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# Who Gives? The Determinants of Charitable Giving, Volunteering, and Their Relationship

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## **Abstract**

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## **Keywords**

charitable giving, volunteering

## **Disciplines**

Business

# **Who Gives? The Determinants of Charitable Giving, Volunteering, and their Relationship**

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## **Abstract**

Charity organizations often have limited resources and thus rely on individual contributions of money and time. The existing literature is divided on whether charitable giving and volunteering are complements or substitutes. This paper aims to clarify the relationship between giving time and giving money using 2012 General Social Survey results and to explore whether certain demographical attributes affect donating, volunteering, and the relationship between donations and volunteerism. A correlation test determines that the frequencies of giving time and giving money are complements ( $r = .3777$ ). In addition to multiple and binomial logit regressions, a multinomial logit regression shows that a combination of income, age, marital status and sex, religion, number of children, political party affiliation, and self-rank of social position significantly affect the complementarity between donating and volunteering.

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<sup>1</sup> Kimberly Yao graduated from the Wharton School of the University of Pennsylvania in May 2015 with a Bachelor of Science in Economics with concentrations in Management and Statistics, as well as a minor in History. This paper is a product of her time as a Wharton Research Scholar.

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## I. INTRODUCTION

Charity organizations, fundraisers, and others involved in philanthropy seek to understand the relationships between certain demographics and their likelihood to give money and time, as these organizations run on limited resources and need to identify who to target in their fundraising or volunteering campaigns. In this paper, charity organizations refer to organizations that provide help to those in need and benefit a considerable portion of the public, commonly measured by 501(c)(3) organization status as granted by the Internal Revenue Service (Broder, 2002). They encompass educational, health, poverty relief, arts and culture, community development, environmental, religious, human rights, animal welfare, and other institutions.

Charitable giving (used interchangeably with “donating”) constitutes the donation of personal funds or property to a charity organization. Many charities rely on personal donations to continue operations, as supplemented by corporate donations, grants, and government funding. Donors signal support and belief in a charity and its mission when they “vote” with their dollars.

Whereas donations mark the giving of money, volunteerism is the giving of time to a cause. Since charity organizations often run on limited funds and donations, they utilize unpaid volunteer labor to conduct operations. Volunteering is not obligatory; people may choose to devote time to certain charities they believe in.

In this paper, I seek to first verify the complementary relationship between charitable giving and volunteering to see if those who donate also volunteer or vice versa. I will then explore the relation between certain demographical attributes and the likeliness of donating and volunteering. In addition, I am curious to see whether these frequently studied attributes also affect whether the relationship between donating and volunteering is that of complements or substitutes.

### *Literature Review*

Many studies have investigated the effects of demographical attributes on charitable giving separately with widely varying results, dependent on dataset used and definitions of variables (Andreoni et al., 2001; Belfield and Beney, 2000; Brooks, 2003; Bryant et al., 2003; Einolf, 2010; Hodgkinson and Weitzman, 1990; Menchik and Weisbrod, 1987; Mesch et al., 2006; Mesch et al., 2011; O’Neill, 2001; Piper and Schnepf, 2008; Rooney et al., 2005; Weipking and Breeze, 2011; Women’s Philanthropy Institute, 2010). The effects of demographical attributes on volunteering are also not agreed upon (Andolina et al., 2003; Bryant et al., 2003; Damico et al., 1998; Lee and Chang, 2007; McPherson and Rotolo, 1996; Menchik and Weisbrod, 1987; Mesch et al., 2006; O’Neill, 2001; Schlozman et al., 1994; Segal, 1993; Sundeen, 1990; Sundeen and Raskoff, 1994). The literature has evolved from studying demographical characteristics—such as age, sex, income, and education—to surveying personality traits, behaviors, and attitudes—such as locus of control, altruism, and values—that may be more difficult to measure. Therefore, recent datasets have not been subject to purely demographical analyses.

Furthermore, the complementary or substitutable relationship of charitable giving and volunteering is debated in existing literature. Many investigate the relationship between dollar amount of charitable giving (donating) and hours spent volunteering.

Some researchers believe that people who care about charities are more likely to both donate and volunteer, resulting in charitable giving and volunteering to be seen as complements (Andreoni et al., 1996; Apinunmahakul, Barham, and Devlin, 2008; Brown and Lankford, 1992; Cappellari, Ghinetti, and Turati, 2011; Menchik and Weisbrod, 1987). Many of these studies analyzed elasticities of charitable gifts, volunteer labor, and tax prices to find a negative relationship between volunteer labor and the tax price of charitable gifts and determined that these qualities imply charitable giving and volunteering are gross Marshallian complements. These models are based on a combination of public goods and private consumption frameworks, meaning they assume the productions of both public good and personal happiness (warm glow) as a result of their charitable giving and volunteering are valid motivations.

Meanwhile, standard economic theory assumes that donating and volunteering are substitutes, as those with time will volunteer and those with money will donate (Meier, 2006). Here, time is considered a limited resource with an opportunity cost; people can choose to divide between volunteering and earning money that can be donated. Using the same dataset as Menchik and Weisbrod (1987), Duncan (1999) finds that unpaid volunteer time and paid labor time funded by donations are considered perfect substitutes. He uses a public goods model that refutes the complementary relationship between charitable giving and volunteering established by others' hybrid public goods-private consumption models. Jones (2006) separately studied the determinants of charitable giving and volunteering and observed mutually exclusive contributing factors, suggesting they are distinct methods of contributing to charity and possibly substitutes.

Since many have evaluated the relationship between charitable giving and volunteering in terms of dollar amount and hours spent, respectively, I will evaluate this relationship from another angle: that of frequency and occurrence. Tax policy will not play a role in these measurements, unlike in the aforementioned analyses of elasticities. I will focus on demographical attributes that charity organizations can easily determine of potential donors and volunteers rather than personality traits, behaviors, or attitudes. The 12 demographical attributes I will be studying are current household income, relative income group when 16 years old, marital status interacting with sex, race, religion, residential area size, number of children, education, political party affiliation, employment, and self-rank of social position, and each will be discussed below. (See Appendix A for full equation.)

## **II. THEORY AND HYPOTHESES**

### ***Current Household Income***

Income is often studied in the context of charitable giving; however, households generally strive to attain a level of financial stability before giving their money to people outside their family, including charities. Therefore, those with higher incomes will likely have more discretionary income on hand that they can choose to donate when they please. Even within the same income level, there can exist large discrepancies; for instance, two families that make the same amount of money can donate differently depending on how much money they perceive themselves to

have, all else equal. Those who more cautiously save money and those who worry about their finances are less likely to donate (Wiepking and Breeze, 2011).

*Hypothesis 1(a): Higher earners will donate more than lower ones.*

Many studies measure whether income affects the likelihood to volunteer. Researchers who believe that charitable giving and volunteering are substitutes likely believe those with more money but less time donate money and those with less money but more time donate time. However, our correlation test previously affirmed that charitable giving and volunteering are more likely to be complements ( $r = .3777$ ). Holding all else constant, I hypothesize that those with lower incomes will spend their excess time working to earn more money, rather than volunteering. Even if they wish to give time to charity organizations, they may not have the resources and luxuries to.

