variables in this study which is contradictory to previous research. The relationship between homeownership and income and education is has been found to interact with age patterns of homeownership (Carasso, et al., 2005; Carasso & McKernan, 2008). For example, the homeownership rate for families headed by persons between the ages 55-64 were much greater than families headed by persons under the age of 35 (79% vs. 39%) in 2004. One of the reasons that could explain this discrepancy is related to the characteristics of the CAP population (Riley & Ru, 2010a). Compared to homeowners with similar income from the Current Population Survey (CPS), homeowners of the CAP sample were more likely to be male, younger, and more educated.

In addition, housing cost was a significant variable indicating that homeowners were found more in areas where the 'average user cost of owner-occupied housing' to the 'average rent on rental housing' was higher. The direction of the variable was positive which was contradictory to the previous literatures (Green & White, 1997; Turner & Yang, 2006). This discrepancy is due to the geographical locations of the CAP sample. More than 74 percent of renters were located in the southern states whereas 61 percent of the CAP homeowners were

from the southern states. In addition no renters were from the Northeast region[4] (Riley & Ru, 2010a, 2010b).

Homeownership Effect on Civic Engagement

In this study, homeownership was hypothesized to have an independent, positive effect on civic engagement. Results of the bivariate probit regression analyses discussed in this chapter focused on this 'homeownership effect.' First, homeownership was a positive predictor of participation in neighborhood groups. The significance of homeownership was sustained when the 2004 participation level also was controlled for. Second, with regard to other group participation, homeownership was marginally significant in some models. However, the significance of homeownership disappeared after controlling for the 2004 participation level..Third, both in church group and school related participation, homeownership was not a significant predictor. Fourth, with regard to participation in any groups, homeownership was positively associated with participation. The significance of homeownership was sustained after the 2004 participation level was controlled for.

Overall the results indicated that homeownership was a significant predictor of both neighborhood group participation and any group participation. This finding is supported by the fact that homeowners typically participate more in place-based communities such as neighborhood associations (Rohe, et al., 2007; Rohe, et al., 2002b). However, this study found no difference between renters and homeowners in terms of participation in other groups, church groups and school related groups. These findings confirm that homeowners were not different from renters with regards to participation in other types of local organizations, (Rohe & Stegman, 1994).

[4] Geographical coverage of the baseline CAP homeowners included Midwest (25.6%), Northeast (2.6%), South (61.5%), and West (10.3%). Geographical coverage of the baseline renters included Midwest (13.9%), South (74.1%), and West (12.0%).

Homeownership Effect on Volunteering Hours

This study analyzed volunteering hours of respondents in two ways. The relationship between homeownership and volunteering hours was tested in the treatment regression analyses (Tables 14 and 15). As indicated before, however, data on hours of volunteering per month were only available for those who actually participated in any of organizations. Therefore additional analyses to avoid item non-response bias was reqired (K. Jones, 2006). The results of the 'full-information maximum likelihood' (FILM) of the Heckman selection model (Table 16) indicated that homeownership was not a significant predictor with regard to volunteering hours once participation in organizations was correctly controlled for. For comparison purposes, results of additional analyses are included in the Appendices. These analyses include the OLS regression analyses for all respondents and participants only (Tables 12-13 in Appendices) and the treatment regression analyses for participants only (Tables 14-15 in Appendices). In sum, homeownership had no effect on respondents' number of hours of volunteering when participation in any organizations was correctly controlled for (Gordon Nembhard & Blasingame, 2006; K. Jones, 2006).

Mobility Effect on Civic Engagement

Homeowners were found to be high in their place attachment as the housing mobility and tenure literature posited (Rohe, et al., 2002b). Results of this study showed that homeowners were longer 'stayers' than renters. More than 80 percent of homeowners lived in their same neighborhood more than 4 years whereas around 50 percent of the renters lived in their same neighborhoods over the same period. In this study, the homeownership effect was hypothesized to interact with the lower mobility of homeowners after controlling for the endogeneity of homeownership (DiPasquale & Glaeser, 1999; Glaeser, et al., 2002; Lerman

& McKernan, 2008). On the contrary however, the results of multivariate statistical analyses employed in this study showed that measurements of mobility -- a measure of the length of residency, a measure of the number of moves, and a measure of moving patterns – had little effect on civic engagement.

Only one measure of moving patterns-- the interaction of housing mobility and neighborhood mobility—was significant in church group participation and PTA participation. Respondents who moved to a different neighborhood were less likely to participate in church groups compared to respondents who never moved (Table 9). This variable was still significant after controlling for the previous levels of participation. Church groups are one type of the place-based communities (Brisson & Usher, 2007a) so participation in the groups depends on the places where people live. Another explanation could be made from the fact that moving almost always breaks some types of social ties. For example, in the Moving to Opportunity (MTO) program in Los Angeles, the experimental group (those who moved to new neighborhoods) was less likely to belong to church groups compared to the control group (Hanratty, McLanahan, & Petit, 2003).

With regard to participation in PTAs, this study found that those who moved to different neighborhoods were more likely to participate compared to those who never moved even after controlling for previous levels of participation (Table 11). A similar result was found in research on the MTO program in New York, when respondents moved to new neighborhoods, parents were thought to utilize more resources, in this case involvement in their children's schools (Leventhal & Brooks-Gunn, 2003). Specifically the Section 8 parents were more likely to participate in school related activities compared to the control group.

Effects of Demographic Variables

These results showed that individual status differentiations such as age, gender, race, education and employment status were important predictors of participation in organizations and investment of time in volunteering (Cnaan & Cascio, 1999; J. Wilson, 2000).

Civic engagement is thought to be lower during the transition from school-related age to young adulthood and to rise again to its peak in middle age (J. Wilson, 2000). This study found that compared to the younger age group (25 years old or less), older age groups were more likely to participate in neighborhood groups, other groups and any groups. Overall the oldest age group (age 51 or more) was more likely to participate in the groups mentioned above. For participation in PTAs, the age groups (26-39 and 40-50) were more likely to participate compared to the younger age group. No age difference was found in church group participation.

Other things being equal, females were more likely to participate in all types of organizations. This could be due to the fact that women's participation in volunteering organizations is much greater than men across all age groups, educational levels and other demographic characteristics (Bureau of Labor Statistics, 2008).

Throughout the analyses for this study, racial difference in participations was significant. Blacks were significantly more likely to participate in neighborhood groups, PTAs and 'any groups.' In addition, Blacks were more likely to invest time in volunteering compared to Whites. A similar result is also found in a study conducted by Brown & Ferris (2007) in which Blacks and Hispanics were reported to be more likely to volunteer than Whites after controlling for social capital and human capital. Being Hispanic was negatively related to participation in church groups other than religious services (Tables 8-9). Specifically Hispanics were less likely to attend church related groups compared to Whites.

No difference between Whites and Blacks was found in this category of participation. One explanation for this pattern is drawn from research conducted by Putnam and his colleagues (2003). In their analyses of the Social Capital Community Benchmark Survey data, Hispanics showed greater religious affiliation and church attendance than Whites but lower levels of membership in and lower levels of participation in religious activities outside of services (Putnam, Feldstein, & Cohen, 2003).

As previous literature has indicated, educational attainment was positively related to participation in groups and volunteering (J. Wilson, 2000; J. Wilson & Musick, 1997a). The significance of education, especially the difference between high school graduates and respondents with a Bachelor's degree or more education, was identified throughout the models tested here. When previous levels of participation, homeownership, and other covariates were controlled for, the significance of education still persisted in most cases.

The literature relevant for this study pointed out that individuals' chances of participation and volunteering are also increased by the availability of family relations (E. Brown & Ferris, 2007; J. Wilson, 2000). This study found that factors related to family structure were significant in measures of both participation and volunteering. Compared to never married respondents, those who were married or partnered were more likely to participate in church groups and 'any groups.' The overall relationship between the number of children in a household and participation in groups was mixed. For example, having an additional child in households was negatively related to participation in neighborhood groups but was positively related to participation in other groups, PTAs, 'any groups' and volunteering hours. Having an additional adult in households was negatively related to

participation in most of the groups. Being married or partnered was positively associated with participation in neighborhood groups, church groups and 'any groups.'

Lastly, other things being equal, income was not a significant variable in either participation in groups or in volunteering hours. Employment status was associated with participation in some groups. Being retired was positively related to participation in neighborhood groups. On the other hand however, being unemployed was negatively related to participation in any groups.

CHAPTER VI: CONCLUSION

Findings from this study confirmed that attainment of homeownership is not for everyone. Results showed that those who were historically disenfranchised were less likely to become homeowners. Findings from this study have provided some evidence that low-income homeowners are more likely to be involved in civic engagement than renters. The relationship between homeownership and civic engagement varied in relation to the types of organizations people select to participate in. The relationship between homeownership and civic engagement was further investigated. In contrast to previous studies, homeowners' less frequent moving was not significantly associated with participation levels in civic engagement. The relationship between homeownership and hours of volunteering was not significant when participation in civic engagement was correctly controlled for. Findings from this study also provided some evidence that differences in civic engagement was a reflection of differences in demographic characteristics. The following sections of this chapter will discuss issues relating to homeownership, mobility and civic engagement.

