

**Time and Neighborhood Exposure, Economic Disparity and the Volunteering of  
Immigrant Youth**

## ABSTRACT

This study investigates how time exposure measured as length of residence and neighborhood exposure measured as proportion of foreign-born at census tract affect children of immigrants' likelihood of volunteering. The data source is the children sample from immigrant families in The National Longitudinal Study of Adolescent Health. The Multilevel logistic regression produced the segmented assimilation paths for children living in wealthy neighborhoods and the poor neighborhoods. The moderation effect of the neighborhood exposure on length of residence only exists in wealthy neighborhood for adolescence. It implies that when the proportion of foreign-born in the same neighborhood increases, the initial positive effect of time exposure on volunteering weakens and changes to negative effect when the concentration of foreign-born is high enough. The set of adult models show that the pattern observed for economically advantaged neighborhoods remains. The findings partially confirmed segmented assimilation theory: in economically advantaged neighborhoods, the lack of exposure to native-born people indeed slows assimilation.

## INTRODUCTION

Volunteering is an activity performed freely (Rosenfeld 2000). Volunteering usually benefits others (Wilson 2000; Oesterle et al. 2004), and it has been conventionally thought of as an altruistic activity designed to assist the disadvantaged (Gomez and Gunderson 2003). Americans have long been considered to contribute to the welfare of others through their involvement in the improvement of the public and private life (Tocqueville 1959; Oesterle et al. 2004). Although researcher indicate that the proportion of people volunteering has declined in recent years (Rosenfeld 2000), the U.S. still has the highest rate of volunteering in the world. Through a supplement to the Current Population Survey, about 60.8 million people volunteered through or for an organization at least once between September 2006 and September 2007. The volunteer rate had held constant at 28.8 percent from 2003 through 2005, with a little job in recent two years. In such a social context, adolescents are encouraged to volunteer.

However, we know little about the factors which draw young people into the volunteer activities, although civic participation is seen as having many positive consequences for both youth and society (Thoits and Hewitt 2001; Wilson and Musick 1999). Except for a few studies on school-based service learning programs (Andersen 1998; Marullo and Edwards 2000), research on volunteering has primarily focused on adult participation primarily because adults are the largest group to do the volunteer work (Oesterle et al. 2004; Janoski and Wilson 1995; Mustillo et al. 2004; Musick et al. 2000). Among few youth studies, one of them identified 40 development assets or building blocks of success that help young people to be healthy, caring, responsible, and productive based on a survey with over one million respondents of 6th-12th graders in more than 1,000 U.S. communities since the early 1990s (Scales et al. 2000). The study shows that the more development assets youth report having in their lives, the less likely they are to engage in high-risk behaviors. They are also more likely to show evidence of developmental success such as doing well in school, valuing racial diversity, helping others, and overcoming adversity. One of these assets, volunteerism, also has been associated with prosocial attitudes and behaviors such as caring and generosity (Mattis et al. 2000). Besides, consistency of values and expectations across young people's lives has been found to be a meaningful contributor to positive outcomes such as succeeding in school and being mentally healthy (Scales and Leffert 1999; Sanders 1998).

Thus, what contributes to the volunteer activities is an interesting research question, especially for youth. Theories about volunteering have pointed to three sets of factors: characteristics of the individual, the properties of the relationships in which that individual is involved, and community context (House 1981). Contemporary scholars

also point to the resources that promote the action of volunteering. Three sets of resources have been distinguished based on human, social and cultural capital (Wilson and Musick 1997).

With respect to both individual attributes and accessibility of resources, immigration experience as a potentially important factor has largely been ignored in the previous literature. In addition, little attention has been paid to the effects of neighborhood contextual factors on volunteering (Wilson 2000). Just like any group of adolescents, immigrant children live within sets of interconnected social systems and structures that shape their life experience in the new society (Bronfenbrenner 1986; Elder, Modell and Park 1993). How their immigration experiences interact with the neighborhood context with respect to the participation of volunteering remains a fruitful field.

Over decades, plenty of immigration studies have been examining factors related to the adjustment of immigrant children. Major gains have been achieved in understanding immigrant children's adjustment on education and their social behaviors. For example, scholars found that births to foreign-born mothers had lower rates of prematurity, low birth weight and infant mortality than those to U.S.-born mothers (Landale et al. 1994). Harris (1999) pointed out that second-generation youth were more likely than the first generation to report poor health and to have engaged in deviant behaviors. Students whose parents are both immigrants outperform their counterparts whose mother or father was U.S.-born (Rumbaut 1995 1997). Despite the progress, a broad range of social indicators still need to be examined to understand behaviors of the immigrants and their

assimilation process. Volunteering, as a part of the social citizenship and normative culture in U.S., plays a significant role in extending the understanding of assimilation.

Conventionally, researchers have tended to focus on how time exposure, such as immigrant generation and residence duration, affects a particular outcome. Less attention has been paid to the social context that may promote or hinder the time exposure's effect. In fact, not only does time in the U.S. make a difference for immigrant children's adaptation, exposure to and involvement in specific social contexts also matter. Based on the recognition of the importance of social contexts for assimilation, some researchers argue that the children of new immigrants will experience segmented assimilation paths (Gans 1992; Portes and Zhou 1993; Portes and Rumbaut 1996; 2001). Segmented assimilation argues that immigrants adapt to certain societal norms but not others because of the social contexts in which they interact. Three paths of assimilation have been identified: upward mobility, downward assimilation and selective acculturation. Just like traditional assimilation theory (Park 1928; Wanber and Srole 1945), upward mobility is a path which applies to middle class immigrants who eventually adopt traits and behaviors of white majority. Downward assimilation applies to immigrants who live in an inner city within the poor neighborhoods. Selective acculturation lies in line between upward mobility and downward assimilation, where lagged acculturation protects disadvantaged immigrant children from assimilating to an adverse outcome. It argues that the intense ethnic networks and cultures protect children from interacting with disadvantaged native children, allowing them to avoid downward assimilation.

Although the relevance of social context has been recognized in assimilation theory and previous empirical studies, we have little knowledge on how much it is related

to the time exposure. For example, although studies have found that immigrant enclaves benefit socially and economically disadvantaged children through cultural protection and ethnic control from risky behaviors (Zhou and Bankston 1994), we do not know when. We also notice that generally segmented assimilation states an unfavorable future for children living disadvantaged social context, but if the childhood circumstances of young immigrant children are identical or predictive of experiences in adulthood are still in questions (Alba and Nee 1997). Thus it is meaningful to use a longitudinal data to test if the context effect is persistent context in adolescence affect young adult assimilation.

In the literature on volunteering, despite some research showing social context to be influential in shaping participation in volunteering (Serow 1990; Wilson and Musick 1997), most of the studies have focused on micro-level determinants. The impact of social context on individual volunteering is one of the least understood issues in the studies of volunteering (Wilson 2000). In this paper, I attempt to bring both social economic context and degree of exposure to U.S. society at the neighborhood level to the study of volunteering in a framework of immigrant assimilation theory. In addition, I also examine whether the neighborhood context in adolescence continues to affect immigrant volunteering during young adulthood. Specifically, I address three research questions in this paper. First, does the high exposure to foreign-born at neighborhood level moderate the path of assimilation with respect to volunteering? Second, will the exposure impact be segmented because of neighborhood social economic disparity? Third, I examine how the exposure to neighborhood in adolescence affects the volunteering during young adulthood.