*Hypothesis 1(b): Higher earners will volunteer more than lower earners.*

### ***Relative Income Group When 16***

Although those who grew up in higher income families when they were 16 years old may be more accustomed to donating, their ability to donate as adults depends solely on their current income—not income when growing up. Therefore, past income may not have a crucial effect on current charitable giving.

*Hypothesis 2(a): Relative income group when 16 has no effect on donating.*

Volunteering in adolescent years has been proven to contribute to volunteering in adult years (Andolina et al., 2003). Since income will likely be a critical variable for volunteering, I will also include the respondents' relative income groups from when they were 16 years old, as that may be linked to whether they volunteered in their formative years. If higher income families volunteer more, then respondents that grew up in higher income families—no matter how much income they have now—may also volunteer more now.

*Hypothesis 2(b): Those who grew up in higher income groups will volunteer more than those who grew up in lower income groups.*

### ***Age***

As people get older, they may become more involved in the community and feel more inclined to give back. Previous studies have found that older people generally give more than their younger counterparts (Andreoni et al., 2003; Lee and Chang, 2007).

*Hypothesis 3(a): Older respondents will donate more than younger ones.*

The literature is divided on the relationship between age and volunteering. While some research has found that volunteering peaks at 40 (Herzog et al., 1989; Menchik and Weisbrod, 1987), others found age to be positively correlated with volunteering (Bussell and Forbes, 2002). Even though younger and middle aged people are more likely to be physically active enough to volunteer, older people may have more time to volunteer.

*Hypothesis 3(b): Older respondents will volunteer more than younger ones.*

### ***Marital Status\*Sex***

Married couples are proven to donate more than singles (Mesch et al., 2011; Rooney et al., 2005). As for the interaction of the respondent's marital status and sex, the literature is split on its effect on charitable giving. While certain studies suggest that women, whether single or married, will donate more frequently than single or married men and may even socialize men to become charitable givers (Andreoni et al., 2001; Einolf, 2010; Mesch et al., 2006; Mesch et al., 2011; Piper and Schnepf, 2008; Women's Philanthropy Institute, 2010), others find no relationship or even that single men outdonate other groups (Belfield and Beney, 2000; Bryant et al., 2003; Hodgkinson and Weitzman, 1990). Even though women on average make less money than their male counterparts, they may still set aside more money for charity because of their demonstrated tendencies to be more altruistic and empathetic than men (Buchan et al., 2008; Chaudhuri and Gangadharan, 2007; Croson and Buchan, 1999; Dufwenberg and Muren, 2006; Eckel and Grossman, 1998; Schwieren and Sutter, 2008; Simmons and Emanuele, 2007).

*Hypothesis 4(a): Married couples will donate more than single females, who will donate more than single males.*

Correspondingly, I predict that married couples will volunteer more than singles because they are more involved in the community. Then single females will volunteer more than males for the same reasons: more altruistic and empathetic personalities, leading to them giving back to charities more in general.

*Hypothesis 4(a): Married couples will volunteer more than single females, who will volunteer more than single males.*

### ***Race***

Rooney et al. (2005) and O'Neill (2001) found race to be unrelated to charitable giving. Most other research excluded race from their studies on donating.

*Hypothesis 5(a): Race will have an insignificant effect on donating, holding all else constant.*

White (2006) found that whites were more likely to volunteer than other races, especially than Hispanics. However, most studies on likelihood of volunteering that have included the race have not found it to be a significant factor, as other variables such as income or education will account for apparent differences in volunteering levels between races (Mesch et al., 2006; O'Neill, 2001; Wilson, 2000). Whites are also more likely to be asked to volunteer than minorities (Wilson, 2000).

*Hypothesis 5(b): Race will have an insignificant effect on volunteering, holding all else constant.*

### ***Religion***

Although religious status is a broad variable as it does not capture the religious preference, involvement, or "theological interpretation of volunteering," it will likely have an effect on charitable giving as some religions tithe, while others ask for donations at services or to other

charity organizations (Wilson and Janoski, 1995). It is generally shown and agreed upon that religion contributes positively to donations (Women's Philanthropy Institute, 2014).

*Hypothesis 6(a): Religious people will donate more than nonreligious ones.*

Similarly, religious involvement often leads to more exposure to volunteering opportunities, whether at the religious organization or other charities. Religious people also feel more inclined to give back (Women's Philanthropy Institute, 2014).

*Hypothesis 6(b): Religious people will volunteer more than nonreligious ones.*

### ***Residential Area Size***

Residential area size likely determines the density of charity organizations the respondents can choose from, so those who live in urban and suburban areas may be exposed to more charities that they would want to donate to and can see where their giving would make a difference. Although more rural areas likely still have access to some charities such as religious organizations and may even donate online, I hypothesize that they will be less likely to donate due to less exposure.

*Hypothesis 7(a): Urban and suburban residents will donate more than rural ones.*

Analogously, I again assume that urban and suburban residents have more exposure and access to charity organizations than rural residents do. Therefore, it makes sense that urban and suburban residents would have more opportunities to volunteer than rural ones.

*Hypothesis 7(b): Urban and suburban residents will volunteer more than rural ones.*

### ***Number of Children***

Families with more children are likely affiliated and involved in more activities and charity organizations by virtue of their children's involvement. The more children a respondent has, the more ties, reasons, and obligations to donate to charity organizations.

*Hypothesis 8(a): Those with more children will donate more than those with fewer.*

Although people with children may have less time to dedicate to other activities such as volunteering, a similar effect should hold: the more children a respondent has, the more ties, reasons, and obligations to volunteer at charity organizations. Studies have shown that parents with children at home are more likely to volunteer (Damico et al., 1998; Menchik and Weisbrod, 1987; Schlozman et al., 1994). These parents are more likely to volunteer if they are married rather than single (Segal, 1993; Sundeen, 1990).

*Hypothesis 8(b): Those with more children will volunteer than those with fewer.*

### ***Education***

Highly educated people have been found to be more altruistic (Yen 2002) and donate more (Andreoni et al., 2003). More highly educated people may feel more fortunate than others to



have had so many years of schooling, and they are also more likely to contribute significant sums to their alma maters.

*Hypothesis 9(a): More educated individuals will donate more than less educated ones.*

Again, since highly educated people are more aware of societal problems and more altruistic, they will likely volunteer more (Yen 2002). More highly educated people may also be able to volunteer in more ways due to their education, whether in fundraising, back-end operations, or front-end volunteering. Furthermore, education has been found to be one of the most reliable predictors of volunteering (McPherson and Rotolo, 1996; Sundeen and Raskoff, 1994).

*Hypothesis 9(b): More educated individuals will volunteer more than less educated ones.*

### **Political Party Affiliation**

Brooks (2003) concluded that political party identification does not exhibit a significant relationship with donations. Theoretically Democrats seem to support welfare programs and redistribution of wealth more than Republicans, but they would “give money” through higher taxes.