Who Owns and Who is Eligible to Own

In three books, William Julius Wilson, has pointed out structural forces shaping inequality in the lives of inner-city residents and especially the lives of Blacks in the United States (W. J. Wilson, 1987, 1996, 2009). His insightful discussions on lives of inner-city Blacks render useful implications for this study. In the following section, I summarize Wilson's points on racial inequality and then discuss them in relation to the racial disparity in

homeownership. Further I discuss the cultural aspects of this inequality as it is expressed in the "American Dream."

According to Wilson (2009), the long history of racial segregation and concentrations of poverty in inner-cities has its roots in structural and economic barriers shaped by government policies and decisions. New infrastructures such as public transportation that was not intended to be racially biased and highway policies in the 1950s both brought about suburbanization of the White middle class and divided sections of cities vividly in terms of race and class (W. J. Wilson, 2009). At the same time, government policies facilitated "flight" of White middle-class households from inner-cities through new Federal Housing Administration (FHA) and Veterans Administration (VA) policies that financed many of houses in suburbs being purchased by by middle-class Whites civilians and veterans .Black veterans were not eligible to participate in suburban home purchase through the G.I. Bill. The relationship between the cities and suburbs was aggravated as suburban municipalities gained financial resources as budgets financing in cities declines sharply. Further increasing segregation, suburbs consistently screened out new residents by their race through anti-Black covenants and concentrated segregation effects by real estate brokers. Federal public housing policies also contributed this racially developing pattern of segregation. And eventually public housing "became a federally funded institution that isolated families by race and class, resulting in high concentrations of poor black families in inner-city ghetto" (2009, p.32). From the 1940s through 1970s, inner- cities faced ever greater demands for housing by the 'Second Great Migration' of African Americans from the South to the Midwest and Northeast. Problematic housing conditions in inner-cities were exacerbated in terms of the

concentration of poverty and racial segregation coupled with constantly increasing out-migration of middle-income Blacks as well as Whites.

The economic situations of inner-city residents further deteriorated as the "suburbanization of employment," "disappearance of manufacturing jobs in inner-cities," and "spatial mismatches in employment" progressed rapidly (W. J. Wilson, 1996, 2009). The serious retrenchment of basic social services that occurred during the 1980s also contributed to the problems of inner-city neighborhoods. Coinciding with the increased both impact of globalization and deindustrialization across the nation (Iversen & Cusack, 2000), further decline in federal supports had an adverse effect on the situation of inner-city unemployment, poverty and social problems (W. J. Wilson, 2009).

In relation to low-to-moderate income homeownership, Wilson's discussion provides useful insight. First, some government policies and decisions such as redlining practiced by the FHA and public housing programs were exercised based on explicit racial bias. Moreover, most of the federal policies discussed above were at least implicitly racial specific in a sense that these policies profoundly impacted the lives of inner-city residents and neighborhoods. As findings of this study showed, the odds of becoming homeowners for those who have been historically and structurally marginalized from the homeownership market are much smaller[5]. Therefore, the historical legacy of differential access to homeownership in the United States should be examined reflexively in order to overcome historical barriers. Simultaneously greater regulations imposed on the current mortgage industry such as new regulatory standards on mortgage lending and credits debts should not be detrimental to those who want to attain homeownership. Though, vastly increased homeownership with subprime mortgages actually triggered the recent financial crisis and housing remains a drag on

[5] The CAPS panel is not a random sample of society. It is selected based on income and minority status

economy (Kiviat, 2010), some mortgage loans available for low-to-moderate income families perform much better than subprime mortgage loans. For example, the default risk for individuals and families who contract for subprime loans with adjustable interest rates and prepayment penalties are four to five times greater than for individuals/families who are able to qualify for community investment loans (Ding, et al., 2008).

Second, one of the devastating consequences for people living in areas with high concentrations of poverty and racial segregation was related to limiting future opportunities. People living in impoverished neighborhoods had to deal with issues such as lower levels of human capital and little availability of decent paying jobs. Therefore, those who were excluded from the new suburban homeownership market also were excluded from labor markets. Stable income and employment are seen as indispensible conditions for homeownership. In addition to domestic policies that negatively affected the poor, globalization around world has made considerable problematic changes in the labor market for those with lower skills and levels of education (Horsewood & Neuteboom, 2006b). Individuals face significant risks as a result of the outsourcing of jobs through globalization and deindustrialization that has destroyed previous stable working class jobs. Those who are unemployed or threatened by the loss of employment due to the decline of traditional manufacturing sector jobs easily find that the skills they have acquired are not easily transferable to other parts of the economy such as the expanding service sector. However, the available jobs for unskilled workers in the service sector often entail significant loss of income relative to manufacturing sector jobs, lower levels of employment protection and loss of social protections (Estevez-Abe, Iversen, & Soskice, 2001; Iversen & Cusack, 2000). In addition, as indicated in Chapter II of this study, ‘democratization of both poverty and

unemployment' points out that in advanced modern societies ever larger sections of the population share the risk of experiencing poverty and unemployment (Beck, 1992).

To make homeownership more sustainable for both current and future homeowners, first, "opportunity-enhancing affirmative action policies such as race-targeted programs for job training, education and recruitment" (Wilson, 2009, P.139) are available options to enhance the chances of employment for underserved population. Second, social protections against ill-timed life events such as unemployment or income loss due to medical conditions could help people exercise greater control over their lives (Voyer, 2004). How can people maintain the optimum levels of stable income and employment over the life course? Answers to this question are eventually related to the characteristics of the United States welfare state. According to Handler (2004), the ideology of the United States welfare state remained consistent from the beginning – proving help only for the deserving poor. Both political conservatives and liberals support that the rigorous work tests and enforcement by sanctions as the most efficacious way to prevent "welfare dependency" (Handler, 2004). In this sense, social rights in the United States are based on performance rather than citizenship which renders individuals' dependence on market forces much stronger in comparison to other Western countries (Esping-Andersen, 1990; Estevez-Abe, et al., 2001).

The "American Dream"

The "American dream" is far too centered on personal material advancement and puts responsibility on the individuals to make their success in the market while providing few social protections compared to the "European dream" (Rifkin, 2004). Americans tend to ignore the structural origins and social significant of poverty and welfare. Also, Americans remain strongly disposed to the idea that individuals are largely responsible for their own

economic situations (W. J. Wilson, 2009). In the book titled *Beliefs about inequality: Americans' views about what is and ought to be,* Kluegel and Smith (1986) presented results from the Pew Global Attitudes Project that asked people in America, Europe, and elsewhere why some people are rich and others are poor. Two-thirds of Americans believed that success was not outside of their control. The characteristics that Americans thought explained why people were poor included: lack of thrift, lack of efforts and lack of ability. Individual factors were considered to be much more important than structural factors in accounting for poverty (Kluegel & Smith, 1986). On the contrary, responses of Germans survey were exactly opposite those of Americans Among Germans, around 68 percent of the people believed that structural factors were much more important than individual shortcomings in regards to poverty (Rifkin, 2004). Rifkin holds that Americans have maintained minimal involvement in the community in order to "optimize individual accumulation of wealth and ensure greater personal control over the disposition of one's property" (2004, p. 33). The idea that 'the more wealth one acquires, the more independent one is in the world' is embedded in the American dream.

As previously indicated in the Chapter II, not everybody can accomplish a dream of homeownership, especially given the risks that homeownership can bring. Many people in the United States may never become homeowners, and probably lack the necessary finances to try. Therefore attaining homeownership should not stigmatize renters (Maxwell & Sodha, 2006; Vale, 2007). The American dream values self-confident individuals' control over their own lives, but at the same it signals that success or failure in society solely depends on individual traits or personal shortcomings. As cautioned by Wilson (2009), without supports for changes in structural and economic factors shaping the lives of people with low income,

this could be "blaming the victim." Given the situation of the greater impact of globalization on the American economy, the far greater risks facing individuals are not problems solely attributable to individual character flaws. For example, the decrease in the employment rate of the younger generation raises a question regarding the sustainability of homeownership. The increases in the fixed term contract and flexible employment also hinders individuals' ability to maintain stable incomes. Therefore, the American dream will be fulfilled by more people only when a more universalistic social protection system is able to support people facing the insecurities of the post-industrial economy.

Homeownership and Civic Engagements

The assets for development perspective indicates that attaining assets gives people a "stake" in society and helps to engender a more positive cognitive schemata about their lives. Assets accumulation is thought to create greater economic stability for individuals and households and to encourage greater community involvement and political participation (M. W. Sherraden, 1991). The "dominant status" approach or personal investment approach related to volunteering also indicates that individuals who own property in the community are more committed to the neighborhood and perform better as volunteers (Wandersman, et al., 1987).During the last decade studies of assets including homeownership have demonstrated a positive link between homeownership and positive social outcomes including increased participation in civic groups. Are homeowners then more active citizens? Is it true that the more one amasses assets, the more one actively engages in community?

