Financial Attitudes and Charitable Giving

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Why do people give away their money? Charitable giving has traditionally been modeled using socioeconomic (i.e., age, income, education) and psychographic variables (i.e., self-esteem, guilt, pity). However, given that charitable giving is, inherently, a financial activity, would financial variables with a psychographic element (i.e., financial attitudinal variables) have the ability to improve the prediction of giving behavior? Using the 2016 Survey of Consumer Finances (SCF), we found that higher risk tolerance, higher subjective financial knowledge, longer financial time horizon, and access to emergency funds from friends/relatives all were positively associated with charitable giving. The results of this study help broaden the potential information set for financial counselors, marketers, nonprofit organizations, or policymakers when understanding a client's intention to charitably give and identifying potential donors beyond traditional socioeconomic and psychographic variables.

Keywords: charitable giving, donor, financial attitudes, survey of consumer finances, theory of planned behavior

Charitable giving is common for many U.S. residents. According to the Almanac of American Philanthropy, the United States is the leading nation in charitable giving, as measured by private philanthropy as a percentage of Gross Domestic Product (GDP) (Zinsmeister, 2016). Americans gave nearly $360 billion to charitable organizations in 2014; the vast majority of this charitable giving was made by individuals (5% from corporations and 14% from foundations; Zinsmeister, 2016). Nearly 7 out of 10 American households donate to at least one charitable cause each year, giving an average donation of $2,600 (Zinsmeister, 2016). When ranking America versus 14 other leading industrial countries, America was number one, and twice as generous as Canadians, Spaniards, and the Irish, and more than 20 times as generous as Germans and Italians (Jacoby, 2016).

But, not every American household prioritizes giving as an important goal in their financial lives. Why do some Americans give, while others do not? This study modeled charitable behavior using financial attitudinal variables. This is unique given that most models for charitable giving rely solely on socioeconomic factors to predict charitable giving. The results of this study are important for financial counselors, marketers, and nonprofit/policymakers. For financial counselors, including financial attitudinal data would allow them to better map the money behaviors of their clients, as a whole. For marketers, this study helps broaden their information set when targeting donors. Finally, for nonprofit/policymakers, this study provides insight into how to encourage charitable giving to ensure that nonprofit organizations are properly funded, particularly, given the recent tax law changes which has resulted in lower tax incentives for giving for many American households.

Literature Review

Bendapudi et al. (1996) defined helping behavior as "behavior that enhances the welfare of a needy other, by providing aid or benefit, usually with little or no commensurate reward in return" (p. 34). In the current study, helping behavior is measured through charitable dollars given. This type of helping behavior has been studied extensively in many different disciplines. Studies related to helping behavior can be found in journals of marketing, economics, business, social psychology, biological psychology, neurology and brain sciences, sociology, political science, anthropology, biology, and evolutionary psychology. One common theme when evaluating previous literature is the focus on

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using socioeconomic and psychographic factors to predict charitable giving. Charitable giving is a complex human behavior that can only be understood using many types of factors given that it is a financial behavior (economic) done in the context of community (socio) that is highly personal and private (psychographic).

Earlier studies on charitable giving primarily focused on socioeconomic factors (e.g., age, income, race, religion). Previous literature found that socioeconomic factors were highly significant when explaining differences between health donors (Burnett, 1981; Cermak et al., 1994; Pessemier et al., 1977). Previous literature also found evidence that psychographic factors are significant when modeling charitable giving. Personal norms (Webb et al., 2000), empathy (Batson, 1987), ego (Cialdini et al., 1981), and attitudes about giving (Burnkrant & Page, 1982; Latour & Manrai, 1989; McIntyre et al., 1987) were all significant when explaining helping behavior. More recent models of charitable giving have added psychographic factors to an existing socioeconomic framework. Bendapudi et al. (1996) provided an extensive theoretical framework for modeling helping behavior that added many psychographic factors, including perceptions, social comparisons, abilities, and motives. Sargeant (1999) added psychographic factors into his model of donor behavior by splitting the determinants of donor behavior into extrinsic (socioeconomic factors) and intrinsic (psychographic factors that include need for self-esteem, guilt, pity, empathy, fear, and sympathy) determinants. Charitable giving can also be predicted as a socialized behavior that is learned from parents (Deenanath et al., 2019; LeBaron et al., 2018).