## **BACKGROUND**

Immigrants, by and large, have been seen as receivers of the benefits of volunteer work in the United States, although earlier immigrants might also provide free services to later immigrants. In most situations, we can presume that an immigrant's native culture places less emphasis on volunteering than the U.S., since the U.S. has the long term traditional to involve in volunteering work. To what extent will immigrants adopt this social norm of American culture after they are exposed to American society? Conventional assimilation models of immigrant adaptation would predict assimilation as a function of the length of U.S. residence and succeeding generations. It hypothesizes that the longer an immigrant has resided in the destination country, the more similar they will become to natives. Usually the immigrant generation or length of residence is used to measure the time exposure to the destination society. These measures have the advantage of not being contaminated by the behavior of the individual (Xie and Greenman 2005). Using these measures, researches show that positive assimilation is not always the case, and often, assimilation runs in the opposite direction. For example, longer U.S. residence is associated with more negative outcomes, whether measured in terms of school performance, aspiration, or behaviors (Kao and Tienda 1995; Rumbaut and Ima 1988; Zhou 1997). These conflicting and sometimes unexpected findings are due to the various settlement patterns among new immigrants, and it is a weak test of acculturative change which assumes that individuals who arrive at the same time have the same level of potential integration (Xie and Greenman 2005).

Segmented assimilation theory, which incorporates the socioeconomic background of immigrants and the context of settlement areas, argues that adaptation is

affected by whether immigrants settle in affluent middle-class suburbs or in impoverished inner city ghettos (Zhou 1997). Three possible assimilation paths have been described: upwardly mobile integration into middle class America, downward mobility into the underclass, and economic integration into middle class America with lagged acculturation and deliberate preservation of the immigrant community's values and solidarity (Zhou 1997). In the deliberate preservation case, often it is said that ethnic values and cultural control help children avoid disadvantaged acculturation, even if they live in an underclass community. For example, Whitmore et al. (1989) found that Southeast Asian refugee children (excluding Cambodians and Hmongs) excelled in American school systems despite the disadvantaged location of their schools and their parents' lack of education and English. Other studies (Kao and Tienda 1995; Portes and Rumbaut 1996) also found that ethnic controls and values encourage Asian children's high educational achievement.

Community context shapes the life chances of their residents in important ways (Sampson, Morenoff and Earls 1999; South and Crowder 1999). According to Massey and Denton (1993), neighborhood socioeconomic status indexes indicate the relative availability and quality of local public services such as school facilities and community resources. Indirectly, they indicate the nature of neighborhood social relations. Neighborhoods usually are segregated by socioeconomic status and race. Despite the widespread agreement that neighborhood context can contribute to social isolation and generate attitudes (Wilson 1987), how neighborhood context affects positive social behaviors like volunteering has received less attention. Over recent decades, only a few empirical studies have examined the impact of neighborhoods on volunteering. At the



community level, one study found that “membership in civic and other voluntary organizations is significantly lower in low-income, central city areas than elsewhere, and this difference persists when most characteristics of individual respondents are taken into account” (Wuthnow 1998:113). At a more macro level, cities are thought to be less congenial to volunteering (Smith 1994:245).

Neighborhoods in the United States are becoming increasingly diverse, in part, because of the continual resettlement of refugees and immigrants from around the world (Goodkind and Foster-Fishman 2002). The predominant post-1965 immigrant groups have established settlement areas in many American cities and suburbs (Logan et al. 2002) as a result of immigration policy reform giving preference to family unification (Gibson 1988). Concentrations of immigrants serve as social networks which facilitate immigrant settlement and incorporation when they are marginalized by socioeconomic, cultural, or linguistic distinctions that inhibit their full incorporation into destination contexts (Abu-Lughod 1961; Logan et al. 2002; Portes and Bach 1985).

Thus, the focal point of segmented assimilation theory is that exposure also depends on where the immigrant lives and with whom they interact. Neighborhood context also serves as a buffer that promotes or maintains specific acculturation patterns. As segmented assimilation theory has argued, individual-level determinants, such as duration of residence and contextual factors at the neighborhood level play a minimal role. Rather, the most important part is the interaction between the two (Zhou 1997). Operationally, this means that time and neighborhood might interact with each other. For example, if immigrant children live in a neighborhood where non-English speakers predominate, then we may surmise that they would experience less exposure to American

culture than immigrant children who live in a neighborhood where English speakers predominate. Thus, neighborhood context can be a socializing agent that channels the effects of American culture on adolescents who are also rooted in their ethnic cultures.

Segmented assimilation identifies the contextual, structural, and cultural factors that separate successful assimilation from unsuccessful or even "negative" assimilation. The process is still not yet completely clear. For example, this theory argues that when immigrant children live in poor neighborhoods, they are more likely to experience downward assimilation. However, they also argue that particular ethnic cultures may help them avoid the adverse consequence of living in poor neighborhoods (Zhou 1997). This implies that both socioeconomic context and concentration of co-ethnics may play a role and that they interact with each other. To what extent ethnic culture can counterbalance downward assimilation in poor economic contexts is the key. Furthermore, do children in middle-class neighborhoods also experience selected acculturation which can help them from assimilating into risk behaviors? If so, will this prevent them from greater assimilation in positive social behaviors as well?

Studies in spatial assimilation shed some light on answers to these questions. Massey (1985) argues that segregation is natural as a group enters the United States. Living in a predominately immigrant community, for example, may limit immigrant contacts with people who are native-born, thereby decreasing exposure. In a recent study, Logan et al. (2002) found that ethnically-bound cultural and social capital are mutually reinforcing. They argue that an immigrant community can be identified by its physical characteristics as well as by the characteristics of the people who live in them. They use the term "ethnic community" in distinction to the term "immigrant enclave." In the

traditional immigrant enclave, people live there due to lack of choice, but in an ethnic community, people may choose to live there as a favored destination to preserve their ethnic integrity. As they define it, an ethnic community is formed through a different social process than is the immigrant enclave, since it is motivated by preferences and tastes that symbolize and sustain ethnic identity. The traditional concept of an immigrant enclave not only refers to people who live there, but more importantly, it also indicates their labor market opportunities, since people in traditional immigrant enclaves mainly rely on employment in firms in immigrant communities. On the contrary, immigrant groups with high levels of human and financial capital who live in ethnic community have more opportunities to work in the mainstream labor market. Thus, their daily exposure is not necessarily limited to the co-ethnics with whom they live. Thus, what is common about the immigrant enclave and ethnic community is the large proportion of immigrants in a physical location. Both communities may create multiple barriers for immigrants to interact with native-born people, which include language differences, time constraints, discrimination and a lack of awareness of opportunities. In general, the greater the concentration of a particular immigrant group living in a neighborhood, the more likely immigrants will rely on members of their own ethnic group to support them in meeting the demands of adjustment. They have fewer opportunities to familiarize themselves with the destination society's culture and norms. Also, the preservation of the original culture may also limit their motivation to engage in activities with native-born people.