Results of this study showed in part that homeowners were more likely to participation in neighborhood groups and any groups when other covariates were controlled for. How then is this study differentiated from the previous research? Conceptually, this

study included homeownership status as a main independent variable and tested its effect while simultaneously estimating the diverse measures of residential and neighborhood mobility of homeowners and renters. In addition, this study incorporated two waves of data so that the previous levels of participation could be controlled. With regards to the research methodology, this study acknowledged bias arising from selection on unobervables and item-non-response throughout the analyses. To control for these biases, this study employed analytical approaches including the treatment effect model, a bivariate probit model and finally the Heckman selection model. Results of this study, however, did not find any significant relationships between homeownership and participation in church groups, school related groups and other groups. The relationship between homeownership and volunteering hours was not sustained when item-non-response bias was controlled for. In addition, this study did not find any interactions between homeownership and the measure of mobility.

Implication for Social Work Practice and Research

Empirical evidence for positive effects of homeownership is growing (Dietz & Haurin, 2003; DiPasquale & Glaeser, 1999; Glaeser, et al., 2002; Grinstein-Weiss, et al., 2008; Haurin, et al., 2002; Rohe, et al., 2007; Rohe & Stegman, 1994; Rohe & Stewart, 1996; Rossi & Weber, 1996). Homeownership can generate beneficial outcomes for individuals, families and communities. These positive outcomes range from enhanced psychological functioning, increased civic participation and child well-being. Therefore homeownership is much more than a financial calculation.

Helping low-to-moderate income families save for a home through a program like the Individual Development Accounts (IDAs) could work to enhance the accessibility of homeownership in the long run (Grinstein-Weiss, et al., 2008). Stricter regulations and

scrutiny of higher risk loans typically targeted to lower credit score borrowers should help them in acquiring and keeping their homes. Community organizations could provide financial literacy training programs for those who do not have sufficient information on banking and financial systems as well as for those who are seeking to obtain affordable mortgages (Spader, Ratcliffe, Montoya, & Skillern, 2009).

For low-income homeowners, providing financial training programs such as on-going post-purchase training for recent homeowners and mortgage default prevention programs for those who fall behind in their mortgage obligation is also important for low- to moderate-income homeowners (Quercia, et al., 2003). More careful and transparent mortgage lending practices in tandem with post-purchase training could help to prevent the massive financial hardship that has recently spread to many areas of the economy. Sounder lending practices and education and training for homeownership, plus regulation to prevent the broad scale bundling of sub-prime mortgages as "investments" could, in combination, help to prevent recurrences of the recent national financial crisis.

The flip side of the discussion regarding homeownership is "the greater stigmatization of tenants and rental housing" that is furthered by structural and economical factors as well as cultural pressures and personal aspiration for homeownership. For many, achieving the American dream is not reachable and sustainable. In this sense, assets development approaches including homeownership policies should be complementary with traditional income maintenance programs. Without employment and stable income, neither assets nor homeownership exist.

At the same time, especially given the risks of homeownership, it is increasingly important that affordable rental housing stocks for low- to moderate-income renters are

expanded and improved. Low-income families, unable to become homeowners, greatly need an enlarged stock of affordable rental housing that is well-built and properly maintained and that can provide safe environments for individuals and families. Recognition of this "flip-side" of the housing discussion, and more importantly continued efforts to provide adequate stocks of safe and affordable rental housing will require much larger scale community development initiatives. Stronger regulations related to rental stock maintenance, and increased government investment in community development corporations (where there is increased accountability to residents of neighborhoods) could be useful strategies for renters and homeowners. Comprehensive Community Initiatives (CCIs) are an example of neighborhood-based efforts to improve the lives of individuals and families as well as quality of life in their neighborhoods by working comprehensively across social, economic, and physical sectors to: improve housing stock, neighborhood infrastructure, the business sector, education for children and adults and providing training institutions along with strengthening the social and civic support network. (Connell & Kubisch, 2001).

Growing numbers of studies on homeownership have started to acknowledge that selection into homeownership is not random. This complication requires proper analytical methods in estimating homeownership effects. The selection models employed in the study simultaneously estimate the selection (homeownership) and outcomes (civic engagement) and estimate the correlation between outcomes and the error term directly in order to control for selection on unobservables. Another approach for this problem can be formulated as endogenous membership (Manski, 1993) or selection on observables (Galster, Marcotte, Mandell, Wolman, & Augustine, 2007; Guo, 2009; Guo & Fraser, 2010). The basic issue is that, for example, some people with certain characteristics (e.g., specific demographic

characteristics) would move to select neighborhoods (e.g., neighborhood selection), choose a certain type of tenure (owning vs. renting) and manifest distinctive behavioral patterns (e.g., civic engagement). In this case, this systematic selection process may produce biased estimate on the relationship between the contextual conditions and outcomes, even if all of the observable characteristics are controlled for (Galster, et al., 2007).

Beyond the effects of homeownership itself, the geographic settings of neighborhoods may have an impact on access to opportunities such as education, employment, social networks and civic engagement opportunities. Wilson's seminal book: *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy* (1987) emphasized that labor market consequences were especially harmful for African-Americans and that the disappearance of employment opportunities in racially segregated high-poverty neighborhoods is at the core of a set of interrelated economic and social problems. Future research should consider incorporating the contextual effects in research on homeownership and civic engagement.

Conclusion

Several theories and perspectives investigated in this study indicated that homeownership promotes civic engagement. The results of this study partially supported the hypotheses. Homeowners were more likely to participate in some types of organizations while controlling for other covariates including measures of mobility and previous levels of participation. This study employed analytic models that control for the biases from selection on unobservables. Results of this study will serve as a foundation for future research on homeownership and civic engagement in Korea.

APPENDICES

Appendix 1. *Measurement of Variables*

Concept	**Measurement**
Dependent variables	
1. Neighborhood association	Do you currently participate in any neighborhood-based group, like a homeowners or tenants association, neighborhood improvement group, block crime watch, or other community service groups? (1,0)
2. Other volunteering or charitable groups	Do you currently participate in any other kind of volunteering or charitable group? (1,0)
3. Church or religious group	Other than attending services, do you participate in church or religious group activities on a regular basis? (1,0)
4. PTA or school related organization	Do you currently belong to the PTA, school board, or any other school-related organization? (1,0)
5. Any group participation	Participation in any of groups listed above (1,0)
6. Volunteering hours	How many hours each month do you volunteer for all of the difference religious, school, neighborhood, and community groups you belong to? (Continuous)
Main independent variable	
Homeownership	Dichotomous measure of homeownership (Owners=1; Renters=0)
Mobility	1) Neighborhood mobility: measured by years in neighborhood: 4 categories - (length less than 1 year); 1-3 years; 4-9 years; and over 10 years 2) Housing mobility: measured by the frequency of moves from Year 1 to Year 4 (no moves); one move; and more than two moves 3) Interaction of housing mobility and neighborhood mobility: measured by two dichotomous variables of 4 categories – (neither moved to new residence nor moved within/across neighborhoods); moved within neighborhood since the most recent previous move; moved to a different neighborhood since the most recent previous move; and moved to a different county level since the most recent previous move.

Concept	Measurement
Demographic variables	
Age	4 categories – (25 years old or less); 26-39; 40-50; and 51 or older
Sex	1=male; 0=female
Race	4 categories – (White); Black; Hispanic; Other
Marital Status	3 categories – (Never married); Married or living with partner; and Widowed/divorced/separated
Education	4 categories - 11^{th} grade or less; (High school graduate/GED); Some college; and Bachelor's degree or more
Relative income	Relative income is measured by household annual income divided by the area median income of census tract from the 2000 census.
Employment	3 categories – (Employed); Unemployed; and Retired/Not in labor force
Number of Children	4 categories – (No child); one ; two; and three or more children
Number of Adults	3 categories – (one adult); two; and three or more
Additional variables affecting homeownership	
Intergenerational tenure status	Binary variable indicating whether parents owned a home (1=yes; 0=no). When you were growing up and living with a parent or guardian, did your parent or guardian ever own the home in which you lived? (Rohe, et al., 2007)
Housing cost	Monthly mortgage payment in a tract divided by the median rent in the tract (Green & White, 1997; Haurin, et al., 2002)

*All study variables were measured repeatedly at year 1 and year 4 except time invariant variables; reference categories are in parentheses.