*Hypothesis 10(a): Political party affiliation will not have a significant effect on donating.*

Again, since Democrats generally support welfare programs more than Republicans, they may be more likely to contribute time to these efforts.

*Hypothesis 10(b): Democrats will volunteer more than Republicans.*

### **Employment**

The employed are likely the most willing to donate, as they are receiving a steady income. Meanwhile, unemployed and retired people may not have as much money on hand to give to charity, especially since those without jobs may be looking to save money until they receive an income again.

*Hypothesis 11(a): The employed are more likely to donate than retirees or the unemployed.*

Retirees have more time to give to charities than the employed and the unemployed. The employed spend much of their day working, and the unemployed are likely job hunting. The unemployed may have more time than the employed, they likely see their excess time as a temporary situation and may not go out to volunteer, whereas the employed likely have steadier schedules with built-in time for volunteering. However, many unemployed people are likely to have been unemployed for less than a year, while the data looks at volunteering from the past year; therefore, there is also a chance unemployment will not impact the volunteering variable.

*Hypothesis 11(b): Retirees are more likely to volunteer than the employed, who are more likely to volunteer than the unemployed.*

### **Self-Rank of Social Position**

Social capital, defined as the “ability of actors to secure benefits by virtue of membership in social networks or other social structures” (Porter, 2000), has been found to strongly influence donating (Brooks, 2005; Wilson, 2001). Social capital is commonly measured using a combination of number of connections and societal involvements, reciprocity of those relationships, political participation, and attitudes and perceptions about the local community, among others (Brown and Ferris, 2007). (Although some studies include charitable giving or donating as a component in the measurement of social capital, Putnam (2001) and Brown and Ferris (2007) argue that it is not related to social capital.) Thus, the closest proxy for social capital available in 2012 General Social Survey questions was the self-rank of social position, which should similarly impact donations positively.

*Hypothesis 12(a): Those who perceive themselves to have higher social positions will donate more than those who perceive themselves to have lower social positions.*

Likewise, social capital strongly influences volunteering (Brooks, 2005; Wilson, 2001). Therefore, self-rank of social position likely acts the same.

*Hypothesis 12(b): Those who perceive themselves to have higher social positions will volunteer more than those who perceive themselves to have lower social positions.*

### **III. DATA AND METHODOLOGY**

In order to investigate these relationships, I used the 2012 General Social Survey conducted by NORC (formerly known as the National Opinion Research Center) at the University of Chicago. In 2012 NORC polled 1974 individuals across the United States of America on over 800 questions regarding demographics, behaviors, and opinions. Besides the United States census, this dataset is the most frequently cited social science database in publications (NORC). It captures measures of charitable giving and volunteerism, in addition to many other demographical, behavioral, and social questions posed to individual respondents.

After removing respondents who did not answer the questions of interest, the sample decreases to 1072 responses—still a considerable number of observations.

Due to data availability of the 2012 General Social Survey, I decided to focus on the frequency and occurrence of charitable giving to and volunteering at any charity organization, as defined and interpreted by the respondents.

#### ***Dependent Variables Defined***

See Appendix B for the marginal distributions of all dependent variables described below.

#### ***Frequency of Charitable Giving in Past Year***

As a measure of personal donations, NORC used the frequency of charitable giving in the past year. In this regard the General Social Survey only asks, “During the past 12 months, how often

have you... given money to charity?" with possible answers of "not at all in the past year," "once in the past year," "at least 2 or 3 times in the past year," "once a month," "once a week," or "more than once a week." Because these options grew increasingly more frequent from one to the next, I coded them into integers 0 to 5, respectively, in variable DONATE.

This is the only measure of donations the General Social Survey provides. It may be easier for respondents to remember how often they give rather than the exact amount they give over the year, though of course this measure fails to capture the difference between significant but infrequent donations and small but frequent gifts. Overall, this method results in responses that are analogous to frequency of volunteering, which are measured in the same frequencies and thus can be compared more easily.

#### *Occurrence of Donation in Past Year*

Respondents' charitable giving can also be more directly measured by investigating whether they have donated in the past year or not. The responses were split into "not at all in the past year" defined as "0" and all other choices coded as "1" in the dichotomous LOGITDONATE variable. As this variable is binary, I will run this dependent variable against all independent variables (to be discussed later) in a binomial logit regression.

#### *Frequency of Volunteerism in Past Year*

NORC measured volunteering in many contexts, but we use the most comparable measure: in terms of frequency. Analogously, the General Social Survey asks, "During the past 12 months, how often have you... done volunteer work for a charity?" with possible answers of "not at all in the past year," "once in the past year," "at least 2 or 3 times in the past year," "once a month," "once a week," or "more than once a week," which I again coded as VOLUNTEER with integer levels from 0 to 5, respectively.

#### *Occurrence of Volunteerism in Past Year*

The respondents can also be split more straightforwardly into those who volunteer and those who do not. Therefore, responses of "not at all in the past year" were coded as "0" in LOGITVOLUNTEER, while all other frequencies of volunteering were coded as "1." Again, this dichotomous dependent variable will be run against all independent variables (see below) in a binomial logit regression.

#### *Relationship Between Donation and Volunteerism*

A multinomial logit variable will combine the two aforementioned dichotomous dependent variables that measure the occurrence of donating and volunteering in the past year, marked by LOGITDONATE and LOGITVOLUNTEER respectively, in order to represent the relationship between donation and volunteerism, assuming one exists. This variable will be coded with 4 possible responses: "0" to represent that one did not donate or volunteer, "1" for volunteered but did not donate, "2" for donated but did not volunteer, and "3" for both donated and volunteered in the past year. This variable will be run against all independent variables (discussed below) in a multinomial logit regression.

### ***Independent Variables Defined***

See Appendix C for the marginal distributions of all independent variables described below.

#### ***Current Household Income***

I used current household income as a proxy for the individual respondent's income. Families often choose to donate out of the pooled household income, not just the individual respondent's own income. Respondents of the 2012 General Social Survey were to choose from 25 different income brackets of varying ranges/scope. In order to convert these data from ranges to numbers, I assigned the midpoint of each income bracket to the corresponding households in that income bracket. As for the open-ended income bracket on the high end—in this case, "\$150,000 or over"—I fitted a Pareto curve to the cumulative distribution in order to estimate an appropriate midpoint for this last interval, which turned out to be \$191,703. I represented each income interval with the midpoint numbers and then transformed the data to  $\text{LN}(\text{INCOME})$ , as the natural logarithm of income has a more normal distribution than income itself.

#### ***Relative Income Group When 16***

The 2012 General Social Survey provides respondents' relative family income groups when they were 16 years old, marked by INCOME16. I can approximate the change in respondents' income group over time. Respondents were asked, "*Thinking about the time when you were 16 years old, compared with American families in general then, would you say your family income was—far below average, below average, average, above average, or far above average?*" I ranked "far below average," "below average," "average," "above average," and "far above average" from 1 to 5, respectively. To ensure this variable and current income were not collinear, I tested the correlation between the two variables, which only came out to be less than 20 percent; therefore, there is likely no interaction between the two variables.