Because of socioeconomic differences across neighborhoods, it may drive assimilation in different directions. According to segmented assimilation theory,

immigrant children living socio economically well-off neighborhoods are more likely to experience positive assimilation, and the opposite occurs when they live in poor neighborhoods (Zhou 1997). This is consistent with the research on volunteering. In neighborhoods with high socioeconomic status, such as those with high household incomes and/or educational attainments membership in civic and other voluntary organizations is significantly higher than neighborhoods with low socioeconomic status (Wuthnow 1998: 113). However, with a high concentration of immigrants in a neighborhood, would this limit the chances of interaction with native-born people in residential areas? Would they volunteer less than expected because of their deliberate preservation of immigrant values and solidarity? In parallel, when children live in disadvantaged neighborhoods, segmented assimilation theory predicts negative assimilation on volunteering since they come into direct contacts with the poor rather than with the middle class. They are also apt to encounter members of native-born minorities rather than members of the dominant majority, which creates barriers for positive assimilation (Zhou 1997). However, when the concentration of immigrants in this type of neighborhood is high, their co-ethnic group values might benefit socially and economically disadvantaged children through cultural protection and control (Gans 1992; Portes and Zhou 1993). As a result, living in a disadvantaged neighborhood may not necessarily predict negative assimilation, especially when the co-ethnic group is large.

Thus, whether the concentration of immigrants will limit exposure to the destination culture and whether this will result in divergent paths based on socioeconomic disparities needs to be specifically examined. Living in an economically disadvantaged immigrant enclave may be a reflection of lack of choices, while living in better-off ethnic

communities may more likely reflect personal choice. In this paper, I argue that both time exposure and neighborhood exposure affect the volunteering behavior and neighborhood moderate the impact of time. In general, on the one hand, a large proportion of immigrants in a neighborhood will slow assimilation in volunteering behavior. on the other hand, due to the socioeconomic differences between neighborhoods, the moderation effect may not be the same. I expect this examination will add to the literature on segmented assimilation by examining how selected acculturation affects children's assimilation in positive behaviors in segmented neighborhood contexts.

An additional question is whether the effect of neighborhood context on volunteering persists from adolescence into young adulthood. In another words, does past pattern or effect through exposure to neighborhood context continue to work when those adolescents enter a new life stage. Do social relations across cultures in neighborhood during adolescence exert a long-term influence during young adulthood for immigrant children? Segmented assimilation describes an unfavorable future for children growing up in disadvantaged neighborhoods. However, Alba and Nee (1997) were critical of this, saying that childhood circumstances of young immigrant offspring are not necessarily identical to nor predictive of experiences in adulthood. According to life course theory, the interdependence of the life history of family members (Elder 1984) and the potential for both continuity and change in pattern are possible over the life course. How much impact of neighborhood context on assimilation in volunteering behavior can we expect to persist when children move from adolescence to young adulthood? This study has the advantage of using neighborhood context in adolescence to predict similar outcomes in young adulthood.

Based on the theoretical background above, three hypotheses are listed as below:

*Hypothesis A:* The length of residence would have a positive influence on volunteering.

*Hypothesis B:* Neighborhood disparity and proportion of foreign-born may mediate or moderate the effect of time exposure on volunteering.

*Hypothesis C:* Neighborhood social-economic disparity will play a role. In the segmented economic context, a segmented path may be expected since segmented assimilation path between wealth neighborhood and poor neighborhood.

Hypothesis D: The neighborhood context in adolescence would continue to affect and play as a buffer on the length of residence on the volunteering in their young adulthood

## **DATA**

Data from the National Longitudinal Study of Adolescent Health (Add Health) are used for this study. Add Health started as a nationally representative sample of more than 20,000 adolescents in grades 7-12 in 1994-5 in the United States (Harris et al. 2003). Initially, 132 middle, junior high and high schools were selected for participation in 1994. From those schools, all students present in the survey day (N=90118) completed in-school questionnaires. Then 20,745 students were sampled and interviewed at home in 1995. After that, two follow-up interviews were conducted in 1996 and 2001. Certain populations were over-samples, including ethnic samples, physically disabled adolescents, and genetic sample. Administrators from the 132 schools also completed a school-administrator survey describing various school characteristics. A parent, usually the mother, was also interviewed in Wave I. About 80 percent of respondents were re-interviewed at the third wave.

Questions about civic participation were available only in Wave III, so this study is restricted to those with data in Wave III and complete information on immigrant status, are children of immigrants and have information on immigrant generations, family origins, race and ethnic background. These subjects could be linked to wave I, wave II, as well as parental questionnaire and school administrator questionnaire for the analysis purpose.

Except for the national representatives and relatively large sample, one of unique advantages of Add Health study is the collection of residential location of each respondent included in the in-home interview. External sources such as the U.S. Census are linked to individual respondents to obtain the broader neighborhood characteristics. Since neighborhood context is the key in this study, this information is valuable. Limitation of this data set for this study is the possible recall errors due to the self-reported dependent variables by retrospective method since information on volunteering is only available in Wave III. In addition, as a socially desired behavior, volunteering may be over-reported. However, I argue that the definition of volunteering do not have great disparity among different groups of adolescents since it is a part of social citizenship education in schools. Another problem is that missing data in the parental questionnaire is substantial, which causes the loss of some important parental information such as income and parental volunteering behaviors.

## **MEASURES**

### Dependent variable

The measure for adolescents' volunteer activity is a categorical variable, based on a retrospective question asked in wave III. The question asks if the respondent ever participated in unpaid volunteer or community service work regularly through such organizations as Little Leagues, scouts, service clubs, church, and social action groups when they were 12 to 18 years old. To clearly measure if a volunteer activity is a real volunteerism, it is necessary to distinguish "non-required volunteering" from "required volunteering" since some volunteering behavior maybe required by others such as school and court for adolescents. By definition, this kind of required volunteering does not really reflect self-motivated volunteering. Thus, this analysis only codes those "Non-required volunteering" as volunteering. This means that volunteer work is not mandated by any institutions.

Adult volunteerism may be different from adolescent volunteerism since individual's norm and value change over the life course. In the wave III in-home questionnaire, those adolescents who have arrived their adulthood were asked if they had done any volunteer or community service work during the last 12 months. This provides an opportunity to examine if the factor of neighborhood context mediate and moderate the time exposure on volunteering in their young adulthood.

Little is known about the reporting errors of volunteerism. Studies are mostly depending on the retrospective questions on the volunteerism. The typical way to ask this question is asking whether they have done any volunteer work during last 12 months or how many hours/weeks/times they have been involving in volunteer work in particular time duration (Wilson and Musick 1997; Mustillo, Wilson and Lynch 2004; Rotolo and Wilson 2004). Reporting error is possible since volunteerism is a socially desired



behavior. Respondents might be more likely to self-report it in such a way as to avoid criticism or has the tendency to seek praise. Unfortunately, there is no way to test the reliability of the self-reported volunteering directly at the analysis stage.