A meta-analysis study on charitable giving (Bekkers & Wiepking, 2011a) evaluated more than 500 studies, from many different disciplines, and identified eight socioeconomic and psychographic factors that drive charitable giving: awareness of need, solicitation, costs and benefits, altruism, reputation, psychological benefits, values, and efficacy. Wilson (2000) provided a meta-analysis on volunteering and found evidence to support that volunteering is driven by both socioeconomic and psychographic factors, including motives related to self-understandings, rational action, and cost–benefit analysis.

Bougheas et al. (2007) may have been the first to add a financial attitudinal variable to a charitable giving study when they added planning horizon as a key variable of interest when modeling charitable behavior. More recently, Liu, James, and Aboohamidi (2019) modeled charitable giving using financial planning horizon as the key predictor variable, alongside traditional socioeconomic factors. Anaza (2011) was the first to comprehensively add financial attitudinal data (e.g., planning horizon, risk tolerance) to existing socioeconomic and psychographic models of helping behavior. Anza found evidence that financial attitudes, such as financial planning horizon, risk tolerance, and saving habits all contributed to explaining helping behavior. This study seeks to build on the work done by Anza (2011) by, first, adding a theoretical basis to the empirical work and, second, updating the study using more recent data.

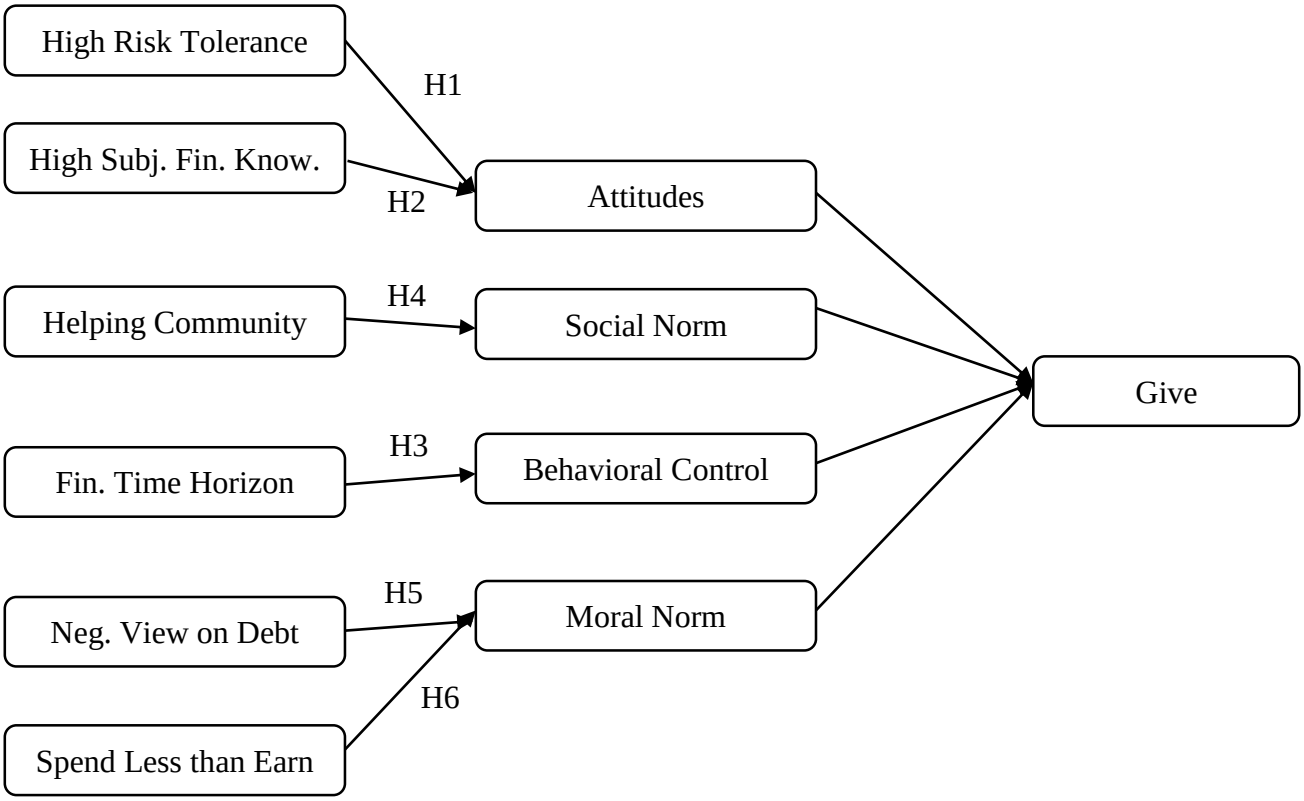
Conceptual Model

Theory of planned behavior (TPB) (Ajzen, 1991; Kimiyagahlam et al., 2019; Xiao & Wu, 2008) was used to model the giving behavior of the average American adult. TPB explains human behavior as a function of three types of individual beliefs (behavioral, normative, and control), which then lead to a behavioral intention that blossoms into an actual behavior given sufficient perceived behavioral control. Behavioral beliefs are beliefs about likely consequences or other attributes associated with the behavior, which create an attitude toward the behavior. Normative beliefs are beliefs about the normative expectations of others, which create subjective norms. Finally, control beliefs are beliefs about whether the behavior is possible to do, which create a sense of perceived behavioral control. This study will not include intentions since data exists for the actual behavior (giving money).

For this study, TPB will be adapted to include a "moral norm" dimension since giving money is mostly a private act and including a moral norm factor has been shown to be significant when modeling giving behavior (Linden, 2011). Moral norms refer to certain behaviors that individuals view as inherently right or wrong, regardless of how the important people around them (including themselves) view that behavior (Manstead, 1999) (Figure 1).

For the "attitudes" component of TPB, risk tolerance and subjective knowledge will be used as proxies for a positive attitude toward giving money. Yavas, Riecken, and Parameswaran (1980) found that, as a person's perceived

Figure 1. Adapted theory of planned behavior diagram.