Appendix 2. *Neighborhood Group Participation: Logistic Regression, Model I*

	Model I		
	Coef	SE	O.R.
Neighborhood group participation			
Homeownership	.71***	.18	2.03
Age (25 years old or less)			
Age 26-39	.12	.22	1.12
Age 40-50	.60**	.24	1.83
Age 51 or older	.86***	.27	2.37
Male	-.38***	.15	.68
Race (White)			
Black	.98***	.15	2.65
Hispanic	-.12	.24	.88
Other	.56	.36	1.76
Marital status (Never married)			
Married & partnered	.22	.26	1.25
Widowed, Divorced & Separated	-.10	.19	.91
Education (HS grad.)			
11th grade	.23	.29	1.26
Some college	.54***	.17	1.71
Bachelor's degree or more	.62***	.19	1.86
Income	.70***	.35	2.02
Employment (Employed)			
Unemployed	.18	.29	1.20
Retired	.33	.20	1.38
Number of children (No child)			
One child	-.31*	.17	.73
Two children	-.28	.20	.75
Three children or more	-.04	.25	.97
Number of adults (One adult)			
Two adults	-.35	.23	.71
Three adults or more	-.68**	.29	.51
Constant	-3.29	.42	
N	2,254		
-2 log L	-948.746		
Wald χ^2 (*df*)	148.13 (*21*)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 3. *Neighborhood group: Logistic Regression, Models II - V*

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Neighborhood group participation												
Homeownership	.64***	.20	1.90	.65***	.21	1.91	.68***	.21	1.97	.35*	.20	1.42
Length of residency (< 1 year)												
1-4 years	-.02	.28	.98									
4-9 years	.15	.25	1.17									
Over 10 years	.35	.32	1.43									
Number of moves (no moves)												
One move				-.04	.18	.96						
Two or more moves				-.18	.24	.83						
Moving pattern (No moves)												
Within neighborhood							.16	.36	1.17			
Across neighborhood							-.03	.20	.97			
County level move							-.29	.27	.75			
Year 1 group participation										2.03***	.15	7.63
Age (25 years old or less)												
Age 26-39	.11	.22	1.11	.10	.22	1.11	.10	.22	1.11	.13	.23	1.13
Age 40-50	.56**	.24	1.75	.59**	.24	1.80	.59**	.23	1.79	.57**	.25	1.77
Age 51 or older	.82***	.27	2.27	.84***	.27	2.31	.83***	.27	2.30	.83***	.29	2.29

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Male	-.39***	.15	.68	-.39***	.15	.68	-.39***	.15	.68	-.30***	.16	.74
Race (White)												
Black	.98***	.15	2.66	.98***	.15	2.66	.96***	.15	2.62	.76***	.16	2.14
Hispanic	-.11	.25	.89	-.12	.24	.89	-.13	.24	.88	-.08	.27	.93
Other	.58	.36	1.79	.57	.36	1.77	.56	.36	1.74	.37	.38	1.45
Marital status (Never married)												
Married & partnered	.23	.26	1.26	.22	.26	1.24	.23	.26	1.26	.19	.28	1.21
Widowed, Divorced & Separated	-.09	.19	.92	-.10	.19	.90	-.09	.19	.91	-.09	.21	.91
Education (HS grad.)												
11th grade	.25	.29	1.28	.24	.29	1.27	.24	.29	1.27	.29	.31	1.34
Some college	.55***	.17	1.73	.55***	.17	1.73	.55***	.17	1.73	.42**	.19	1.53
Bachelor's degree or more	.65***	.19	1.91	.62***	.19	1.87	.64***	.19	1.90	.42**	.20	1.52
Income	.75**	.36	2.12	.72**	.36	2.06	.73**	.36	2.08	.86**	.35	2.36
Employment (Employed)												
Unemployed	.17	.30	1.19	.18	.30	1.20	.18	.29	1.20	-.09	.31	.92
Retired	.32	.20	1.38	.33	.20	1.38	.33	.20	1.40	.30	.22	1.35
Number of children (No child)												
One child	-.31*	.17	.74	-.31*	.17	.74	-.31*	.17	.73	-.29	.18	.75
Two children	-.29	.20	.75	-.28	.20	.76	-.30	.20	.74	-.21	.21	.81
Three children or more	-.05	.25	.96	-.04	.25	.96	-.05	.25	.95	.03	.26	1.03
Number of adults (One adult)												
Two adults	-.33	.24	.72	-.34	.24	.71	-.33	.23	.72	-.31	.26	.73
Three adults or more	-.67**	.29	.51	-.67**	.29	.51	-.66**	.29	.52	-.71**	.31	.49
Constant	-3.43	.48		-3.23	.42		-3.26	.42		.09	.15	1.10
N	2,254			2,254			2,254			2,254		
-2 log L	-947.23			-948.37			-947.57			-846.02		
Wald χ^2 (*df*)	159.43 (24)			155.07 (23)			153.49 (24)			285.55 (22)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 4. *Other group participation: Logistic Regression, Model I*

	Model 1		
	Coef	SE	O.R.
Other group participation			
Homeownership	.105	.174	1.110
Age (25 years old or less)			
Age 26-39	.562***	.211	1.755
Age 40-50	.547**	.224	1.728
Age 51or older	.776***	.259	2.174
Male	-.335**	.138	.715
Race (White)			
Black	.131	.154	1.141
Hispanic	.088	.239	1.092
Other	.204	.351	1.227
Marital status (Never married)			
Married & partnered	.322	.265	1.380
Widowed, Divorced & Separated	.208	.195	1.231
Education (HS grad.)			
11th grade	-.868***	.306	.420
Some college	.771***	.177	2.162
Bachelor's degree or more	1.129***	.186	3.092
Income	.325	.379	1.384
Employment (Employed)			
Unemployed	-.130	.281	.878
Retired	.022	.210	1.023
Number of children (No child)			
One child	.152	.154	1.165
Two children	.280	.185	1.324
Three children or more	.389*	.227	1.476
Number of adults (One adult)			
Two adults	-.632**	.255	.531
Three adults or more	-.381	.336	.683
Constant	-2.593	.417	
N	2,254		
-2 log L	-1,075.586		
Wald χ^2 (*df*)	127.59 (*21*)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 5. *Other group participation: Logistic Regression, Models II - V*

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Other group participation												
Homeownership	.01	.19	1.01	.05	.20	1.05	.09	.19	1.10	-.02	.19	.98
Length of residency (< 1 year)												
1-4 years	-.27	.28	.76									
4-9 years	.05	.26	1.05									
Over 10 years	-.30	.30	.74									
Number of moves (No moves)												
One move				.03	.19	1.03						
Two or more moves				-.21	.25	.81						
Moving pattern (No moves)												
Within neighborhood							.21	.34	1.23			
Across neighborhood							.05	.19	1.05			
County level move							-.42	.29	.66			
Year 1 group participation										1.82***	.13	6.19
Age (25 years old or less)												
Age 26-39	.55**	.21	1.74	.55**	.21	1.73	.55***	.21	1.73	.54**	.22	1.71
Age 40-50	.56**	.23	1.76	.53**	.23	1.70	.53**	.23	1.70	.36	.24	1.43
Age 51 or older	.80***	.26	2.23	.75***	.26	2.12	.75***	.26	2.11	.68**	.26	1.97
Male	-.35**	.14	.70	-.34**	.14	.71	-.34**	.14	.71	-.21	.14	.81

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Race (White)												
Black	.12	.15	1.13	.13	.15	1.14	.11	.16	1.12	.13	.17	1.14
Hispanic	.08	.24	1.09	.09	.24	1.09	.07	.24	1.07	.20	.25	1.22
Other	.20	.35	1.22	.22	.35	1.24	.18	.35	1.20	.24	.33	1.27
Marital status (Never married)												
Married & partnered	.34	.26	1.40	.31	.27	1.37	.33	.26	1.40	.30	.27	1.36
Widowed, Divorced & Separated	.18	.19	1.19	.20	.19	1.22	.21	.19	1.23	.16	.21	1.17
Education (HS grad.)												
11th grade	-.87***	.31	.42	-.87***	.31	.42	-.86***	.31	.42	-.74**	.32	.48
Some college	.78***	.18	2.19	.78***	.18	2.18	.78***	.18	2.18	.69***	.19	2.00
B.A and more	1.12***	.19	3.06	1.13***	.19	3.09	1.15***	.19	3.16	.87***	.19	2.38
Income	.39	.39	1.48	.32	.40	1.38	.33	.40	1.39	.27	.41	1.31
Employment (Employed)												
Unemployed	-.14	.28	.87	-.13	.28	.88	-.12	.28	.89	-.23	.30	.79
Retired	.04	.21	1.04	.02	.21	1.02	.03	.21	1.03	.09	.22	1.10
Number of children (None)												
One child	.16	.15	1.17	.16	.15	1.17	.15	.15	1.16	.23	.16	1.26
Two children	.27	.19	1.31	.28	.18	1.33	.26	.18	1.29	.30	.20	1.35
Three children or more	.40*	.23	1.49	.38*	.23	1.47	.36	.23	1.44	.41	.24	1.51
Number of adults (One adult)												
Two adults	-.66***	.25	.52	-.63**	.26	.53	-.62**	.26	.54	-.69**	.27	.50
Three adults or more	-.40	.33	.67	-.38	.34	.69	-.37	.34	.69	-.33	.36	.72
Constant	-2.52	.49		-2.52	.42		-2.56	.41		-2.85	.44	.06
N	2,254			2,254			2,254			2,254		
-2 log L	-1072.33			-1074.82			-1073.35			-969.2771		
Wald χ^2 (*df*)	136.61 (24)			136.85 (23)			133.68 (24)			298.52 (22)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 6. *Church Group: Logistic Regression, Model I*