### Independent Variables

Exposure to American society is determined by both the length of residence the respondent has been in the U.S. and the neighborhood contexts they live in. It is hypothesized that exposure to American society leads to assimilation, which in turn leads to a greater likelihood of volunteering. When measuring the settlement period, the length of second generation immigrants was determined by their age at each survey. Different coding systems were conducted to test the sensitivity of this variable, and the results do not depend on grouping. The proportion of people who are foreign-born at the Census tract level is used to measure the exposure to the destination culture at the neighborhood level. To test the if the assimilation is segmented because of neighborhood disparity, a difference is made between better-off neighborhoods and disadvantaged neighborhoods. The disadvantaged neighborhoods are similar to the immigrant enclave as discussed in literature, which usually refers to immigrants who live in an ethnic community and are marginalized by socioeconomic, cultural, or linguistic distinctions that inhibit full incorporation into destination contexts (Logan et al. 2002; Portes and Bach 1985). The difference between an immigrant community and an enclave lies in the concentration of the ethnic group. Proportion of foreign-born is seen as a direct measure of the degree of contact with the native culture.

The analyses are conducted separately for advantaged and disadvantaged neighborhoods to examine the complexity of segmentation of neighborhoods. Median household income at the neighborhood level is used to approximate economic advantage. Respondents are divided into two groups of equal size. Half of the respondents live in neighborhoods with median household income lower than the median of median household income in all neighborhoods, while the other half of respondents live in neighborhoods with median household income higher than the median of median household income. The neighborhood variables are measured at the census tract level.

Census tracts have enjoyed widespread use as measures of neighborhoods, although they have also been criticized. The criticism stems from the argument that neighborhoods are defined as government statistical areas rather than the actual dynamic neighborhood processes that are hypothesized to shape child and adolescent well-being (Jencks and Mayer 1990). However, these administratively-defined units are reasonably consistent with the notion of overlapping and nested ecological structures, and nationwide, it is an efficient and convenient way to capture the characteristics of neighborhoods (Sampson et al. 2002).

*Control variables:* Parental education is used to indicate the social economic status of family. I expect that the more desired family social economic situation, the higher probability of immigrant children involvement in volunteering, since they do not need struggle between volunteering and family responsibilities. Parental education is coded as the highest degree obtained by a parent. If two parents present, then the parent with the highest level of education will be used, which is a binary variable of high school graduate or not. Family socioeconomic status is also thought to shape parents' values and

in turn their child-rearing goals and behaviors (Gecas 1979; Kohn 1969; Mortimer and Kumka 1982). Previous studies have shown that positive effect of mother's education on household participation in the volunteer work, as well as next generation's propensity to participate in volunteer work (Brown 1999). Parent-child relationship is very important for children's psychological wellbeing. As immigrants, high ability of English speaking skill by parents will help their children keep up with school work and social activities, which also provides more resources and instructions for their children's volunteering. It will be ideal if this variable can be included in the analysis. However, since the dataset has no measurement on parental English communication ability, I use a proxy variable of whether children speak English at home to represent this.

Both parental and children educational aspirations are included in the models as control variables since the U.S. school system takes volunteering into account as an important factor during college admission. Family structure has been linked to the availability of resources for children. Single parent family in immigrant community has less social capital to obtain information. Previous research argues that the family is usually considered the most important mechanism in value socialization (Bengtson, 1975, P.358). Immigrant kids in a single-parent family usually have more constraints than natives. Not only is economic security a concern, divorce maybe socially stigmatized among their ethnic group, so their direct social contacts may be significantly reduced. Thus, I include a binary variable of two biological parental families verse others in my analysis. I also include whether an adolescent taking a job during a typical non-summer week and church attendance as the control variables in the models. Part-time job may compete with volunteering for children' time and it may also be a self-selection of

choices. Thus, part-time job during a typical non-summer week is expected to have a negative effect on the likelihood of volunteering if the time competition theory holds. Church attendance is expected to have a positive effect on volunteering.

Other variables include age, gender, and race/ethnicity. Add Health respondents were aged 11-18 in the Wave I survey and they became 18-27 during the Wave III survey. Age may affect volunteering. Johnson (2002) suggests that people will have more concerns about the economic costs and benefits of a particular work as age increases. In his research, he uses a quite wide age group for adults. Whether this pattern exists among a younger group is examined in this paper. Gender is an important control variable to be considered since volunteer work has traditionally been thought of as a female activity (Daniels 1988; Mustillo et al. 2004). I expect females will be more likely to volunteer than males. Race and ethnicity play important roles both in initial adolescent values and in changes that occur across the young adult years (Johnson 2002). Previous work shows that whites volunteer more than blacks (Musick, Wilson and Bynum 2000). It is unclear if this difference exists among adolescents. It is also not clear what the patterns are among other minority groups.

In adult models, in addition to the aforementioned variables, marital and cohabitation experience are also included. Previous studies show that married people are more likely to volunteer than singles (Hodgkin Son and Weitzman 1996), regardless of whether they have children (Sundae 1990). Since the respondents are all young adults, it is more meaningful to examine their marital and cohabitation history instead of current marital status. The response categories of this variable are (1) Married, but never cohabited; (2) cohabited, but never married; (3) cohabited then married; and (4) neither

married nor cohabited. Control variables include educational achievement and labor force participation. Education is a strong predictor of volunteering since volunteer work and paid work compete for a person's time (Rotolo and Wilson 2004; Mustillo, Wilson and Lynch 2004) when studying adult volunteerism. In addition, I use the daily language spoken with the best friends to measure the language acculturation. Church attendance is used to measure religiosity, which is defined as a two category variables of weekly or more and less than weekly.

## METHODS

The statistical modeling approach used in this paper is multilevel logit model (Raudenbush and Bryk 2002). The choice of statistical methods is guided by the categorical nature of the outcome variable as well as the data structure. The self-reported variable of volunteering in both adolescence and adulthood,  $y_{ij}$ , is a binary response for individual  $i$  in neighborhood  $j$  (volunteering=1 and not volunteering=0). The probability that the response is equal to one is defined as  $P_{ij} = \Pr(y_{ij} = 1)$ , where  $y_{ij}$  has a Bernoulli distribution. The data in the regression equation are transformed by taking the log of odds of volunteering.

$$\log\left(\frac{P_{ij}}{1 - P_{ij}}\right) = \beta_{0j} + \beta_{1j}mig\_dur_{ij} + \beta_{2j}race_{ij} + \beta_{3j}females_{ij} + \dots \quad \text{Level 1 model}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}prop\_foreign_j + u_{0j} \quad \text{Level 2 model}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}prop\_foreign_j + u_{1j} \quad \text{Level 2 model}$$

$$\log\left(\frac{P_{ij}}{1 - P_{ij}}\right) = \gamma_{00} + \gamma_{01}mig\_dur_{ij} + \gamma_{01}prop\_f_j + \gamma_{11}mig\_dur_{ij} * prop\_f_j + u_{1j}mig\_dur_{ij} + u_{0j} + \beta_{2j}race + \dots$$

## Combined model

Where  $\beta$  are regression coefficients at individual level

$\gamma$  are regression coefficients at neighborhood level

$u_{0j}$  and  $u_{1j}$  is the random effect at level two, the neighborhood level. Other

predictors are omitted in the formula to make it look concise.  $\beta_0$  is the intercept, which represents the log odds of volunteering when all categorical independent variables are at their reference group and continuous variables at 0s.  $\beta_1$  represents the effect of length of residence on volunteering. To examine the effect of neighborhood exposure on volunteering, I use the contextual variable of proportion of foreign-born in a particular neighborhood to predict the intercept and the coefficient of time exposure to see if the concentration of foreign-born moderates the length of residence on volunteering. In other words, an interaction effect is expected to exist between time exposure and neighborhood exposure. Thus, the moderation effect of proportion foreign-born on length of residence is expressed as a cross-level interaction. Two sets of models are conducted for adolescents and young adults separately. I present results in the form of both raw coefficients and odds ratios for ease of interpretation. In addition, since this data is structured at different levels, multilevel models can correct the biases of standard errors due to the dependence of individuals in same neighborhood. The model also uses the likelihood ratio to test for significance when examining the model as a whole.