level of financial risk decreased, that person was more likely to give to churches or educational institutions. If we assume that the average American charitable giver is no less exposed to actual financial risk than the average American nongiver, then those that give perceive less financial risk in their household, which would give them a higher risk tolerance. Risk tolerance, then, is a type of positive attitude that we expect to be positively associated with helping behavior.

Anaza and DeVaney (2008) found that individuals who perceive themselves as "financially sound" give more money, time, or both to charitable organizations. Given that the perception of being financially sound is essentially having higher subjective knowledge ("how knowledgeable are you about personal finance?"), we expect that a participant that has a positive attitude toward giving will likely have higher subjective financial knowledge.

H1: Risk tolerance is positively associated with giving.

H2: Subjective financial knowledge is positively associated with giving.

Regarding perceived behavioral control, it has been shown that those with higher self-efficacy are more likely to give (Enete & Heckman, 2018). Chatterjee, Finke, and Harness (2011) provided evidence that higher self-efficacy is associated with a longer financial time horizon. So, using financial time horizon as a proxy for self-efficacy, we assume that, as a financial time horizon expands, it is likely that they exhibit higher self-efficacy, which should be associated with more giving behavior.

H3: Financial time horizon is positively associated with giving.

In the TPB, social influences are conceptualized in terms of "the pressure that people perceive from important others to perform, or not to perform, a behavior (subjective norm)" (Rivis & Sheeran, 2003, p. 218). When evaluating whether a participant has an established "social norm" in favor of giving, we looked at whether a participant was in a community of friends/relatives who are willing to financially help during an emergency. Having access to emergency funds has

been used as proxy for social capital (Boisjoly et al., 1995), and having social capital has been shown to be associated with greater charitable giving (Wang & Graddy, 2008).

H4: Having friends/relatives who will help financially in the event of an emergency is positively associated with giving.

As a proxy for having a moral norm to give, participants who have developed a moral norm to give should avoid acquiring excessive debt and excessive spending since this would discourage their ability to sustainably give their money away. The use of debt has been considered a moral issue by many influential civilizations, including the Israelites (Deuteronomy 15), Greeks (Malvasi, 2012), Catholics (Smoker, 2009), and Protestants (Geisst, 2013). Fiscal responsibility can also be described as a moral issue given that those who do not budget well are not able to give, which reduces the funds necessary to sustain religious activities, as well as limit a person's ability to be generous, as commanded by the Bible (Keister, 2008). Therefore, debt attitudes and whether the participant spends more than they earn (i.e., fiscal responsibility) will serve as proxies for having a moral norm to give money.

H5: Having a negative view of excessive debt is positively associated with giving.
H6: Spending less than annual earnings is positively associated with giving.