	Model I		
	Coef	SE	O.R.
Church group participation			
Homeownership	.042	.204	1.043
Age (25 years old or less)			
Age 26-39	.136	.234	1.146
Age 40-50	.341	.272	1.407
Age 51 or older	.405	.328	1.500
Male	-.055	.185	.947
Race (White)			
Black	.173	.180	1.189
Hispanic	-.649***	.243	.523
Other	-.040	.395	.961
Marital status (Never married)			
Married & partnered	.601*	.316	1.824
Widowed, Divorced & Separated	.185	.233	1.203
Education (HS grad.)			
11th grade	-.511*	.292	.600
Some college	.377**	.193	1.458
B.A and more	.557***	.209	1.745
Income	-.131	.399	.877
Employment (Employed)			
Unemployed	.169	.372	1.184
Retired	-.037	.251	.963
Number of children (No child)			
One child	-.118	.197	.889
Two children	.132	.235	1.141
Three children or more	.268	.283	1.307
Number of adults (One adult)			
Two adults	-.331	.286	.718
Three adults or more	-.784**	.351	.457
Constant	.014	.441	
N	1,152		
-2 log L	-733.99		
Wald χ^2 (*df*)	54.74		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 7. *Church Group: Logistic Regression, Models II – V*

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Church group participation												
Homeownership	-.07	.23	.93	-.09	.24	.91	-.09	.23	.91	-.22	.26	.80
Length of residency (Less than 1 year)												
1-4 years	-.19	.32	.83									
4-9 years	.17	.30	1.19									
Over 10 years	.20	.38	1.22									
Number of moves (No moves)												
One move				-.28	.21	.76						
Two or more moves				-.27	.29	.76						
Moving pattern (No moves)												
Within neighborhood							.28	.43	1.33	.22	.49	1.24
Across neighborhood							-.37*	.22	.69	-.49*	.27	.61
County level move							.05	.33	1.05	-.11	.38	.89
Year 1 group participation										1.98***	.18	7.27
Age (25 years old or less)												
Age 26-39	.12	.23	1.13	.12	.23	1.13	.12	.23	1.13	.03	.26	1.04
Age 40-50	.30	.27	1.35	.30	.27	1.35	.31	.27	1.36	.53*	.32	1.70
Age 51 or older	.37	.33	1.45	.36	.33	1.44	.36	.33	1.44	.52	.41	1.69
Male	-.06	.19	.94	-.06	.19	.94	-.06	.19	.94	.15	.23	1.16

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Race (White)												
Black	.17	.18	1.19	.17	.18	1.19	.18	.18	1.19	.18	.23	1.20
Hispanic	-.65***	.24	.52	-.65***	.24	.52	-.63***	.24	.53	-.49*	.28	.61
Other	-.04	.40	.96	-.05	.40	.95	-.02	.40	.98	.06	.52	1.06
Marital status (Never married)												
Married & partnered	.62*	.32	1.85	.60*	.32	1.83	.60*	.32	1.82	.75**	.35	2.13
Widowed, Divorced & Separated	.17	.23	1.19	.18	.23	1.20	.17	.24	1.19	.01	.27	1.01
Education (HS grad.)												
11th grade	-.51*	.29	.60	-.51*	.30	.60	-.54*	.29	.59	-.56	.40	.57
Some college	.41**	.19	1.51	.41**	.19	1.50	.41**	.19	1.51	.26	.24	1.30
B.A and more	.57***	.21	1.77	.58***	.21	1.78	.57***	.21	1.77	.47*	.26	1.60
Income	-.06	.41	.95	-.06	.41	.94	-.05	.41	.95	-.19	.48	.83
Employment (Employed)												
Unemployed	.21	.39	1.23	.20	.38	1.22	.18	.36	1.20	.41	.54	1.51
Retired	-.03	.25	.97	-.02	.25	.98	-.03	.25	.97	-.09	.31	.91
Number of children (No child)												
One child	-.11	.20	.90	-.10	.20	.90	-.09	.20	.92	.02	.22	1.02
Two children	.13	.23	1.14	.15	.23	1.16	.15	.23	1.16	.38	.26	1.46
Three children or more	.26	.28	1.29	.28	.29	1.32	.25	.28	1.28	.27	.33	1.31
Number of adults (One adult)												
Two adults	-.33	.29	.72	-.31	.29	.73	-.32	.29	.73	-.40	.32	.67
Three adults or more	-.77**	.35	.46	-.75**	.35	.47	-.75**	.36	.47	-.75*	.40	.47
Constant	-.07	.51		.11	.46		.11	.45		-.82	.54	
N	1,152			1,152			1,152			980		
-2 log L	-731.85			-732.38			-73.71			-518.93		
Wald χ^2 (*df*)	56.58			56.36			58.46			148.07		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 8. *PTA participation: Logistic Regression, Model I*

	Model I		
	Coef	SE	O.R.
PTA participation			
Homeownership	-.018	.271	.982
Age (25 years old or less)			
Age 26-39	.633**	.249	1.883
Age 40-50	.633**	.307	1.883
Age 51 or older	-.078	.471	.925
Male	-.534**	.251	.587
Race (White)			
Black	.731***	.215	2.078
Hispanic	.338	.235	1.402
Other	.384	.484	1.469
Marital status (Never married)			
Married & partnered	.067	.422	1.069
Widowed, Divorced & Separated	-.491	.321	.612
Education (HS grad.)			
11th grade	.143	.331	1.154
Some college	.188	.241	1.207
Bachelor's degree or more	.766***	.252	2.151
Income	.359	.483	1.431
Employment (Employed)			
Unemployed	-.418	.395	.658
Retired	-.288	.323	.750
Number of children (One child)			
Two children	.592***	.198	1.807
Three children or more	.770***	.233	2.160
Number of adults (One adult)			
Two adults	-.483	.396	.617
Three adults or more	-.305	.434	.737
Constant	-2.252	.536	
N	1,273		
-2 log L	-643.43		
Wald χ^2 (*df*)	85.47 (20)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 9. *PTA participation: Logistic Regression, Models II-V*

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
PTA participation												
Homeownership	.05	.28	1.05	.08	.28	1.09	.17	.29	1.18	-.05	.35	.95
Length of residency (Less than 1 year)												
1-4 years	.47	.41	1.60									
4-9 years	.12	.37	1.13									
Over 10 years	.28	.45	1.33									
Number of moves *(No moves)*												
One move				.45	.23	1.57						
Two or more moves				.11	.35	1.12						
Moving pattern (No moves)												
Within neighborhood							.32	.41	1.38	.40	.53	1.49
Across neighborhood							.46*	.26	1.59	.74**	.32	2.09
County level move							-.38	.36	.68	-.15	.45	.86
Year 1 group participation										2.11***	.21	8.25
Age (25 years old or less)												
Age 26-39	.64**	.25	1.89	.66***	.25	1.93	.65***	.25	1.92	.18	.30	1.20
Age 40-50	.64*	.31	1.89	.68**	.31	1.97	.68**	.31	1.97	.14	.37	1.15
Age 51 or older	-.08	.47	.92	-.06	.48	.94	-.05	.48	.95	-.35	.54	.71
Male	-.53**	.24	.59	-.54**	.25	.58	-.54**	.24	.58	-.24	.32	.79

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Race (White)												
Black	.74***	.22	2.09	.76***	.22	2.14	.73***	.22	2.08	.47*	.24	1.60
Hispanic	.33	.24	1.39	.33	.23	1.39	.30	.23	1.35	.41	.29	1.50
Other	.43	.48	1.53	.43	.49	1.54	.38	.50	1.46	.40	.49	1.49
Marital status (Never married)												
Married & partnered	.09	.43	1.09	.09	.41	1.10	.12	.41	1.13	-.04	.50	.96
Widowed, Divorced & Separated	-.44	.31	.65	-.46	.32	.63	-.46	.31	.63	-.63*	.36	.53
Education (HS grad.)												
11th grade	.15	.33	1.16	.17	.32	1.18	.18	.32	1.19	.25	.35	1.29
Some college	.16	.24	1.17	.17	.24	1.18	.17	.24	1.19	.08	.29	1.08
B.A and more	.78***	.26	2.18	.75***	.25	2.11	.78***	.26	2.18	.81***	.31	2.25
Income	.28	.49	1.32	.22	.49	1.25	.20	.50	1.22	.11	.57	1.12
Employment (Employed)												
Unemployed	-.46	.40	.63	-.43	.39	.65	-.43	.39	.65	-.21	.43	.81
Retired	-.33	.32	.72	-.32	.32	.72	-.31	.32	.73	-.23	.39	.80
Number of children (One child)												
Two children	.60***	.20	1.83	.60***	.20	1.82	.59***	.20	1.81	.28	.24	1.33
Three children or more	.77***	.23	2.16	.77***	.23	2.15	.79***	.23	2.20	.54**	.26	1.72
Number of adults (One adult)												
Two adults	-.46	.40	.63	-.49	.39	.61	-.48	.39	.62	-.13	.47	.88
Three adults or more	-.32	.44	.72	-.36	.43	.70	-.34	.43	.71	-.23	.52	.80
Constant	-2.46	.66		-2.34	.51		-2.41	.51		-2.24	.60	
N	1,273			1,273			1,273			973		
-2 log L	-641.27			-640.35			-640.33			-472.40		
				94.55			93.18			159.22		
Wald χ^2 (*df*)	91.02 (23)			(22)			(23)			(24)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 10. *Any Group Participation: Logistic regression, Model I*