## RESULTS

### Descriptive Analysis

Tables 1 and 2 show descriptive statistics of the variables in both adolescent and adult models by the socioeconomic status of neighborhood to distinguish the advantaged and disadvantaged immigrant communities. About 37 percent of immigrant adolescents regularly engaged in non-required volunteering work. Adolescents in socioeconomically advantaged neighborhoods were four percent higher in engaging in non-required volunteering than adolescents from disadvantaged neighborhoods. Duration of residence does not differ much across neighborhood types. The proportion of people who are foreign-born in socioeconomically disadvantaged neighborhoods (30 percent averagely) is higher than in advantaged neighborhoods (24 percent averagely). However, the range of the proportion of people who are foreign-born in disadvantaged neighborhoods is much higher than the range in advantaged neighborhoods. The logged median household income for advantaged neighborhoods is 10.68 and for disadvantaged neighborhoods is 9.96. In adulthood, the proportion of volunteers decreases. For example, only 26 percent of young adults volunteer compared to 37 percent of adolescents. The rate of volunteering is higher for immigrant children growing up in advantaged neighborhoods than in disadvantaged neighborhoods.

### **Multilevel Logit Model Results**

Table 3 presents the regression results for adolescent volunteering. Model 1 examines if time exposure has an effect on volunteering. According to Model 1, time exposure measured as residential duration has a positive effect on the likelihood of volunteering, with one additional year of living in the U.S. increasing the likelihood of volunteering by 2 percent. Model 2 tests if neighborhood exposure and economic disparity moderate the length of residence on volunteering. The results show that logged household income at

the neighborhood level also significantly increases the likelihood of volunteering, but not proportion of foreign. Both of neighborhood variables do not attenuate the impact of length of residence on volunteering. When logged income is increased by one unit, the likelihood of volunteering is increased by 40 percent. Model 3 shows if the proportion of foreign-born moderates the effect of time exposure on volunteering, and it showed that the length of residence is becoming less significant ( $p < 0.1$ ).

To test if the moderation effect is segmented, I divided the sample into two groups by the median of median household income at neighborhood levels. Model 1 in table 4 shows a three-way interaction and the length of residence disappeared in this model, this shows the median household income might buffer the moderation effect of proportion of foreign-born on length of residence. To make the three-way interaction clearer, I run the models for the wealthy neighborhood and disadvantaged neighborhood separately in model 2 and model 3, respectively. Model 2 displays the results for adolescents who live in disadvantaged neighborhoods. Length of residence, logged median household income, and the proportion of foreign-born people all do not have significant effect on volunteering. Model 3, however, shows a completely different story for immigrant children living in better-off neighborhoods. For them, not only do residential duration and neighborhood context affect assimilation in volunteering behavior, but the interaction of these two does as well. The interpretation of this cross-level interaction should not be interpreted by a single estimate and has to take into consideration both the main effect and interaction effect together. The odds ratio of residential duration based on the change in the proportion that is foreign-born can be calculated from the following equation:

$$\text{Odds Ratio} = \exp \left( \beta_{\text{mig\_dur}} + \beta_{\text{mig\_dur*prop\_foreign}} * p \right) \quad (5)$$



where letter  $p$  refers to the proportion of foreign-born at neighborhood. As expected, since the effect of the cross-level interaction between time exposure and neighborhood exposure is negative, it reduces the positive effect of time exposure on volunteering when the concentration of foreign-born at neighborhood increases. It confirms *hypothesis A*, that a reduction of contact with native-born people at the residential level decreases the positive effect of time exposure on assimilation of volunteering in socioeconomically advantaged neighborhoods. To simulate how these two exposure variable interact with each other, I calculated odds ratios given different proportions of foreign-born at neighborhood levels into the equation (5). Figure 1 presents the predicted odds ratios of time exposure on the likelihood of volunteering when the proportion of foreign-born people in the neighborhood increases. The predicted odds ratios show the effect that an additional year of living in the United States increases the likelihood of volunteering given a fixed proportion of foreign-born people in a neighborhood. Although residential duration initially has a significantly positive effect on volunteering, the effect weakens as the proportion of foreign-born at the neighborhood increases. When the proportion of foreign-born increases to over 30 percent, the effect of time exposure becomes negative. Thus, 30 percent of people who are foreign-born in the neighborhood are the turning point for the effect of time exposure on volunteering. This indicates that a higher concentration of immigrants in advantaged neighborhoods is an obstacle for assimilation. In these communities, volunteering rates would not increase with additional years of residence in the United States.

Among other control variables, age has a negative effect on adolescent volunteering. This is consistent with previous studies on the age effect on volunteering in

adults. Female adolescents are about 25 percent more likely to volunteer than male adolescents. Since Hispanics compose the largest group of immigrants, they are the omitted category in the models. The results do not show any differences between Hispanics and other racial and ethnic groups for both the aggregate model and separate models. Educational aspiration encourages volunteering. Contrary to what is expected, working during a typical non-summer week does not affect immigrant adolescent volunteering. Parental education positively affects volunteering. Having a parent who has at least a high school degree increases the chances of volunteering by more than 50 percent. Frequent church attendance also significantly increases the chances of volunteering by 40 percent compared to less than frequent church attendance.

Model 1 in Table 5 displays the multilevel regression results for young adults. Model 1 includes individuals who grew up in both disadvantaged neighborhoods and advantaged neighborhoods. With each additional year of residence in the United States, the likelihood of volunteering increases by about 4 percent. A higher percentage of foreign-born in a neighborhood does not affect volunteering. Model 2 tests if proportion of foreign-born moderates the effect of time exposure. It shows that there is no significant interaction between duration of residence and proportion of foreign-born. Logged median household income in the neighborhoods that respondents lived in during adolescence positively impacts the likelihood of volunteering when they enter into young adulthood.

Model 3 and Model 4 present the results for people who grew up in advantaged neighborhoods and disadvantaged neighborhoods separately. In disadvantaged neighborhoods, both the proportion of foreign-born and the cross-level interaction between duration of residence and the proportion of foreign-born have significant effects

on volunteering. Again, since it is an interaction effect, the odds ratios of residential duration based on the change in proportion of foreign-born can be calculated from equation (5). In contrast to what was found in the adolescent models, when the proportion of foreign-born increases, the residential duration effect is positive. Predicted odds ratios given different proportions of foreign-born are represented by the diamond line in Figure 2. Thus, the proportion of foreign-born positively moderates the effect of time exposure on volunteering in young adulthood models when they grew up in disadvantaged neighborhoods. According to Model 3, in advantaged neighborhood one additional year of residence in the U.S. increases the likelihood of volunteering by 18 percent. Residential duration, contact with residents in the neighborhood, and the interaction of these two factors each have a significant effect on volunteering. This result is similar to what was found for adolescents in Table 2. The predicted odds ratios are presented in Figure 2 by the square line. Similar to the model for those who lived in advantaged neighborhoods in adolescence, the effect of time exposure on volunteering is positive initially, but the effect weakens when the proportion of immigrants in the neighborhood increases. When the proportion increases to over 40 percent, living in an advantaged neighborhood hinders the positive assimilation on volunteering for young adults instead of encouraging volunteering. The result confirms Hypothesis C, that neighborhood context play an important role in the assimilation process for young adults.