Method

Data and Sample

The data for the current study comes from the 2016 Survey of Consumer Finances (SCF). The SCF is a triennial cross-sectional survey of U.S. households sponsored by the Federal Reserve Board, and is collected by the National Organization for Research at the University of Chicago through interviews. During 2016, 6,248 participants completed surveys using computer-assisted personal interviewing systems (CAPI). The SCF is a nationally representative survey and is best known for its rich financial data on personal household balance sheets. All missing data is imputed with five multiple implicates for every question. However, 40 people were excluded in the analysis because they did not report any income. Therefore, the ending survey sample size is 6,208. This study used all five implicates when conducting the analysis. For our analysis, we combined all five implicates using the repeated-imputation inference (RII) method (Hanna et al., 2018; Montalto & Sung, 1996).

Dependent Variables

Two questions were used from the SCF to measure giving money behavior. The first question asks respondents, "During 2015, did you (or anyone in your family living here) make charitable contributions of money or property totaling $500 or more? Yes, or No." If they answered, "yes" then a second, follow-up, question was asked to respondents, "Roughly, how much did you (and your family living here) contribute?" This study converted the follow-up question to a "giving rate" by dividing each response by the respondent's total income and ordering the responses into three groups: no giving, give between 0% and 3.0% of total income, and give more than 3.0% of total income. These cutoff points were chosen because they provided both a relatively even distribution among the groups without adding fractional basis points.

Independent Variables

Predictor Variables. The predictor variables include risk tolerance, which was measured on a scale of 0 (not willing to take any risk) to 10 (willing to take risk). Subjective financial knowledge, which measures a person's perception of having financial knowledge, consisted of a scaled response ranging from 0 to 10 where scores of 0 indicated no subjective financial knowledge (no knowledge of personal finance) and 10 indicated extremely high subjective financial knowledge (very knowledgeable about personal finance).

When assessing social norms, whether a participant was in a generous community was measured using a binary question that asked whether they could access emergency funds from a relative or friend (1: able to access $3,000 from friends or relatives in emergency; 0: no access to funds). Having access to emergency funds has been used as proxy for social capital (Boisjoly et al., 1995). Having social capital has been shown to be associated with greater charitable giving (Wang & Graddy, 2008).

When measuring perceived behavioral control, we operationalized self-efficacy using a measure of financial time horizon ("In planning or budgeting your (family's) saving and spending, which of the time periods is most important

to you (and your family living here)?: Next Few Months (1), Next Year (2), Next Few Years (3), Next 5 to 10 Years (4), Longer Than 10 Years (5)"). Studies have shown an association between longer financial time horizon and greater self-efficacy (Chatterjee et al., 2011). It may be argued that those with a longer financial time horizon are more likely to perceive more control over their ability to give and execute financial planning that includes giving behavior.

When measuring debt attitudes as a proxy for a moral norm that encourages giving behavior, a binary question about whether it is "right" to use credit for vacations was used (1: right to use debt to cover vacation expenses; 0: not right). This question was used over other debt attitude questions in the SCF because of its use of the word "right," which signifies a moral conviction. Finally, in order to operationalize a participant's moral norm toward consumption, a question about whether a household spends more than they earn (1: spend more than earn; 2: spend = earn; 3: spend less than earn) was used, which assumes those who have a moral norm to give will avoid consuming more than their income, as recommended by many religious traditions, including Christianity (Luke 12:20-21; 1 Timothy 6:8), Judaism (Ecclesiastes 6:2), and Islam (al-Baquarah 2:233; al-Talaaq 65:7).

Control Variables. The control variables have all been shown to be significant factors when explaining giving behavior. They include volunteering (Farmer & Fedor, 2001), sex (Andreoni & Vesterlund, 2001), age (Bekkers & Wiepking, 2011b), race (Rooney et al., 2005), education (Mesch et al., 2006), total financial assets (James & Jones, 2011), and total income (James, 2009; Mcclelland & Brooks, 2004).

Empirical Model

Let *G* be whether a household is giving more than $500 and *Grate* is the percentage of total income that the household is giving if *G*=1. Both *G* and *Grate* are a function of financial attitudes and behavior variables (**F** '), socioeconomic control variables (**K** '), and an error term (Ɛ),

$$G = \alpha + \mathbf{F}\pi + K\beta + \varepsilon \quad (1)$$

$$Grate = \alpha + \mathbf{F}\pi + K\beta + \varepsilon \quad (2)$$

This study hypothesizes that **F** variables (volunteer, risk tolerance, subjective financial knowledge, financial time horizon, use of credit for vacations, spending less than you earn) will also have statistically significant coefficients, $\pi > 0$. Therefore, the null hypothesis can be expressed as H_O:π=0, and alternative hypotheses as H_O:π>o. A binary probit model was employed for the first dependent variable given its binary nature (household gave over $500: yes or no), and an ordered logit model was utilized for the second dependent variable given its ordinal nature (household giving as a percentage of total income).