#### ***Age***

Respondents gave their ages, which were coded as is except for "89 or older." Again, I fitted a Pareto curve to the cumulative distribution to estimate this open-ended interval. (I also previously included age as a quadratic variable in order to test for a peak in the middle age range, but both the linear and quadratic components became insignificant.)

#### ***Marital Status\*Sex***

Marital status and sex were included individually and as an interaction term. For marital status, respondents marked whether they were married, widowed, divorced, separated, or single and never been married. "Married" was coded as "1," while all other options were coded as "0."

The sex of the respondent is dichotomous—"male" or "female"—as defined in the 2012 General Social Survey. Since the majority of the respondents have families and 73.4% of them decide on major charitable gifts and other financial decisions together, the sex of the respondent does not

necessarily imply that certain sexes act in a certain way, but rather that they do in the context of a family, as with the 2012 General Social Survey respondents.

### *Race*

The 2012 General Social Survey only marks whether the respondent is white, black, or other. To simplify race into a dichotomous variable, I coded nonwhite—"black" and "other"—as "0," and "white" as "1."

### *Religion*

Respondents were asked, "*What is your religious preference?*" with choices of Catholic, Protestant, Orthodox, Christian other, Hinduism, Inter-nondenominational, Jewish, Muslim, Native American religion, Buddhism, other Eastern, other or none. "None" was coded as "0," whereas all religions were coded as "1."

### *Residential Area Size*

National Opinion Research Center classified respondents' homes by residential area size. According to their definitions, a city is an area incorporated as such and usually at the core of a metropolitan statistical area (MSA), a town is an area incorporated as such, a suburb is "defined as any incorporated area or unincorporated area of 1,000+ within the boundaries of an MSA but not within the limits of a central city of the MSA," and any other is unincorporated land. The respondent's residential area size is either a "city greater than 250,000," "city 50,000-250,000," "city 10,000-49,999," "town greater than 2500," "suburb of large city," "suburb of medium-sized city," "unincorporated area near large city," "unincorporated area around medium-sized city," "smaller areas," and "open country." I grouped these possibilities by size into three levels denoted in integer intervals from "0" to "2." Cities of 50,000 people or over were designated "2"; suburbs, unincorporated areas outside of cities, and small cities were coded as "1"; and towns, smaller areas, and open country were represented as "0."

### *Number of Children*

Respondents reported the number of children they have in integer increments from none to six children. The 2012 General Social Survey then grouped together those with "seven or more" children. To get a more precise estimation for the median number of children for this last group have, I fitted the Pareto curve to the cumulative distribution. This resulted in a midpoint of 7.74 children for those respondents in the "seven or more" category.

### *Education*

Respondents listed their number of years of education in the 2012 General Social Survey. No conversions were necessary. Answers range from "0" to "20" years.

### *Political Party Affiliation*

To determine political identification, the 2012 General Social Survey asked, "Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?" I coded "Republican" as "-1," "Democrat" as "1," and "Independent," "moderate," or "other" as "0."

### *Employment*

Respondents marked their employment status as “working full time,” “working part time,” “going to school,” “keeping house,” “unemployed, laid off,” “retired,” “temporarily not working,” or “other.” Instead of coding each choice separately, I used three dummy variables to represent employment status. For the *employed* dummy, I marked “working full time” and “working part time” as “1” and all other choices as “0.” For the *unemployed* dummy, I coded “unemployed, laid off” as “1” and all other statuses as “0.” For the *retired* dummy, I marked “retired” as “1” and all other options as “0.”

### *Self-Rank of Social Position*

As a proxy for social capital, respondents were asked, “*In our society there are groups which tend to be towards the top and those that are towards the bottom. Here we have a scale that runs from top to bottom. Where would you put yourself on this scale?*” with a diagram of a scale from 1 (top) to 10 (bottom). I coded these backwards from “10” to “1” in order to get a positive correlation.

## **IV. FINDINGS**

### ***Correlation Test***

A simple correlation test on the respondents’ frequency of donations and frequency of volunteerism in the past year was conducted to verify the relationship between donations and volunteerism as actions. Only respondents who answered all questions of interest were included ( $N = 1072$ ). This analysis resulted in high correlation ( $r = .3777$ ,  $p < .0001$ ), demonstrating a strong complementary relationship between donating and volunteering.

Using the most recent database used in this area of research, my correlation test supported a complementary relationship between charitable giving and volunteering, which corroborates the findings of Apinunmahakul, Barham, and Devlin (2008), Brown and Lankford (1992), Cappellari, Ghinetti, and Turati (2011), and other researchers. This supports the notion that those who want to give to charity will give both time and money in order to support these causes.

### ***Determinants of Charitable Giving***

Many studies have sought to measure which demographics are more likely to partake in charitable giving. While contributing factors are currently debated, a verified conclusion could help charities identify and target likely donors and seek to understand why certain demographics give less (Andreoni et al., 2001; Belfield and Beney, 2000; Brooks, 2003; Bryant et al., 2003; Einolf, 2010; Hodgkinson and Weitzman, 1990; Menchik and Weisbrod, 1987; Mesch et al., 2006; Mesch et al., 2011; O’Neill, 2001; Piper and Schnepf, 2008; Rooney et al., 2005; Weipking and Breeze, 2011; Women’s Philanthropy Institute, 2010).

I ran a multiple regression using continuous ordinary least squares on the relation between the frequency of charitable giving and the independent variables. Next, in order to run a binomial

logit regression measuring whether the respondent has donated in the past year or not, I will simplify the dependent variable to a binary variable. For these two regressions, I expect their hypotheses and outcomes will be similar.

### *Results*

Upon running the multiple regression using continuous ordinary least squares, current income, marital status, age, religion, and self-rank of social position were found to have significant effects on the frequency of charitable giving ( $p < .01$ ,  $r^2 = .145$ ). The reduced model after conducting stepwise selection in both directions found the same variables to be significant contributors ( $p < .01$ ,  $r^2 = .140$ ). The logit regression on occurrence of volunteerism include the same variables, as well as number of children, for both full ( $\log \text{likelihood} = -552.764$ ) and reduced ( $\log \text{likelihood} = -555.749$ ) models. Refer to Table 1 for regression tables.

As predicted, current household income but not past household income affects charitable giving, supporting Hypotheses 1(a) and 2(a). The logarithm of current family income was found to have a positive relationship with frequency of donating ( $\beta = .215$ ,  $p < .01$  full;  $\beta = .217$ ,  $p < .01$  reduced) and an even more positive one with the occurrence of donating ( $\beta = .383$ ,  $p < .01$  full;  $\beta = .402$ ,  $p < .01$  reduced). However, relative household income when 16 had an insignificant relationship with both frequency and occurrence of donating. This corroborates the notion that charitable giving is more dependent on ability to donate (based on disposable income) than habits (based on upbringing).