In the young adult models, age negatively affects volunteering. Asians volunteer more than Hispanics. Work does not impact volunteering, but educational achievement does. High school graduates are significantly more likely to volunteer than those who do not complete high school, about 90 percent more likely. Language use with friends has no

effect on adult volunteering, whether they are in advantaged or disadvantaged communities. In examining marital and cohabitation history, young adults who had experience of cohabitation and/or marriage are less likely to volunteer than those who had never cohabited or married. Frequent church attendance increases the likelihood of volunteering by 110.6 percent.

## **DISCUSSION AND CONCLUSION**

In this paper, I test hypotheses based on segmented assimilation theory with specific relevance to a positive social behavior, volunteering. In multilevel regression analyses of Add Health data for children from immigrant families, the results show that, in general, longer length of residence in the United States is associated with a higher likelihood that respondents engaged in non-required volunteering. This pattern of positive assimilation on volunteering for children from immigrant families marginally holds when they enter their early adulthood, which indicates a continuity of assimilation on positive behaviors across the life course. By examining the effects of both neighborhood exposure and time exposure on volunteering, different assimilation paths were demonstrated for children of immigrants living in different types of neighborhood. First, in adolescence, the cross-level interaction is significant for children of immigrants living in advantaged neighborhoods in adolescence, which means that neighborhood exposure to native-born people moderates the path of assimilation on volunteering in advantaged neighborhoods. In other words, when the proportion of foreign-born immigrants living in the same neighborhood increases, the initial positive assimilation on volunteering becomes weaker until it reverses to become negative. This is similar to what the segmented assimilation

argued that fewer contacts with disadvantaged native-born people present barriers to downward assimilation, even if they live in advantaged neighborhoods. In poor neighborhoods, both residence duration and exposure to native contacts and their cross-level interaction do not have an effect on adolescent volunteering. Therefore, negative assimilation does not occur in this case, even if they live in disadvantaged neighborhoods. Thus, there is the possibility that fewer contacts with disadvantaged native-born children can protect them from adverse outcomes.

Second, in young adulthood, interactions occur in both advantaged and disadvantaged communities, but the effects run in opposite directions. Neighborhood context during adolescence plays a role when they enter into young adulthood. In advantaged neighborhoods, the effect runs in the same direction as in adolescence, which indicates a continuation of the neighborhood effect on assimilation in volunteering behavior over the life course. On the contrary, in disadvantaged neighborhoods, the likelihood of volunteering is improved when the proportion of foreign-born people in neighborhood during adolescence increases. This suggests that disadvantaged neighborhood context during adolescence even improves adult civic participation, in the case of growing up in immigrant communities.

Studies on neighborhood effects have been preoccupied with problem behaviors and health related outcomes, and neighborhood research (Wilson 1987; Sampson et al. 2002) has primarily concentrated on the structural dimensions of neighborhood disadvantage, especially poverty. For example, Wilson (1987) argues that neighborhood concentrations of the most disadvantaged populations have propagated destructive attitudes and behaviors that perpetuate disadvantage, such as high rates of teenage

childbearing, female family headship, drug use, illegal market activity, and detachment from the labor force. To a lesser extent, the social-ecological literature has considered aspects of neighborhood differentiation other than concentrated disadvantage, such as residential stability and home ownership. In the first case, for example, segmented assimilation argues that immigrant children will assimilate into the native-born underclass permanently if they live in disadvantaged inner cities (Zhou 1997; Gan 1992). Moreover, research has shown that children of immigrants can adjust their behaviors if they live in an immigrant enclave, since their ethnic cultures can protect them from this downward assimilation (Zhou 1997). From a new perspective, this study includes both kinds of neighborhood characteristics but emphasizes the latter more than the former. It adds to the literature by examining neighborhood effects on immigrant assimilation in volunteering behavior, taking into consideration the different levels of exposure to native-born people in residences for children of immigrants living in neighborhoods of different socioeconomic levels.

Previous studies have also paid particular attention to the impact of the immigrant enclave because not only does the immigrant enclave economy show a competitive return to human capital relative to people who work in the secondary sector of the economy (Wilson and Portes 1980), but also the immigrant enclave exhibits strong ties to ethnic culture and values. With respect to how local context affects immigrant assimilation, studies have focused on the density of the ethnic networks on the outcome of assimilation. For example, research has shown that immigrant children from families in tight-knit social networks have better psychological outcomes, higher levels of academic achievement, and higher educational aspirations than those in socially isolated families

(Portes and Schauffler 1994; Rumbaut 1994; Zhou and Bankston 1994). Less attention has been paid to the association between residential exposure to native-born people and assimilation outcomes.

This paper uses the proportion of foreign-born immigrants in the neighborhood to represent residential exposure to the culture of the destination society. The concentration of foreign-born is not the same as the concentration of co-ethnics, so the representation of ethnic social capital is lacking in this context. Moreover, this kind of neighborhood also might create a situation where immigrants are even more isolated from both co-ethnic and native-born people. Thus, whether the concentration of foreign-born people, not the density of co-ethnic groups, will make immigrant children resist assimilation is a new question which fits the framework of segmented assimilation.

By considering the side of density of exposure to native-born people instead of exposure to ethnic culture and networks, this paper adds to the literature on segmented assimilation theory. Based on the regression analysis, lack of exposure to native-born people does decrease the assimilation in volunteering behavior, whether or not the neighborhood is composed of mostly co-ethnics or other immigrant groups. This weakens the selective acculturation theory, which posits that strong ethnic ties decreases assimilation. Rather, the relatively weaker ties with native-born people decreases assimilation, at least in the case of volunteering. This challenges the current segmented assimilation theory that focuses on the impact of ethnic culture.

However, this conclusion is only true for adolescents in socioeconomically advantaged neighborhoods. In disadvantaged neighborhoods, the degree of exposure to the disadvantaged native-born underclass neither improves nor worsens assimilation in

volunteering behavior. Segmented assimilation theory argues that socioeconomically disadvantaged children of immigrants living in immigrant enclaves may be protected from destructive attitudes and behaviors because of the strong ties of ethnic cultures; therefore it is possible that the protective effect will also protect the children from assimilation to positive social behaviors. However, this is not the case when measuring contact with native-born people instead of co-ethnics. The possible reason is that disadvantaged immigrants may give the priority to surviving over others. Thus, no matter how long they have lived in the United States and what the race/ethnic composition is, their volunteering rate remains about same for this group of immigrants.