Results

Table 1 (below) shows the descriptive characteristics for the sample used. Approximately 38% weighted U.S. households gave $500, or more, during 2016. When looking at the household giving rate as a percentage of total income, 53% of weighted households gave 0% while 30% gave between 0% and 3% and 17% gave more than 3.0% of household total income. Regarding financial attitude and behavior variables, only 10% of the weighted survey population believed that it is right to use debt to cover vacations. Regarding socioeconomic factors, 68% of the weighted sample is White. The SCF oversampled higher income individuals, which lead to a skewed income variable where the U.S. average total income average is $102,251 versus a median value of $52,657.

Table 2 shows the results for the binary probit regression, which was used to test model (1). For our predictor variables, risk tolerance, subjective financial knowledge, generous community, and financial time horizon were statistically significant variables at a .05 alpha level. For our control variables, all of the variables were statistically significant at a .05 alpha level except for the Hispanic ethnicity, as compared to the White reference group, and whether an individual went to graduate school as compared to the bachelors' degree reference group.

Table 3 shows the results for the multinomial logistic regression, which was used to test model (2). For our predictor variables, when comparing those who gave 3.0% or more with those that did not give, subjective financial knowledge and generous community were statistically significant variables at a .05 alpha level. If a household moves up one point in subjective financial knowledge, it has 12% higher odds

TABLE 1. Descriptive Characteristics of Variables

Variable	*n*	Mean (Unweighted)	Mean (Weighted)	St. Dev
Predictor variables				
Give	6,248	.48	.38	.22
Givecat (giving as % of income)[a]	6,208	.65	.52	.34
0: No giving	3,265	—	—	—
1: 0%–3.0%	1,858	—	—	—
2: More than 3.0%	1,085	—	—	—
Risk tolerance	6,248	4.72	4.25	1.25
Subjective financial knowledge	6,248	7.46	7.27	.95
Generous community	6,248	.67	.64	.21
Financial time horizon	6,248	3.09	2.90	.59
Use credit for vacation is right	6,248	.10	.10	.13
Thriftiness	6,248	2.47	2.40	.32
Control variables				
Volunteer	6,248	.21	.26	.21
Female	6,248	.46	.53	.22
White	6,248	.72	.68	.20
Black	6,248	.13	.16	.15
Hispanic	6,248	.10	.11	.13
Asian and other	6,248	.05	.05	.10
Less than 12th grade	6,248	.09	.11	.13
High school	6,248	.19	.23	.18
Some college	6,248	.26	.30	.20
Bachelor's degree	6,248	.25	.22	.19
Graduate school	6,248	.20	.14	.18
Age	6,248	52.14	51.10	7.26
Total financial assets	6,248	4,436,094	332,267	1,101,603
Total income	6,248	799,817	102,251	2,442,647

Note. 2016 SCF; all five implicates were used; weighted using population weights.
[a]40 observations did not have income and were excluded from all analysis.

of giving 3.0% or more of total income compared to households that did not give (see odds ratio column in Table 3 for first group). If the participant was in a generous community, the odds that they will give 3.0% of income, or more, compared to not giving increased by 28%. When comparing those who gave between 0% and 3.0% with those that did not give, subjective financial knowledge, generous community, and financial time horizon were statistically significant variables at a .05 alpha level. If a household moves up one point in subjective financial knowledge, it has 12% higher odds of giving between 0% and 3.0% of total income compared to households that did not give (see odds ratio column in Table 3 for first group). A household that incrementally increases their financial time horizon one level has 12% higher odds of giving between 0% and 3.0%, as compared to not giving. If the participant was in a generous community, the odds that they will give between 0% and 3.0% of income, compared to not giving, increase by 28%. Finally, when comparing giving more than 3.0% with those who gave between 0% and 3%, only subjective