Age demonstrated a very significant influence on charitable giving in a positive direction. All four regressions—the ordinary least squares full ( $\beta = .012$ ,  $p < .01$ ) and reduced ( $\beta = .014$ ,  $p < .01$ ), as well as the logit full ( $\beta = .024$ ,  $p < .01$ ) and reduced ( $\beta = .023$ ,  $p < .01$ )—found older respondents to donate more, supporting Hypothesis 3(a).

Marital status was found to have an extremely significant influence on frequency of donating ( $\beta = .378$ ,  $p < .01$  full;  $\beta = .311$ ,  $p < .01$  reduced) and a slightly less significant but more positive one on occurrence of donating ( $\beta = .489$ ,  $p < .05$  full;  $\beta = .428$ ,  $p < .05$  reduced). However, sex alone and the interaction between marital status and sex was not significant. Therefore, Hypothesis 4(a) is only partially proven: married couples are more likely to donate than singles, but females are not significantly more likely to donate than males.

Religious individuals were much more likely to donate ( $\beta = .504$ ,  $p < .01$  full;  $\beta = .489$ ,  $p < .01$  reduced) and donated more ( $\beta = .251$ ,  $p < .05$  full;  $\beta = .247$ ,  $p < .05$  reduced) than nonreligious ones, which verifies Hypothesis 6(a). The more children respondents had, the less likely they were to donate at all ( $\beta = -.094$ ,  $p < .05$  full;  $\beta = -.088$ ,  $p < .05$  reduced), but not necessarily donate more or less frequently. This contradicts Hypothesis 8(a).

Race, residential area size, education, political party affiliation, and employment were all found to be insignificant in terms of charitable giving, supporting Hypotheses 5(a) and 10(a), while disproving Hypotheses 7(a), 9(a), and 11(a). More urban and suburban, educated, and employed are not more likely to donate than their counterparts.

**TABLE 1. Charitable Giving Regression Coefficients**

	donate		logitdonate	
	(1) <i>OLS full</i>	(2) <i>OLS reduced</i>	(3) <i>logistic full</i>	(4) <i>logistic reduced</i>
lnincome	0.215*** (0.041)	0.217*** (0.038)	0.383*** (0.076)	0.402*** (0.071)
income16	0.027 (0.056)		0.025 (0.109)	
marital	0.378*** (0.120)	0.311*** (0.085)	0.489** (0.234)	0.428** (0.170)
age	0.012*** (0.003)	0.014*** (0.002)	0.024*** (0.006)	0.023*** (0.005)
sex	0.154 (0.107)		0.257 (0.193)	
race	0.050 (0.096)		0.149 (0.178)	
religion	0.251** (0.101)	0.247** (0.099)	0.504*** (0.186)	0.489*** (0.182)
resareasize	0.004 (0.059)		-0.089 (0.113)	
children	0.006 (0.024)		-0.094** (0.044)	-0.088** (0.043)
education	0.003 (0.010)		0.013 (0.019)	
political	0.055 (0.076)		0.149 (0.151)	
employ	0.075 (0.110)		0.134 (0.207)	
unemploy	-0.134 (0.193)		-0.205 (0.343)	
retire	0.190 (0.155)		-0.069 (0.307)	
rank	0.083*** (0.023)	0.086*** (0.022)	0.117*** (0.043)	0.116*** (0.042)
marital:sex	-0.127 (0.156)		-0.143 (0.312)	
Constant	-2.065*** (0.432)	-1.890*** (0.396)	-5.136*** (0.824)	-4.938*** (0.761)
R <sup>2</sup>	0.145	0.140		
Log Likelihood			-552.764	-555.749
F Statistic	11.174*** (df = 16; 1055) 34.698*** (df = 5; 1066)		<b>Note: * p&lt;0.1; ** p&lt;0.05; *** p&lt;0.01</b>	



## *Determinants of Volunteering*

Many studies have sought to measure which demographics are more likely to volunteer at charities. Results vary across databases and studies, and researchers have yet to agree upon one conclusion (Andolina et al., 2003; Bryant et al., 2003; Damico et al., 1998; Lee and Chang, 2007; McPherson and Rotolo, 1996; Menchik and Weisbrod, 1987; Mesch et al., 2006; O'Neill, 2001; Schlozman et al., 1994; Segal, 1993; Sundeen, 1990; Sundeen and Raskoff, 1994). A clearer understanding could aid charity organizations in identifying potential volunteers and encourage other demographics to volunteer more.

This study will be set up in a similar format to the previous one measuring charitable giving. First, I ran a multiple regression using continuous ordinary least squares on the relation between the frequency of volunteerism and the independent variables. Then I altered the dependent variable into a binary variable for a binomial logit regression measuring whether the respondent has volunteered in the past year or not. I expect the hypotheses and outcomes for these two regressions will be similar.

### *Results*

When I ran the multiple regression using continuous ordinary least squares, only relative income group when 16, education, and political party affiliation were found to significantly contribute to frequency of volunteerism ( $p < .1$ ,  $r^2 = .023$ ). In addition, current income, age, and sex were also found to be contributing factors to frequency of volunteerism after conducting a stepwise selection in both directions ( $p < .01$ ,  $r^2 = .020$ ). The correlation coefficients of the full and reduced models are rather low because volunteers are a diverse group, and there likely exists omitted variable bias in the models (Bussell and Forbes, 2002).

As for the logit regression, current income, income when 16, sex, and political party affiliation significantly contributed to the occurrence of volunteering ( $\log \text{likelihood} = -724.185$ ). After reducing the model using stepwise selection in both directions, the employed dummy was also added to the above independent variables ( $\log \text{likelihood} = -726.157$ ). See Table 2 for corresponding regression tables.

Income, both past and present, demonstrated significant positive relationships with occurrence and frequency of volunteering. Hypothesis 1(b) was supported by the significant betas in the frequency of volunteerism reduced model ( $\beta = .078$ ,  $p < .05$ ) and both full ( $\beta = .180$ ,  $p < .01$ ) and reduced ( $\beta = .197$ ,  $p < .01$ ) models for the logit regression, while Hypothesis 2(b) was supported by all four volunteering regressions. This supports previous findings that income is one of the most significant predictors of volunteerism and that civic engagement habits are formed in adolescent years, as those with higher family incomes even at 16 will continue to volunteer and volunteer more than those with lower ones (Andolina et al., 2003).

Age was only found to be weakly significant in the reduced frequency of volunteering model ( $\beta = .005$ ,  $p < .1$ ), supporting Hypothesis 3(b). Unlike giving money, it seems that people of all ages have time as a relatively equal resource and are willing to give it to charity in similar amounts. Age was also previously tested as a quadratic variable, but was also not significant, contrary to other studies (Herzog et al., 1989; Menchik and Weisbrod, 1987). There may exist a more complex correlation or interaction with age than previously thought.

Although sex was found to be somewhat significant in the occurrence of volunteering full ( $\beta = 0.291, p < .1$ ). and reduced ( $\beta = .243, p < .1$ ) models, marital status—as well as its interaction with sex—were not. Females were slightly more likely to volunteer at all, but marital status was not a factor, only partially supporting Hypothesis 4(b).