How does neighborhood context during adolescence affect their assimilation in volunteering behavior when they enter into young adulthood? The life course perspective emphasizes the interdependence of the life history of family members as well as social context (Elder 1984). In this paper, I use neighborhood context in adolescence to predict whether it moderates the effect of residential duration on volunteering, taking into account their education, work status, marital status and religiosity. Based on the statistical results, when children of immigrants in disadvantaged neighborhoods grew up, their experience of living in poor immigrant neighborhoods during adolescence actually makes them more likely to volunteer. This is counter to segmented assimilation theory that argues disadvantaged adolescent social context will lead to permanent adverse assimilation. One speculation is that their experiences in poor neighborhoods as immigrants motivate them to volunteer when they enter into young adulthood. They may volunteer to help new immigrants. However, this is only a speculation. The neighborhood context during young adulthood may also play a role. Unfortunately, Add Health data



does not include the neighborhood context variables when they enter into adulthood. For children living in socioeconomically advantaged neighborhoods during adolescence, the young adult pattern of assimilation in volunteering behavior is same as during adolescence, which suggests a continuity of the neighborhood effect over the life course. However, neighborhood differences in moderation of assimilation in volunteering behavior may also reflect differences in racial and ethnic composition in neighborhoods, which may coincide with the concentration of foreign-born people. Moreover, it may also be the racial segregation within the immigrant community. For example, Asian Americans are more likely to live in socioeconomically advantaged immigrant neighborhoods than Hispanics. The next step of this work will examine how the racial and ethnic composition of a neighborhood affects the assimilation of immigrant children.

To summarize, this paper tested the neighborhood effects on the immigrant children's volunteering behavior. The results shed some light on segmented assimilation theory by considering neighborhood disparity. Living in immigrant community does curb the assimilation path in volunteering behavior, but it is conditioned on the socioeconomic status of the neighborhood. In advantaged neighborhoods, the assimilation effect on volunteering is weakened by an increase in the concentration of immigrants. This implies that less exposure to native-born residential contacts limits assimilation. This also offers a unique perspective to assimilation literature in that living in advantaged neighborhoods does not necessarily mean assimilating into the mainstream American culture. On the other hand, living in a poor neighborhood with high proportion immigrants during adolescence does not necessarily lead to permanent negative outcomes. The adolescent context actually prompts positive behavior when entering young adulthood.

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Table 1: Descriptive statistics of variables for adolescent models

<b>Adolescent Models</b>	All				Below median income neighborhood				Above median income neighborhood			
Variable	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
Volunteering in adolescence	0.45	0.50	0	1	0.44	0.50	0	1	0.46	0.50	0	1
Strict volunteering in adolescence	0.37	0.48	0	1	0.35	0.48	0	1	0.39	0.49	0	1
Migration duration	13.85	4.55	0.75	20.58	13.82	4.34	0.75	20.58	13.88	4.74	0.92	19.92
Age	16.44	1.65	11.42	21.33	16.29	1.71	11.42	21.33	16.57	1.59	11.75	20.67
Female	0.51	0.50	0	1	0.52	0.50	0	1	0.50	0.50	0	1
White	12.82				11.07				14.51			
Black	5.85				7.32				4.44			
Asian	26.61				13.47				39.25			
Other	6.67				8.49				4.91			
Hispanic	48.05				59.66				36.89			
Education aspiration	4.33	0.94	1	5	4.29	0.97	1	5	4.37	0.91	1	5
Parent education expectation	4.13	1.09	1	5	4.09	1.09	1	5	4.17	1.09	1	5
Part-time work	0.46	0.50	0	1	0.44	0.50	0	1	0.48	0.50	0	1
Speaking English at home	0.56	0.50	0	1	0.51	0.50	0	1	0.62	0.49	0	1
Church attendance	0.40	0.49	0	1	0.35	0.48	0	1	0.44	0.50	0	1
Parent high school graduate	0.68	0.47	0	1	0.61	0.49	0	1	0.75	0.43	0	1
Two biological parents	0.62	0.49	0	1	0.54	0.50	0	1	0.70	0.46	0	1
Neighborhood proportion of foreign-born	0.27	0.23	0	0.87	0.30	0.29	0.00	0.87	0.24	0.14	0.00	0.55
Logged median household income	10.33	0.45	8.52	11.74	9.96	0.34	8.52	10.44	10.68	0.21	10.45	11.74
Number of individuals	3315				1626				1689			



Table 2: Descriptive statistics of variables for adult models

<b>Adult Models</b> Variable	All				Below median income neighborhood				Above median income neighborhood			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
Volunteering in early adulthood	0.26	0.44	0	1	0.24	0.42	0	1	0.29	0.45	0	1
Migration duration	20.22	4.59	5.92	28.00	20.22	4.39	7.08	28.00	20.23	4.78	5.92	27.58
Age	22.82	1.72	18	28	22.71	1.77	18	28	22.93	1.65	18.42	27.58
Female	0.51	0.50	0	1	0.51	0.50	0	1	0.50	0.50	0	1
White	12.78				10.74				14.8			
Black	6.10				7.76				4.46			
Asian	26.61				13.54				39.46			
Other	6.60				8.29				4.93			
Hispanic	47.91				59.67				36.35			
High school graduate	0.88	0.32	0	1	0.85	0.36	0	1	0.91	0.28	0	1
Work	0.70	0.46	0	1	0.72	0.45	0	1	0.69	0.46	0	1
English	86.36				83.65				89.02			
Other Language	7.07				9.25				4.93			
Half English	6.57				7.10				6.05			
Cohabit and married	0.08	0.26	0	1	0.09	0.28	0	1	0.07	0.25	0	1
Married, not cohabitation	0.12	0.33	0	1	0.15	0.36	0	1	0.09	0.29	0	1
Cohabit, not married	0.25	0.43	0	1	0.26	0.44	0	1	0.25	0.43	0	1
Single	0.54	0.50	0	1	0.50	0.50	0	1	0.59	0.49	0	1
Church attendance	0.34	0.47	0	1	0.31	0.46	0	1	0.36	0.48	0	1
Neighborhood proportion of foreign-born	0.27	0.23	0	0.87	0.30	0.29	0.00	0.87	0.24	0.14	0.00	0.55
Logged median household income	10.32	0.45	8.52	11.74	9.97	0.33	8.52	10.44	10.67	0.21	10.45	11.74
Number of individuals	3379				1676				1703			