	Model 1		
	Coef	SE	O.R.
Any group participation			
Homeownership	.528***	.155	1.695
Age (25 years old or less)			
Age 26-39	.412***	.159	1.510
Age 40-50	.392**	.185	1.480
Age 51 or older	.595***	.230	1.813
Male	-.491***	.127	.612
Race (White)			
Black	.786***	.143	2.194
Hispanic	.079	.189	1.082
Other	.271	.290	1.311
Marital status (Never married)			
Married & partnered	.519**	.237	1.680
Widowed, Divorced & Separated	.099	.182	1.104
Education (HS grad.)			
11th grade	-.356*	.213	.701
Some college	.468***	.142	1.596
Bachelor's degree or more	.757***	.154	2.131
Income	.093	.298	1.098
Employment (Employed)			
Unemployed	-.381	.249	.683
Retired	.027	.191	1.027
Number of children (No child)			
One child	.273*	.148	1.314
Two children	.472***	.164	1.603
Three children or more	.789***	.212	2.200
Number of adults (One adult)			
Two adults	-.493**	.223	.611
Three adults or more	-.604**	.276	.546
Constant	-1.206	.321	
N	2,254		
-2 log L	-1444.17		
Wald χ^2 (*df*)	140.70 (21)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 11. *Any Group Participation: Logistic Regression, Models II – V*

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Any group participation												
Homeownership	.47***	.17	1.60	.49***	.17	1.63	.51***	.17	1.67	.35**	.16	1.41
Length of residency (Less than 1 year)												
1-4 years	.00	.23	1.00									
4-9 years	.14	.21	1.15									
Over 10 years	.22	.26	1.25									
Number of moves (No moves)												
One move				.00	.16	1.00						
Two or more moves				-.13	.21	.88						
Moving pattern (No moves)												
Within neighborhood							.27	.32	1.31			
Across neighborhood							.03	.17	1.03			
County level move							-.34	.22	.71			
Year 1 volunteering hours										1.46***	.12	4.31
Age (25 years old or less)												
Age 26-39	.40**	.16	1.50	.40**	.16	1.50	.40**	.16	.16	.36**	.17	1.43
Age 40-50	.37**	.19	1.44	.38**	.19	1.47	.38**	.19	.19	.29	.20	1.33
Age 51 or older	.57**	.23	1.76	.58**	.23	1.78	.57**	.23	.23	.54**	.24	1.72
Male	-.50***	.13	.61	-.49***	.13	.61	-.50***	.13	.13	-.32**	.13	.73

	Model II			Model III			Model IV			Model V		
	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.	Coef	SE	O.R.
Race (White)												
Black	.79***	.14	2.20	.79***	.14	2.20	.77***	.14	.14	.71***	.15	2.03
Hispanic	.08	.19	1.09	.08	.19	1.08	.06	.19	.19	.12	.20	1.12
Other	.28	.29	1.33	.28	.29	1.32	.26	.29	.29	.23	.30	1.26
Marital status (Never married)												
Married & partnered	.53**	.24	1.70	.51**	.24	1.67	.53**	.24	1.70	.52**	.24	1.69
Widowed, Divorced & Separated	.10	.18	1.10	.09	.18	1.10	.10	.18	1.11	.05	.19	1.05
Education (HS grad.)												
11th grade	-.35*	.21	.70	-.35*	.21	.70	-.35*	.21	.70	-.28	.22	.76
Some college	.48***	.14	1.61	.48***	.14	1.61	.48***	.14	1.62	.36**	.15	1.43
B.A and more	.77***	.16	2.16	.76***	.16	2.13	.78***	.16	2.19	.49***	.16	1.63
Income	.12	.30	1.13	.10	.30	1.10	.09	.30	1.10	-.04	.31	.96
Employment (Employed)												
Unemployed	-.39	.25	.68	-.38	.25	.68	-.39	.24	.68	-.56	.27	.57
Retired	.02	.19	1.02	.03	.19	1.03	.03	.19	1.03	-.01	.20	.99
Number of children (No child)												
One child	.28*	.15	1.32	.28*	.15	1.32	.28*	.15	1.32	.26	.16	1.30
Two children	.47***	.16	1.60	.47***	.16	1.61	.45***	.16	1.58	.34**	.17	1.41
Three children or more	.78***	.21	2.19	.78***	.21	2.19	.77***	.21	2.16	.73***	.22	2.08
Number of adults (One adult)												
Two adults	-.49**	.22	.61	-.49**	.22	.61	-.48**	.22	.62	-.45*	.23	.64
Three adults or more	-.60**	.28	.55	-.60**	.28	.55	-.59**	.28	.55	-.60**	.29	.55
Constant	-1.30	.38		-1.16	.33		-1.18	.32		-1.32	.33	
N	2,254			2,254			2,254			2,254		
-2 log L	-1443.00			-1433.77			-1441.42			-1343.20		
Wald χ^2 (*df*)	140.75 (24)			140.72 (23)			149.01 (24)			271.61 (22)		

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 12. *Volunteering Hours: OLS Regression, Models I - V (All)*

	Model 1		Model II		Model III		Model IV		Model V	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE	Coef	SE
volunteering hours (log)										
Homeownership	.159**	.075	.120	.084	.115	.087	.139*	.084	.168**	.066
Length of residency (<1 year)										
1-4 years			-.133	.125						
4-9 years			.009	.118						
Over 10 years			-.047	.140						
Number of moves (No moves)										
One move					.007	.081				
Two or more moves					-.156	.102				
Moving pattern (No moves)										
Within neighborhood							-.015	.119		
Across neighborhood							-.011	.086		
County level move							-.137	.117		
Year 1 volunteering hours									.459***	.025
Age (25 years old or less)										
Age 26-39	.143*	.081	.140*	.082	.134*	.082	.135*	.082	.069	.072
Age 40-50	.130	.090	.128	.090	.120	.090	.118	.090	.060	.082
Age 51 or older	.209*	.113	.212*	.114	.190*	.115	.192*	.115	.090	.099
Male	-.148*	.060	-.152*	.060	-.149*	.060	-.151**	.060	-.079	.053

	Model 1		Model II		Model III		Model IV		Model V	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE	Coef	SE
Race (White)										
Black	.363***	.073	.360***	.073	.367***	.073	.355***	.073	.206***	.064
Hispanic	-.014	.097	-.015	.098	-.017	.098	-.022	.098	.061	.082
Other	.192	.159	.195	.157	.200	.158	.187	.158	.131	.143
Marital status (Never married)										
Married & partnered	.157	.106	.164	.107	.151	.107	.161	.107	.040	.089
Widowed, Divorced & Separated	.112	.087	.102	.087	.105	.086	.112	.087	.044	.077
Education (HS grad.)										
11th grade	-.317***	.102	-.315***	.102	-.313***	.102	-.312***	.103	-.239**	.096
Some college	.258***	.072	.263***	.073	.267***	.072	.265***	.072	.121*	.064
Bachelor's degree or more	.369***	.081	.369***	.082	.370***	.082	.381***	.082	.155**	.072
Income	.069	.163	.100	.167	.074	.168	.081	.167	.065	.139
Employment (Employed)										
Unemployed	-.064	.119	-.066	.120	-.061	.118	-.061	.119	-.036	.105
Retired	-.007	.095	-.005	.095	-.010	.096	-.003	.096	.033	.085
Number of children (No child)										
One child	.081	.069	.085	.069	.090	.068	.083	.068	.059	.060
Two children	.295***	.082	.295***	.083	.299***	.082	.290***	.083	.222***	.072
Three children or more	.339***	.102	.341***	.101	.336***	.102	.335***	.102	.228**	.093
Number of adults (One adult)										
Two adults	-.118	.100	-.127	.100	-.112	.100	-.110	.100	-.074	.084
Three adults or more	-.212*	.120	-.215*	.121	-.208*	.121	-.201*	.122	-.218**	.108
Constant	.436	.168	.463	.207	.485	.167	.457	.164	.091	.149
R^2	.08		.08		.08		.08		.28	
N	2,254		2,254		2,254		2,254		2,254	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 13. *Volunteering Hours: OLS Regression, Models I – V (Participants Only)*

	Model 1		Model II		Model III		Model IV		Model V	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE	Coef	SE
Volunteering hours (log)										
Homeownership	-.088	.098	-.112	.103	-.151	.105	-.124	.103	-.115	.091
Length of residency (Less than 1 year)										
1-4 years			-.231	.156						
4-9 years			-.090	.131						
Over 10 years			-.219	.165						
Number of moves (No moves)										
One move					-.001	.094				
Two or more moves					-.219	.145				
Moving pattern (No moves)										
Within neighborhood							-.258	.197		
Across neighborhood							-.049	.108		
County level move							-.008	.156		
Year 1 volunteering hours									.290***	.028
Age (25 years old or less)										
Age 26-39	-.066	.097	-.062	.098	-.085	.099	-.076	.098	-.113	.093
Age 40-50	-.055	.118	-.051	.119	-.070	.118	-.070	.118	-.122	.114
Age 51 or older	-.099	.142	-.087	.143	-.125	.144	-.110	.142	-.244*	.138
Male	.103	.083	.102	.081	.103	.081	.099	.083	.131	.076