Education and employment both had slightly significant, positive relationships with the frequency of volunteerism ( $\beta = .021, p < .1$  full;  $\beta = .019, p < .1$  reduced) and occurrence of volunteerism ( $\beta = .232, p < .1$  reduced), respectively. Individuals with more education are slightly more likely to volunteer at a .10 level, supporting Hypothesis 9(b). While retirees showed no significant difference relative to the employed and the unemployed, employed individuals were 23.2 percent more likely than unemployed ones to volunteer at all, partially supporting Hypothesis 11(b).

Political party affiliation demonstrated a strong effect on volunteerism, as the component was significant in all four models: full frequency of volunteering ( $\beta = .214, p < .05$ ), reduced frequency ( $\beta = .198, p < .05$ ), full occurrence of volunteering ( $\beta = .289, p < .05$ ), and reduced occurrence of volunteering ( $\beta = .253, p < .05$ ). Democrats were more likely to volunteer and volunteer more often than Republicans, supporting Hypothesis 10(b).

Race did not have a significant relationship with volunteerism, supporting Hypothesis 5(b). However, religion, residential area size, number of children, and self-rank were not significant contributing factors either, so Hypotheses 6(b), 7(b), 8(b), and 12(b) are inconclusive. Since religion, number of children, and self-rank of social position demonstrated significant influences on charitable giving but not volunteering, it seems those three factors have more impact on money or spending habits than time.

**TABLE 2. Volunteering Regression Coefficients**

	volunteer		logitvolunteer	
	(1) <i>OLS full</i>	(2) <i>OLS reduced</i>	(3) <i>logistic full</i>	(4) <i>logistic reduced</i>
lnincome	0.065 (0.048)	0.078** (0.040)	0.180*** (0.068)	0.197*** (0.059)
income16	0.118* (0.066)	0.132** (0.064)	0.180** (0.091)	0.204** (0.088)
age	0.004 (0.004)	0.005* (0.003)	-0.001 (0.005)	
marital	0.107 (0.142)		0.069 (0.196)	
sex	0.183 (0.126)	0.135 (0.091)	0.291* (0.175)	0.243* (0.126)
race	0.039 (0.113)		0.142 (0.156)	
religion	0.123 (0.120)		0.059 (0.165)	
resareasize	0.005 (0.070)		-0.058 (0.097)	
children	-0.022 (0.028)		-0.021 (0.039)	
education	0.021* (0.012)	0.019* (0.012)	0.018 (0.016)	
political	0.214** (0.089)	0.198** (0.085)	0.289** (0.124)	0.253** (0.118)
employ	-0.024 (0.130)		0.142 (0.180)	0.232* (0.135)
unemploy	0.061 (0.228)		-0.044 (0.316)	
retire	-0.001 (0.183)		-0.177 (0.253)	
rank	0.022 (0.027)		0.026 (0.037)	
marital:sex	-0.113 (0.185)		-0.116 (0.255)	
Constant	-0.378 (0.510)	-0.275 (0.447)	-2.901*** (0.724)	-2.842*** (0.633)
R <sup>2</sup>	0.023	0.020		
Log Likelihood			-724.185	-726.157
F Statistic	1.524* (df = 16; 1055)	3.581*** (df = 6; 1065)	<b>Note: * p&lt;0.1; ** p&lt;0.05; *** p&lt;0.01</b>	

### ***Determinants of Charitable Giving and Volunteering Together***

Lastly, I built a model to explore the potential relationships between the independent variables and the complementarity between charitable giving and volunteering. Using the multinomial logit function with dependent variable DONATEVOLUNTEER having possible integer outcomes of “0” for neither donate nor volunteer, “1” for volunteer only, “2” for donate only, and “3” for both donate and volunteer, based on a 2 by 2 of occurrence of donating and occurrence of volunteering. The numeral assignments to the outcomes were ordered from least contribution to highest contribution, based on my judgment.

#### ***Results***

The logarithm of current household income, age, marital status, religion, number of children, political party affiliation, and self-rank of social position were shown to have significant effects on the complementarity between charitable giving and volunteering on some aspects at the .05 level. Refer to Table 3 for the multinomial logit regression table.

Specifically, the relative probability of donating only rather than volunteering only is 37 percent higher for higher earners, all else equal ( $p < .01$ ), and the relative probability of both donating and volunteering over just donating is 43.9 percent higher for higher earners ( $p < .01$ ).

Age also plays a significant factor in the complementarity of the relationship. The relative probability of donating over volunteering is 2.7 percent higher for one year's increase in age ( $p < .01$ ) and 2.0 percent higher for both donating and volunteering over donating only.

Marital status only affected the relative probability of volunteering over nothing, as married couples were more than doubly less likely to volunteer over nothing than singles ( $p < .05$ ).

The relative probability of only donating over only volunteering is 47.0 percent higher for religious respondents ( $p < .05$ ), and that of both donating and volunteering over only donating is 43.6 percent higher for religious respondents again ( $p < .05$ ). The complementarity of donating and volunteering seems to get stronger for religious individuals. The opposite relation is true for number of children, as the relative probability of only donating over only volunteering is 14.2 percent lower for each additional child ( $p < .01$ ) and that of both donating and volunteering rather than only donating is 10.2 percent lower for each additional child ( $p < .05$ ).

Lastly, political party affiliation and self-rank of social position also affect the complementarity between charitable giving and volunteering. The relative probability of both donating and volunteering over just donating is 35.7 percent higher for Democrats than Republicans ( $p < .05$ ). Self-rank of social position also demonstrated a positive contribution on the complementarity, as the relative probability of only donating over only volunteering is 13.2 percent higher ( $p < .05$ ) and that of both donating and volunteering over only donating is 12.0 percent higher for those with higher self-rank ( $p < .05$ ).

All other relations were deemed insignificant.

**TABLE 3. Charitable Giving and Volunteering Regression Odds Ratios**

	(1) Volunteer	(2) Donate	(3) Both
lnincome	0.113 (0.126)	0.370*** (0.094)	0.439*** (0.090)
income16	0.090 (0.211)	-0.072 (0.134)	0.133 (0.127)
age	-0.003 (0.012)	0.027*** (0.008)	0.020*** (0.007)
marital	-2.656** (1.050)	0.072 (0.277)	0.306 (0.269)
sex	0.095 (0.331)	0.102 (0.245)	0.423* (0.238)
race	-0.154 (0.326)	-0.016 (0.220)	0.196 (0.213)
religion	-0.209 (0.330)	0.470** (0.236)	0.436** (0.222)
resareasize	0.215 (0.221)	0.019 (0.138)	-0.091 (0.133)
children	-0.141 (0.096)	-0.142*** (0.054)	-0.102*** (0.051)
education	-0.037 (0.040)	-0.012 (0.023)	0.021 (0.021)
political	0.475 (0.303)	0.117 (0.183)	0.357** (0.177)
employ	-0.044 (0.378)	0.032 (0.256)	0.198 (0.244)
unemploy	0.041 (0.584)	-0.164 (0.429)	-0.205 (0.419)
retire	0.070 (0.630)	0.044 (0.366)	-0.161 (0.364)
rank	0.031 (0.078)	0.132** (0.053)	0.120** (0.051)
marital:sex	2.115* (1.137)	0.156 (0.374)	-0.115 (0.360)
Constant	-1.951 (1.380)	-5.066*** (1.016)	-6.231*** (0.982)
Akaike Inf. Crit.	2,534.071	2,534.071	2,534.071

*Note:* \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

## V. DISCUSSION

Charitable giving and volunteering were found to be strongly correlated among respondents. Hence, charity organizations should find individuals who are very passionate about their cause because they will likely give both time and money, not just one or the other.