Table 3: Volunteer Activity in Adolescence, Random Effect Logit Models

Variables	Model 1			Model 2			Model 3		
	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )
Intercept	-2.129***	0.485	0.12	-5.513***	1.284	0.004	-5.566***	1.295	0.004
Migration duration	0.023*	0.010	1.02	0.022*	0.010	1.02	0.026+	0.016	1.03
<i>Demographic variables</i>									
Age	-0.068**	0.026	0.93	-0.070**	0.026	0.93	-0.071**	0.026	0.93
Female	0.218**	0.076	1.24	0.224**	0.077	1.25	0.224**	0.077	1.25
White	0.208	0.139	1.23	0.190	0.141	1.21	0.188	0.142	1.21
Black	0.109	0.179	1.11	0.154	0.183	1.17	0.152	0.183	1.16
Asian	0.220*	0.110	1.25	0.2034+	0.111	1.23	0.205+	0.111	1.23
Other	0.065	0.174	1.07	0.097	0.176	1.10	0.094	0.176	1.10
Hispanic(omitted)									
<i>Education Aspiration</i>									
Aspiration to go to college	0.256***	0.049	1.292	0.253***	0.050	1.29	0.253***	0.050	1.29
Parent expectation to go to college	0.088*	0.038	1.09	0.082*	0.038	1.09	0.083*	0.038	1.09
<i>Part-time job and Language use</i>									
Work during non-summer time	0.117	0.080	1.12	0.119	0.080	1.13	0.119	0.080	1.13
Speaking English at home	0.030	0.097	1.03	0.015	0.098	1.02	0.014	0.098	1.01
<i>Family background</i>									
Parent high school graduate	0.443***	0.096	1.56	0.422***	0.097	1.53	0.421***	0.097	1.52
Two biological parents	0.173*	0.083	1.19	0.141+	0.083	1.15	0.140+	0.083	1.15
<i>Church attendance</i>									
Weekly or more	0.35***	0.079	1.42	0.349***	0.079	1.42	0.349***	0.079	1.42
<i>Neighborhood segregation</i>									
logged Median household income				0.336***	0.118	1.40	0.337**	0.118	1.40
Proportion of foreign-born				0.227	0.298	1.25	0.403	0.617	1.50
Proportion of foreign-born*migration duration							-0.013	0.039	0.99
Number of observation		3226			3226			3226	

Two tail test: +  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 4: Volunteer Activity in Adolescence by Neighborhood Household Income, Random Effect Logit Models

Variables	Model 1			Model 2			Model 3		
	All			Below Median Households			Above Median Household		
	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )
Intercept	-1.815***	0.499	0.16	-3.394+	1.912	0.03	-9.701**	3.235	0.00
Migration duration	0.014	0.011	1.01	0.030	0.023	1.03	0.089**	0.031	1.09
<i>Demographic variables</i>									
Age	-0.065**	0.026	0.94	-0.038	0.035	0.96	-0.127**	0.040	0.88
Female	0.223**	0.077	1.25	0.323**	0.111	1.38	0.1	0.109	1.11
White	0.194	0.142	1.21	0.326	0.204	1.39	0.029	0.199	1.03
Black	0.142	0.182	1.15	0.110	0.235	1.12	0.168	0.287	1.18
Asian	0.203+	0.111	1.23	0.249	0.177	1.28	0.205	0.149	1.23
Other	0.095	0.176	1.10	0.051	0.232	1.05	0.048	0.272	1.05
Hispanic(omitted)									
<i>Education Aspiration</i>									
Aspiration to go to college	0.255***	0.050	1.29	0.260***	0.068	1.30	0.246***	0.074	1.28
Parent expectation to go to college	0.087*	0.038	1.09	0.056	0.054	1.06	0.119*	0.056	1.13
<i>Part-time job and Language use</i>									
Work during non-summer time	0.115	0.080	1.12	0.058	0.115	1.06	0.181	0.114	1.20
Speaking English at home	0.029	0.097	1.03	0.183	0.146	1.20	-0.133	0.134	0.88
<i>Family background</i>									
Parent high school graduate	0.43***	0.097	1.54	0.431***	0.126	1.54	0.357*	0.155	1.43
Two biological parents	0.153+	0.083	1.17	0.202+	0.116	1.22	0.076	0.122	1.08
<i>Church attendance</i>									
Weekly or more	0.354***	0.079	1.42	0.387***	0.117	1.47	0.36***	0.112	1.43
<i>Neighborhood segregation</i>									
Logged Median household income				0.043	0.182	1.04	0.745*	0.299	2.11
Proportion of foreign-born	-0.440	0.403	0.64	0.586	0.683	1.80	3.568*	1.534	35.46
Neighborhood household income below median	-0.346**	0.123	0.71						
Migration duration x: proportion of foreign born				0.020	0.046	1.02	-0.269**	0.098	0.76
Proportion of foreign-born* below median households	0.055*	0.026	1.06						
Number of observation		3226			1603			1623	

Two tail test: +  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5: Volunteer Activity in Early Adulthood, Random Effect Logit Models

Variables	Model 1			Model 1			Model 2			Model 3		
	All			All			Below median income neighborhood			Above median income neighborhood		
	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )	Coeff.	S.E.	Exp( $\beta$ )
Intercept	-2.130	1.418	0.12	0.562	0.626	1.75	-0.023	2.283	0.98	-7.26*	3.237	0.00
Migration duration	0.040***	0.011	1.04	0.031**	0.011	1.03	-0.007	0.026	0.99	0.126***	0.035	1.13
<i>Demographic variables</i>												
Age	-0.116***	0.028	0.89	-0.112***	0.028	0.89	-0.124**	0.039	0.88	-0.125	0.042	0.88
Female	0.156+	0.084	1.17	0.158+	0.085	1.17	0.255*	0.126	1.29	0.0517	0.117	1.05
White	0.282*	0.143	1.33	0.290*	0.144	1.34	0.475*	0.214	1.61	0.087	0.196	1.09
Black	0.084	0.189	1.09	0.085	0.190	1.09	0.356	0.246	1.43	-0.229	0.307	0.80
Asian	0.305**	0.113	1.36	0.321**	0.114	1.38	0.338+	0.197	1.40	0.243+	0.144	1.27
Other	-0.142	0.195	0.87	-0.126	0.196	0.88	0.132	0.260	1.14	-0.499	0.305	0.61
Hispanic(omitted)												
<i>Work and Education</i>												
Work	-0.117	0.092	0.89	-0.114	0.092	0.89	-0.004	0.140	1.00	-0.177	0.126	0.84
High school graduate	0.606***	0.165	1.83	0.601***	0.165	1.82	0.590**	0.216	1.80	0.616*	0.262	1.85
Speaking English with friends	-0.133	0.090	0.88	-0.138	0.090	0.87	-0.184	0.130	0.83	-0.097	0.129	0.91
<i>Marital Status</i>												
Cohabit and married	-0.599**	0.190	0.55	-0.600**	0.190	0.55	-0.491+	0.258	0.61	-0.749**	0.290	0.47
Married, not cohabitation	-0.348*	0.144	0.71	-0.356*	0.144	0.70	-0.354+	0.193	0.70	-0.324	0.223	0.72
Cohabit, not married	-0.396***	0.107	0.67	-0.401***	0.107	0.67	-0.502**	0.162	0.61	-0.304*	0.147	0.74
Single(omitted)												
<i>Church attendance</i>												
Weekly or more	0.748***	0.087	2.11	0.749***	0.087	2.12	0.740***	0.130	2.10	0.748***	0.121	2.11
<i>Neighborhood segregation</i>												
Below median households				-0.320*	0.142	0.73						
Logged Median household income	0.232+	0.125	1.26				0.116	0.209	1.12	0.582*	0.293	1.79
Proportion of foreign-born	-0.323	0.313	0.72				-2.967*	1.268	0.05	5.801*	2.366	330.73
Migration duration x:												
Proportion of foreign-born							0.151*	0.060	1.16	-0.320**	0.109	0.73
Proportion of foreign-born*below median households				0.060*	0.025	1.06						
Number of observation		3226			3226			1603			1623	

Two tail test: +  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 1-2: Impacts of Assimilation on Volunteering: Adolescents and Youth Adults