TABLE 2. Binomial Probit Regression of Give Variable

Variable (Reference Group) N = 6,208[a]	Est. Coef.	SE	*p*- Value	Avg. Marg. Effect	VIF
Intercept	-5.14	0.19	<.01	—	—
Predictor variables					
Risk tolerance	0.01	0.01	.00	0.01	1.18
Subjective financial know	0.04	0.01	<.01	0.01	1.10
Generous community	0.17	0.05	.00	0.04	1.21
Financial planning horizon	0.07	0.02	<.01	0.02	1.15
Use credit for Vac. is right	0.01	0.06	.95	0.00	1.01
Thriftiness	0.05	0.03	.08	0.01	1.13
Control variables					
Volunteer	0.74	0.04	<.01	0.18	1.11
Gender (male)					
Female	-0.06	0.04	.01	-0.03	1.07
Ethnicity (White)					
Black	0.19	0.06	.02	0.04	1.14
Hispanic	-0.08	0.07	.13	-0.03	1.17
Asian and other	-0.22	0.09	.01	-0.06	1.04
Education (bachelor's degree)					
Less than 12th grade	-0.42	0.09	<.01	-0.12	1.71
High school	-0.36	0.06	<.01	-0.10	1.82
Some college	-0.21	0.05	<.01	-0.06	1.77
Graduate school	-0.02	0.06	.41	0.01	1.43
Age	0.01	0.00	<.01	0.00	1.20
Log of total financial assets	0.12	0.01	<.01	0.04	1.61
Log of total income	0.21	0.01	<.01	0.03	2.44

Note. Weighted analysis of the 2016 Survey of Consumer Finances using all five implicates and RII technique.
[a]40 observations did not have income and were excluded from all analysis.

financial knowledge was statistically significant at a .05 alpha level.

For our control variables, ethnicity was statistically significant at a .05 alpha level when comparing those groups who gave more than 3.0% versus both other reference groups. Education was significant when looking at both groups that had no giving as the reference group. Volunteering was an important predictor for all groups. For example, if a participant in a household volunteered more than 1 hour per week, the odds are 659% higher of that household giving 3.0% or more compared to not giving. Financial assets and income were also significant for all groups. For every 10% increase in total income, the odds of giving are increased by 5%, compared to households that did not give.

Discussion

This study tested whether financial attitudinal variables have the ability to improve the prediction for how likely a household is to give money to a charitable organization. As predicted by an adjusted TPB, participants with certain financial attitudes (higher risk tolerance and subjective financial knowledge), higher perceived behavioral control (financial time horizon), and who had social norms toward giving from friends/relatives (access emergency funds), had

TABLE 3. Multinomial Logistic Regression: Comparison of Different Levels of Giving as Percentage of Total Income

Variable (Reference Group)	Modeled Response Versus Reference Group								
	Give >3% Versus No Give			0% > Give > = 3% Versus No Give			Give >3% Versus 0% > Give >= 3%		
N = 6,208[a]	Est. Coef.	SE	Odds Ratio	Est. Coef.	SE	Odds Ratio	Est. Coef.	SE	Odds Ratio
Intercept	-9.95*	0.61	—	-15.99*	0.56	—	6.04	0.44	—
Predictive variables									
Risk tolerance	-0.01	0.02	0.99	0.03	0.02	1.03	-0.04	0.02	0.96
Subjective financial know	0.09*	0.02	1.10	0.05*	0.02	1.05	0.04*	0.02	1.05
Financial time horizon	0.09	0.04	1.10	0.11*	0.03	1.11	-0.02	0.04	0.98
Generous community	0.28*	0.11	1.32	0.25*	0.09	1.29	0.03	0.10	1.03
Use credit for Vac. is right	-0.17	0.15	0.85	0.02	0.12	1.02	-0.18	0.15	0.84
Thriftiness	0.12	0.07	1.12	0.00	0.05	1.01	0.11	0.07	1.12
Control variables									
Volunteer	1.76*	0.10	5.79	0.96*	0.09	2.60	0.80*	0.09	2.23
Gender (male)									
Female	-0.05	0.09	0.95	-0.06	0.08	0.94	-0.02	0.09	1.01
Ethnicity (White)									
Black	0.62*	0.14	1.85	0.16	0.12	1.18	0.45*	0.15	1.57
Hispanic	-0.45*	0.22	0.64	-0.03	0.14	0.98	-0.43*	0.23	0.65
Asian and other	-0.93*	0.25	0.39	-0.18	0.16	0.83	-0.75*	0.24	0.47
Education (bachelor's degree)									
Less than 12th grade	-0.97*	0.25	0.38	-0.35*	0.19	0.71	-0.63	0.28	0.54
High school	-0.58*	0.14	0.56	-0.43*	0.12	0.65	-0.16	0.15	0.86
Some college	-0.37*	0.12	0.69	-0.22*	0.10	0.80	-0.14	0.12	0.87
Graduate school	-0.04	0.13	0.96	-0.17	0.11	0.85	0.12	0.11	1.13
Age	0.04*	0.03	1.04	0.01*	0.00	1.02	0.02*	0.00	1.02
Log of total financial assets	0.17*	0.03	1.18	0.10*	0.02	1.11	0.06*	0.03	1.06
Log of total income	0.31*	0.06	1.37	1.11*	0.05	3.03	-0.80*	0.04	0.45
Model fit statistics									
-2 Log-likelihood	12,451								
Cox and Snell pseudo R^2	0.37								