Overall, current household income seemed to be significant in all dimensions. Higher earners seemed to both donate and volunteer more since they may have the luxury of both more discretionary time and money.

But the other demographical attributes seemed to be more critical to either donating or volunteering. For instance, marital status, age, religion, number of children, and self-rank of social position impact donating at the .05 level, while income when 16 and political party affiliation affect volunteering at the .05 level. This may be difficult to accept, given that charitable giving and volunteering are strongly correlated. However, current household income has a particularly strong influence on both and may in turn strengthen their correlation, and some of the other seeming contradictions turn out to make sense: previous income may foster stronger volunteering habits but do not necessarily indicate the continued ability to donate no matter the current income; marital status and somehow number of children turn out to affect money habits more than time-spending habits; religion may demonstrate a more significant influence on money than time; and high self-rank individuals may find civic involvement to be a more important part of their social lives. Moreover, the volunteering regressions were not particularly strong, as volunteers are very diverse and thus are difficult to identify and predict from certain demographical attributes (Bussell and Forbes, 2002).

Of the relations that were significant, it overall seems that the higher income, married with more children, female, older, more religious, more Democratic, and higher self-ranked are more charitable. Age turned out to not be quadratic, contrary to Menchik and Weisbrod (1987)'s and Herzog et al. (1989)'s findings. It is worth noting that demographics with the most time (young, unmarried, retired) were not necessarily more likely to volunteer, supporting Warburton and Crosier (2001).

Furthermore, residential area size was not found to significantly affect charitable giving or volunteering either way. Charity organizations would do well to reach out to urban, suburban, and rural residents equally in that case.

### ***Limitations and Further Research***

The 2012 General Social Survey did not break down charitable giving and volunteering by type of charity organization, such as arts, education, religious, and environmental. In the future, it would be useful to evaluate charitable giving and volunteering to specific types of charity organizations; for example, do religious respondents significantly give more than to nonreligious respondents to all types of charities or only religious ones?

This dataset also did not have specific information on respondents' number of hours volunteered, so I could not integrate tax policy and compare time spent volunteering against dollar amount donated. This study would also have benefitted from variables that better measure social capital,

as some other General Social Surveys do. The General Social Survey can only capture cross-sectional data, from which I have ran regressions and drawn conclusions. If possible, longitudinal data would clarify whether the significance of the Age variable, for instance, is really a factor of aging or generational differences.

As for the effects of independent variables on the complementarity of the relationship between charitable giving and volunteering, the results and interpretations of multinomial logit regressions depend on the order I assign to each of the four possible outcomes: donate, volunteer, both, or neither. Other regressions may be able to expose more intricacies than the multinomial logit, as I ordered the nominal outcomes in the way that made most sense to me but still may be obscuring some details. In another multinomial logit regression, it is possible that only volunteering could be seen as a larger contribution than only donating.

While this analysis has established that charitable giving and volunteering are complements, it is worth further investigating why the same demographical and social attributes do not significantly contribute to both regressions. More refined data on type of charity, measure of social capital, and longitudinal data will likely clarify some of these relations for charity organizations to better utilize in the future.

## APPENDIX A. REGRESSION EQUATIONS.

$$\begin{aligned} \text{Donate} = & \beta_{0A} + \beta_{1A} * \ln(\text{Income}) + \beta_{2A} * \text{Income16} + \beta_{3A} * \text{Age} + \beta_{4A} * \text{MaritalStatus} \\ & * \text{Sex} + \beta_{5A} * \text{Race} + \beta_{6A} * \text{Religion} + \beta_{7A} * \text{ResidentialAreaSize} + \beta_{8A} \\ & * \text{NumberOfChildren} + \beta_{9A} * \text{Education} + \beta_{10A} * \text{PoliticalPartyID} + \beta_{11A} \\ & * \text{Employment} + \beta_{12A} * \text{SelfRank} \end{aligned}$$

$$\begin{aligned} \text{Volunteer} = & \beta_{0B} + \beta_{1B} * \ln(\text{Income}) + \beta_{2B} * \text{Income16} + \beta_{3B} * \text{Age} + \beta_{4B} \\ & * \text{MaritalStatus} * \text{Sex} + \beta_{5B} * \text{Race} + \beta_{6B} * \text{Religion} + \beta_{7B} \\ & * \text{ResidentialAreaSize} + \beta_{8B} * \text{NumberOfChildren} + \beta_{9B} * \text{Education} \\ & + \beta_{10B} * \text{PoliticalPartyID} + \beta_{11B} * \text{Employment} + \beta_{12B} * \text{SelfRank} \end{aligned}$$

## APPENDIX B. DEPENDENT VARIABLES.

This appendix contains the marginal distributions and coding method for each studied regressor.

### *Frequency of Charitable Giving* (DONATE)

**Question:** *During the past 12 months, how often have you... Given money to a charity?*

Response	Coded as	Count
Not at all in the past year	"0"	283
Once in the past year	"1"	155
At least 2 or 3 times in the past year	"2"	354
Once a month	"3"	177
Once a week	"4"	75
More than once a week	"5"	28
<b>Sum</b>		<b>1072</b>

### *Occurrence of Charitable Giving* (LOGITDONATE)

**Question:** *During the past 12 months, how often have you... Given money to a charity?*

Response	Coded as	Count
Not at all in the past year	"0"	283
Once in the past year; at least 2 or 3 times in the past year; once a month; once a week; more than once a week	"1"	789
<b>Sum</b>		<b>1072</b>

### *Frequency of Volunteering* (VOLUNTEER)

**Question:** *During the past 12 months, how often have you... Done volunteer work for a charity?*

Response	Coded as	Count
Not at all in the past year	"0"	560
Once in the past year	"1"	118
At least 2 or 3 times in the past year	"2"	192
Once a month	"3"	99



Once a week	"4"	59
More than once a week	"5"	44
<b>Sum</b>		<b>1072</b>

***Occurrence of Volunteering*** (LOGITVOLUNTEER)

**Question:** *During the past 12 months, how often have you... Done volunteer work for a charity?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Not at all in the past year	"0"	560
Once in the past year; at least 2 or 3 times in the past year; once a month; once a week; more than once a week	"1"	512
<b>Sum</b>		<b>1072</b>