	Model 1		Model II		Model III		Model IV		Model V	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE	Coef	SE
Race (White)										
Black	.094	.079	.092	.080	.099	.079	.097	.079	.025	.074
Hispanic	-.079	.115	-.083	.113	-.074	.116	-.080	.115	-.035	.106
Other	.136	.176	.117	.178	.152	.171	.129	.175	.125	.162
Marital status (Never married)										
Married & partnered	-.150	.138	-.140	.138	-.167	.138	-.150	.137	-.193	.124
Widowed, Divorced & Separated	.126	.102	.111	.101	.112	.099	.124	.101	.098	.096
Education (HS grad.)										
11th grade	-.473***	.166	-.459***	.163	-.474***	.165	-.469***	.164	-.353**	.158
Some college	.131	.088	.130	.088	.138	.088	.134	.088	.045	.083
B.A and more	.118	.089	.105	.089	.117	.089	.122	.089	.020	.084
Income	.075	.183	.098	.185	.088	.189	.100	.187	.073	.169
Employment (Employed)										
Unemployed	.272	.185	.277	.182	.279	.174	.280	.172	.253	.177
Retired	.025	.116	.027	.116	.020	.116	.023	.116	.093	.112
Number of children (No child)										
One child	-.044	.091	-.037	.089	-.032	.089	-.042	.090	-.046	.084
Two children	.191**	.095	.192**	.095	.193**	.095	.200**	.096	.173*	.088
Three children or more	.057	.117	.064	.117	.056	.119	.069	.118	.022	.119
Number of adults (One adult)										
Two adults	.199	.123	.174	.124	.210	.125	.202	.124	.181	.108
Three adults or more	.049	.141	.042	.142	.049	.144	.053	.143	.009	.124
Constant	1.734	.206	1.861	.238	1.808	.202	1.763	.202	1.407	.200
R^2	.05		.06		.06		.06		.17	
N	1,225		1,225		1,225		1,225		1,225	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 14. *Volunteering Hours: Treatment Regression, Model I (Participants Only)*

	Estimating homeownership		Estimating volunteering hours	
	Coef	Robust SE	Coef	Robust SE
Homeownership			.102	.194
Age (25 years old or less)				
Age 26-39	.044	.170	-.078	.096
Age 40-50	-.005	.183	-.061	.116
Age 51 or older	-.120	.226	-.094	.141
Male	.533***	.143	.071	.087
Race (White)				
Black	-.384***	.137	.115	.080
Hispanic	-.149	.188	-.080	.115
Other	-.453	.302	.159	.177
Marital status (Never married)				
Married & partnered	-.155	.218	-.152	.137
Widowed, Divorced & Separated	-.065	.186	.122	.100
Education (HS grad.)				
11th grade	.136	.213	-.476***	.165
Some college	.335**	.147	.114	.087
Bachelor's degree or more	.431**	.177	.094	.089
Income	4.851***	.474	.001	.191
Employment (Employed)				
Unemployed	-.675***	.247	.277	.182
Retired	-.523***	.186	.057	.119
Number of children (No child)				
One child	.074	.161	-.046	.090
Two children	.137	.177	.191**	.094
Three children or more	.336*	.209	.061	.116
Number of adults (One adult)				
Two adults	.013	.205	.195	.123
Three adults or more	-.095	.285	.040	.141
Intergenerational tenure status				
Parent owned home	.129	.138		
Tract-level characteristics				
Housing cost	.602**	.250		
Constant	-3.755	.432	1.692	.211
N	1,225		1,225	
Rho	-.138			
P-value	.257			

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 15. *Volunteering Hours: Treatment Regression, Models II – V (Participants Only)*

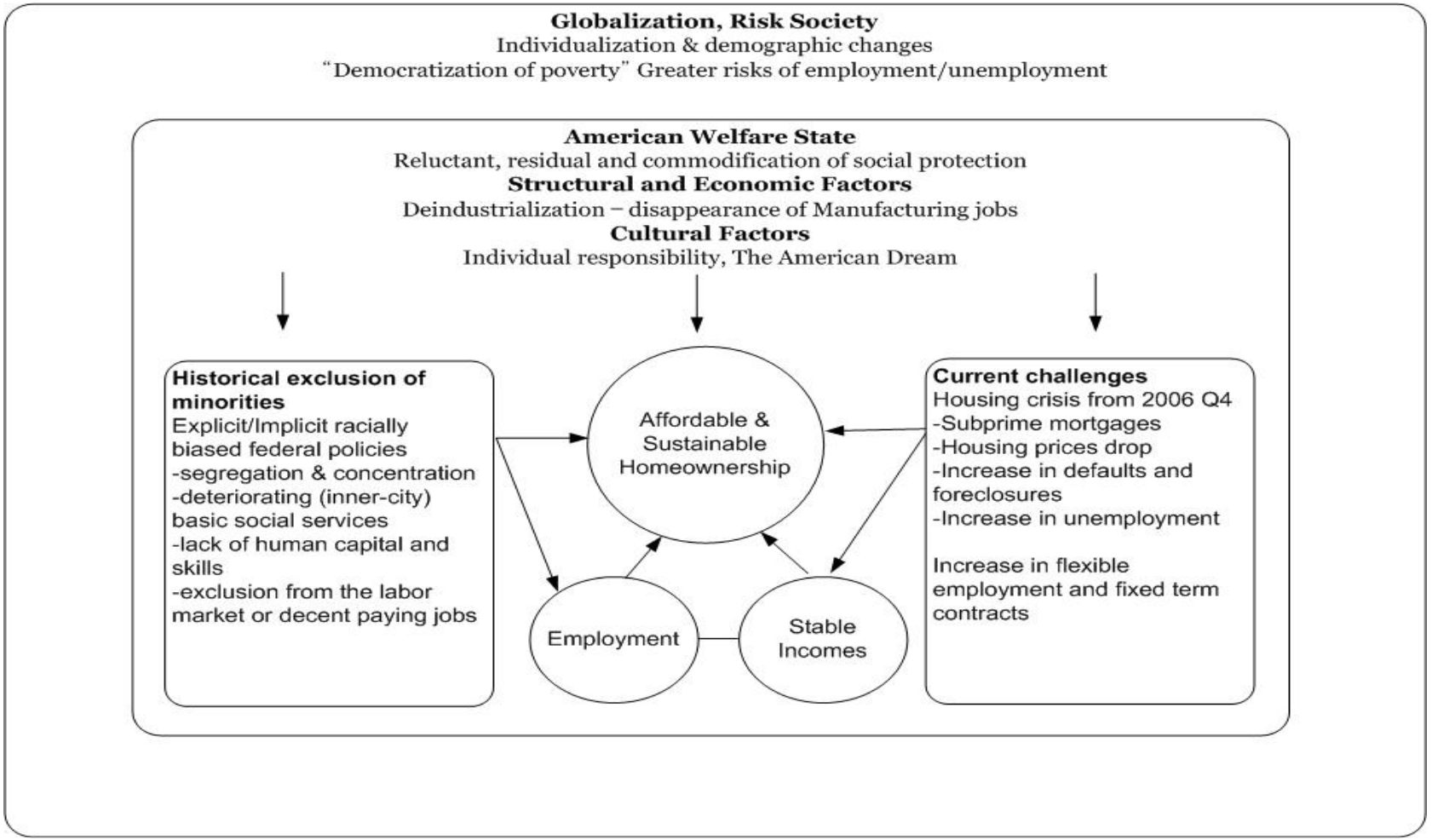
	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Volunteering hours (log)								
Homeownership	.060	.198	.045	.199	.064	.196	.047	.168
Length of residency (<1 year)								
1-4 years	-.221	.154						
4-9 years	-.088	.130						
Over 10 years	-.219	.165						
Number of moves (No moves)								
One move			.010	.094				
Two or more moves			-.216	.143				
Moving pattern (No moves)								
Within neighborhood					-.254	.194		
Across neighborhood					-.037	.105		
County level move					-.019	.152		
Year 1 volunteering hours							.290***	.027
Age (25 years old or less)								
Age 26-39	-.073	.097	-.097	.098	-.087	.097	-.123	.092
Age 40-50	-.056	.117	-.075	.116	-.076	.116	-.127	.113
Age 51 or older	-.082	.142	-.119	.143	-.104	.141	-.240*	.137
Male	.073	.086	.070	.086	.068	.087	.103	.079
Race (White)								
Black	.111	.081	.120	.080	.117	.081	.043	.076
Hispanic	-.084	.114	-.074	.117	-.081	.115	-.036	.107
Other	.137	.179	.175	.173	.150	.177	.144	.164