Note. Weighted analysis of the 2016 Survey of Consumer Finances using all five implicates and RII technique.
[a]40 observations did not have income and were excluded from all analyses.
*$p < .05$.

a positive association with giving. It is not surprising that higher subjective financial knowledge would be associated with higher charitable giving given that cognitive ability has been shown to be positively associated witing (Bekkers & Wiepking, 2011b; James, 2011). The positive association found between risk tolerance and charitable giving has been shown in previous studies to exist in women (Müller & Rau, 2016) and private sector employees (Buurman et al., 2012). More work needs to be done to more model this association, particularly given that risk tolerance has not been consistently measured in the past (Roszkowski et al., 2005). The connection between financial time horizon and charitable giving helps support the work by Liu et al. (2019) who found a strong association between financial time horizon and charitable giving using the Health Retirement Study. Finally, adapting the TPB to include a "moral norm," as operationalized by whether participants had a morally negative view about excessive debt and spending less than they earn, did not have a statistically significant association with giving. One contributing factor to the lack of statistical significance in the moral norm variables could be the lack of overall variance in the survey questions: 90% of the participants answered "yes" to the "use credit for vacation is right" question, and there were only three possible selections for the "thriftiness" variable. In another recent study that tested the relationship between moral attitudes and financial outcomes, Zagorsky (2017) was also not able to find statistical significance. These overall results differ from Anaza (2011), which found significance with the financial attitudinal variables financial planning horizon, risk tolerance, and whether spending exceeded a household budget when using the 2004 SCF.

Limitations to this study include the use of proxy variables in the TPB conceptual model. Attitude, moral norm, and perceived behavioral control concepts were not directly measured with giving-specific questions because they were not provided in the SCF dataset, which limits the explanatory power of the study. Another limitation of the study includes the lack of data on religiosity (not provided in the SCF dataset). In 2016, the largest share of charitable donations went to religious organizations (31%) and 55% of Americans say that their religious orientation motivates their giving (Annual Report on Philanthropy, 2018). Not including a religiosity control variable seems to be an important omitted variable that limits the explanatory power of the study.

These results add to previous literature by adding a theoretical motivation to Anaza's (2011) study, which was the first paper, to our knowledge, to comprehensively add financial attitudinal variables to existing socioeconomic and psychographic models of giving behavior. Our paper makes a case to consider and/or collect financial attitudinal data, including risk tolerance, subjective financial knowledge, and access to emergency funds from friends/relatives, in order to better predict charitable giving behavior. Since giving is a financial behavior, it makes logical sense that predicting giving behavior should include more types of financial variables.

Given that the United States is the leading nation in charitable giving (Zinsmeister, 2016), it is likely that financial counselors and financial planners will encounter clients who are actively giving to charities. Financial counselors and planners could benefit from this study by using financial attitude variables to better understand their client's giving behavior. For example, if a client expressed an interest in charitable giving, but never actually gave, a financial counselor could possibly help their client achieve their goal of more charitable giving through increasing their financial knowledge and risk tolerance. Financial educators, who help to improve financial knowledge among their students, could use the results of this study to develop more nuanced curriculum that incorporates the idea that a student's charitable giving behavior may likely be influenced as their financial attitudes are shaped. For nonprofit organizations or marketers, these new variables would provide a more nuanced view of a potential donor than the traditional approach of simply using socioeconomic variables of age, income, sex, race, and education to target who may be a potential donor. For example, when prioritizing a potential donor list, these financial attitudinal variables could help create more sophisticated scoring of the potential donors, with individuals who have higher subjective financial knowledge and risk tolerance earning a higher desirability score as a potential donor.

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