***Occurrence of Charitable Giving and Volunteering*** (DONATEVOLUNTEER)

**Question:** *During the past 12 months, how often have you...*

<i>Given money to a charity?</i>		<i>Done volunteer work for a charity?</i>	
<b>Response</b>	<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Not at all in the past year	Not at all in the past year	"0"	560
Not at all in the past year	Once in the past year; at least 2 or 3 times in the past year; once a month; once a week; more than once a week	"1"	118
Once in the past year; at least 2 or 3 times in the past year; once a month; once a week; more than once a week	Not at all in the past year	"2"	192
Once in the past year; at least 2 or 3 times in the past year; once a month; once a week; more than once a week	Once in the past year; at least 2 or 3 times in the past year; once a month; once a week; more than once a week	"3"	99
<b>Sum</b>			<b>1072</b>

## APPENDIX C. INDEPENDENT VARIABLES.

### *Current Household Income* (INCOME)

**Question:** *In which of these groups did your total family income, from all sources, fall last year before taxes:*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Under \$1,000	\$500	19
\$1,000 to \$2,999	\$2,000	16
\$3,000 to \$3,999	\$3,500	9
\$4,000 to \$4,999	\$4,500	7
\$5,000 to \$5,999	\$5,500	6
\$6,000 to \$6,999	\$6,500	12
\$7,000 to \$7,999	\$7,500	16
\$8,000 to \$9,999	\$9,000	26
\$10,000 to \$12,499	\$11,250	42
\$12,500 to \$14,999	\$13,750	37
\$15,000 to \$17,499	\$16,250	24
\$17,500 to \$19,999	\$18,750	28
\$20,000 to \$22,499	\$21,250	39
\$22,500 to \$24,999	\$23,750	41
\$25,000 to \$29,999	\$27,500	53
\$30,000 to \$34,999	\$32,500	52
\$35,000 to \$39,999	\$37,500	53
\$40,000 to \$49,999	\$45,000	93
\$50,000 to \$59,999	\$55,000	80
\$60,000 to \$74,999	\$67,500	99
\$75,000 to \$89,999	\$82,500	84
\$90,000 to \$109,999	\$100,000	71
\$110,000 to \$129,999	\$120,000	47
\$130,000 to \$149,999	\$140,000	30
\$150,000 or over	\$191,704	88
<b>Sum</b>		<b>1072</b>

### *Relative Income Group When 16* (INCOME16)

**Question:** *Thinking about the time when you were 16 years old, compared with American families in general then, would you say your family income was...*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Far below average	"1"	90
Below average	"2"	283
Average	"3"	503
Above average	"4"	168
Far above average	"5"	28
<b>Sum</b>		<b>1072</b>

**Age (AGE)**

**Question:** *Respondent's age:*

(Coded as is for regression, but responses displayed in groups below)

<b>Response intervals</b>	<b>Count</b>
18-19	13
20-29	175
30-39	215
40-49	202
50-59	183
60-69	162
70-79	85
80-89	37
<b>Sum</b>	<b>1072</b>

**Marital Status (MARITAL)**

**Question:** *Are you currently--married, widowed, divorced, separated, or have you never been married?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Never married; separated; divorced; widowed	"0"	575
Married	"1"	497
<b>Sum</b>		<b>1072</b>

**Sex (SEX)**

**Question:** *Respondent's sex:*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Male	"0"	499
Female	"1"	573
<b>Sum</b>		<b>1072</b>

**Marital Status\*Sex (MARITAL\*SEX)**

**Question:**

*Are you currently--married, widowed, divorced, separated, or have you never been married?* *Respondent's sex:*

<b>Response</b>	<b>Response</b>	<b>Count</b>
Never married; separated; divorced; widowed	Male	260
Never married; separated; divorced; widowed	Female	315
Married	Male	239
Married	Female	258
<b>Sum</b>		<b>1072</b>

### ***Race***

**Question:** *What race do you consider yourself?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Nonwhite (black; other)	“0”	273
White	“1”	799
	<b>Sum</b>	<b>1072</b>

### ***Religion***

**Question:** *What is your religious preference?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
None	“0”	207
Catholic; Protestant; Christian other; Hinduism; Inter- nondenominational; Jewish; Muslim; Native American religion; Orthodox; Buddhism; other Eastern; other	“1”	865
	<b>Sum</b>	<b>1072</b>

### ***Residential Area Size***

**Question:** *Expanded N.O.R.C. size code. See Appendix S, GSS Methodological Report No. 4. Code based on census.*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Open country; smaller areas; town >2500	“0”	154
City 10,000-49,999; suburb/ unincorporated area of city	“1”	571
City 50,000-250,000; city >250,000	“2”	347
	<b>Sum</b>	<b>1072</b>

### ***Number of Children***

**Question:** *How many children have you ever had? Please count all that were born alive at any time (including any you had from a previous marriage.)*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
0	“0”	292
1	“1”	156
2	“2”	299
3	“3”	162
4	“4”	89
5	“5”	35
6	“6”	22
7	“7”	7
8 or older	“11.730937”	10
	<b>Sum</b>	<b>1072</b>

### ***Number of Years of Education***

**Question:** *Highest year of schooling completing:*

(Coded in numbers as is for regression, but responses displayed in groups below)

<b>Response intervals</b>	<b>Count</b>
Some primary school (1-5 years)	8
Primary school graduate (6 years)	13
Some secondary school (7-11 years)	126
Secondary school graduate (12 years)	78
Some college or two-year degree (13-15 years)	287
Four-year college degree (16 years)	169
Advanced degree (17-20 years)	164
<b>Sum</b>	<b>1072</b>

### ***Political Party Affiliation***

**Question:** *Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Republican	"-1"	108
Democrat	"1"	201
Independent, moderate, or other	"0"	763
<b>Sum</b>		<b>1072</b>

### ***Employed (Dummy)***

**Question:** *Last week were you working full time, part time, going to school, keeping house, or what?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Working full time; working part time	"1"	647
Unemployed, laid off; retired; temporarily not working; in school; keeping house; other	"0"	425
<b>Sum</b>		<b>1072</b>

### ***Unemployed (Dummy)***

**Question:** *Last week were you working full time, part time, going to school, keeping house, or what?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Unemployed, laid off	"1"	56
Working full time; working part time; retired; temporarily not working; in school; keeping house; other	"0"	1016
<b>Sum</b>		<b>1072</b>

### ***Retired (Dummy)***

**Question:** *Last week were you working full time, part time, going to school, keeping house, or what?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
Retired	"1"	180
Working full time; working part time; unemployed, laid off; temporarily not working; in school; keeping house; other	"0"	892
<b>Sum</b>		<b>1072</b>

### ***Self-Rank of Social Position***

**Question:** *In our society there are groups which tend to be towards the top and those that are towards the bottom. Here we have a scale that runs from top to bottom. Where would you put yourself on this scale?*

<b>Response</b>	<b>Coded as</b>	<b>Count</b>
10 (bottom)	"1"	13
9	"2"	10
8	"3"	35
7	"4"	78
6	"5"	136
5	"6"	405
4	"7"	145
3	"8"	143
2	"9"	36
1 (top)	"10"	71
<b>Sum</b>		<b>1072</b>

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