	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Marital status (Never married)								
Married & partnered	-.142	.137	-.169	.138	-.151	.136	-.195	.123
Widowed, Divorced & Separated	.108	.099	.108	.097	.121	.099	.095	.094
Education (HS grad.)								
11th grade	-.462***	.162	-.477***	.164	-.472***	.163	-.356**	.157
Some college	.115	.088	.120	.087	.117	.088	.030	.083
B.A and more	.084	.090	.092	.090	.098	.090	.000	.085
Income	.031	.193	.012	.197	.027	.195	.011	.175
Employment (Employed)								
Unemployed	.281	.179	.283*	.171	.284*	.169	.257	.174
Retired	.055	.119	.052	.119	.053	.119	.120	.114
Number of children (No child)								
One child	-.039	.088	-.035	.087	-.045	.089	-.048	.083
Two children	.192**	.094	.192**	.094	.199**	.095	.172**	.088
Three children or more	.067	.116	.059	.117	.072	.117	.025	.118
Number of adults (One adult)								
Two adults	.171	.124	.205*	.125	.198*	.124	.178*	.108
Three adults or more	.032	.142	.037	.145	.043	.143	.001	.124
Constant	1.820	.243	1.763	.208	1.718	.207	1.371	.204
Estimating Homeownership								
Age (25 years old or less)								
Age 26-39	.044	.170	.043	.170	.044	.170	.049	.170
Age 40-50	-.004	.184	-.006	.183	-.005	.184	-.003	.184
Age 51	-.120	.226	-.121	.226	-.122	.226	-.123	.226
Male	.534***	.143	.532***	.143	.534***	.143	.541***	.144

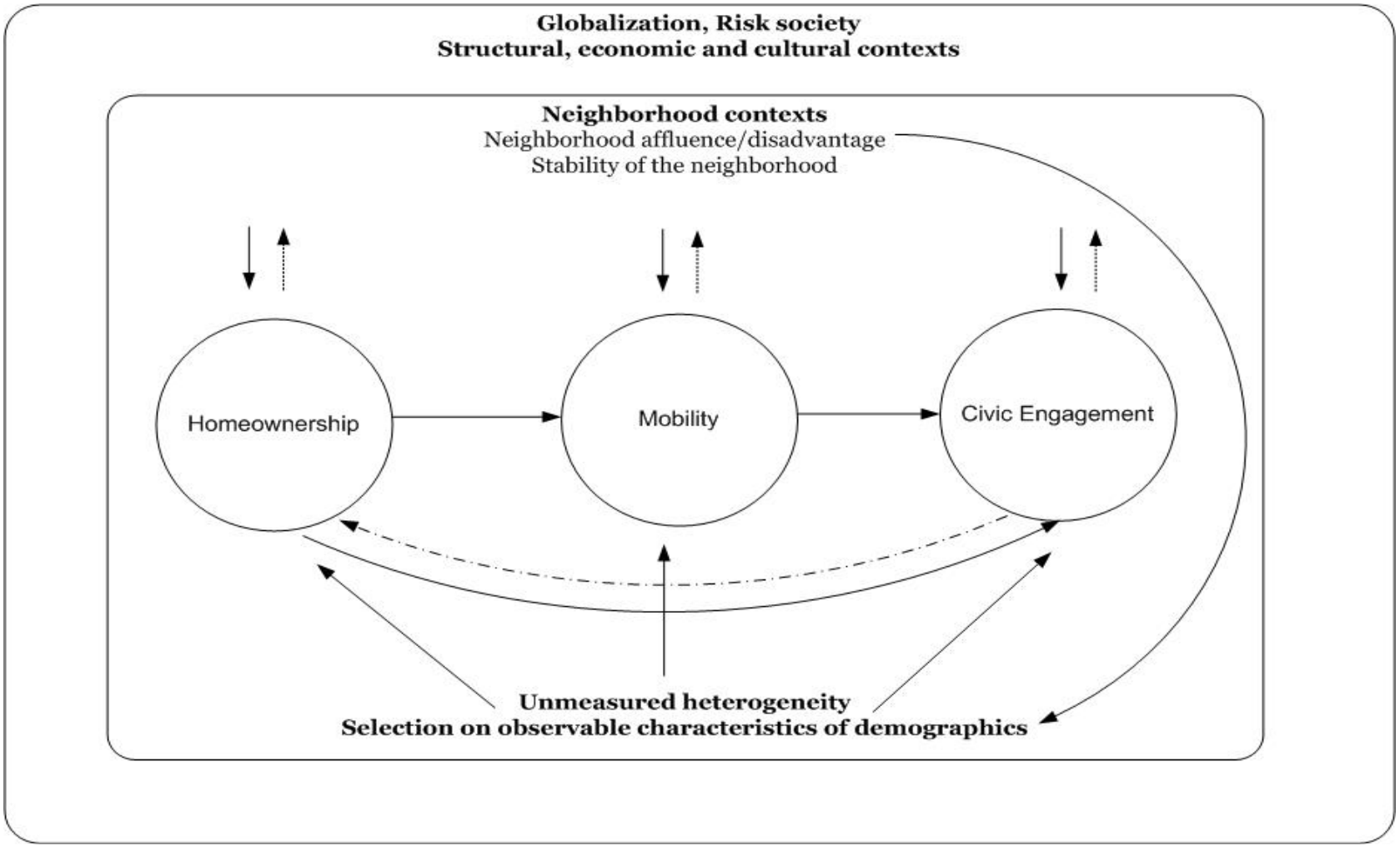
	Model II		Model III		Model IV		Model V	
	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE	Coef	Robust SE
Race (White)								
Black	-.384***	.137	-.383***	.137	-.384***	.137	-.384***	.138
Hispanic	-.151	.189	-.148	.188	-.149	.188	-.160	.189
Other	-.453	.303	-.452	.303	-.453	.302	-.451	.300
Marital status (Never married)								
Married & partnered	-.153	.218	-.154	.217	-.157	.217	-.161	.219
Widowed, Divorced & Separated	-.068	.186	-.064	.187	-.065	.187	-.066	.186
Education (HS grad.)								
11th grade	.134	.213	.135	.213	.135	.213	.143	.214
Some college	.334**	.146	.334**	.146	.335**	.147	.335**	.147
B.A and more	.428**	.177	.429**	.176	.430**	.176	.428**	.176
Income	4.855***	.476	4.849***	.475	4.851***	.475	4.863***	.472
Employment (Employed)								
Unemployed	-.674***	.249	-.671***	.246	-.674***	.247	-.680***	.249
Retired	-.524***	.187	-.526***	.187	-.524***	.186	-.521***	.187
Number of children (No child)								
One child	.076	.161	.074	.161	.075	.161	.075	.161
Two children	.138	.177	.136	.177	.137	.177	.141	.176
Three children or more	.335*	.209	.335	.209	.337	.209	.341*	.210
Number of adults (One adult)								
Two adults	.010	.205	.016	.206	.015	.205	.008	.204
Three adults or more	-.099	.286	-.093	.285	-.092	.285	-.091	.287
Intergenerational tenure status								
Parent owned home	.128	.138	.129	.138	.128	.138	.133	.139
Tract-level characteristics								
Housing cost	.599**	.251	.603**	.250	.601**	.251	.588**	.247
Constant	-3.753	.432	-3.753	.431	-3.754	.432	-3.757	.432
N	1,225		1,225		1,225		1,225	
Rho	-.124	.121	-.141	.122	-.134	.120	-.126	.108
P-value	.308		.256		.448		.271	

*** P <.01 ** P<.05 * P<.1; reference categories are in parentheses

Appendix 16. Affordable & *Sustainable Homeownership*



Appendix 17. Unanswered Questions



Appendix 18. *Organizational Participation by Race (Percent)*

	White	Black	Hispanics	Other
Neighborhood group participation ***	15.81	29.35	11.31	20.59
Other group participation **	22.94	26.45	17.88	23.53
Church group participation ***	63.65	66.58	41.57	63.89
PTA participation ***	10.88	21.38	21.17	16.18
Any group participation ***	50.74	66.12	48.91	52.94

*** P <.01 ** P<.05 * P<.1

Appendix 19. *Sample Comparison Between In-Sample and Out-Sample (Owners)*

	In-sample		Out-sample	
	N	%/M (s.d.)	n	%/M (s.d.)
Neighborhood group participation***				
Yes	322	20.58	18	11.46
No	1,243	79.42	139	88.54
	1,565		157	
Other group participation				
Yes	387	24.73	38	24.20
No	1,178	75.27	119	75.80
	1,565		157	
Church group participation				
Yes	525	62.80	48	60.76
No	311	37.20	31	39.24
	836		79	
PTA participation				
Yes	226	23.37	16	21.33
No	741	76.63	59	78.67
	967		75	
Volunteering hours				
Hours in month *	1,565	5.86 (12.0)	157	4.15 (6.91)
Hours in month (log)	1,565	1.15(1.16)	157	1.05(1.07)

*** P <.01 ** P<.05 * P<.1

Appendix 20. *Sample Comparison Between In-Sample and Out-Sample (Renters)*

	In-sample		Out-sample	
	N	%/M (s.d.)	n	%/M (s.d.)
Neighborhood group participation***				
Yes	100	14.51	47	25.0
No	589	85.49	141	75.0
	689		188	
Other group participation				
Yes	136	19.74	43	22.87
No	553	80.26	145	77.13
	689		188	
Church group participation				
Yes	183	57.91	59	59.0
No	133	40.09	41	41.0
	316		100	
PTA participation				
Yes	65	21.24	28	26.42
No	241	78.76	78	73.58
	306		106	
Volunteering hours				
Hours in month	689	5.28 (14.5)	188	5.67 (11.9)
Hours in month (log)	689	.94 (1.16)	188	1.12(1.15)

*** P <.01 ** P<.05 * P<.1

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