Trust and Charitable behaviour:

A Study about the Effects of Trust on Charitable behaviour in the Netherlands

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Abstract

In this research the effects of social trust, the trust in unknown others, and institutional trust, the trust in institutions, on charitable behaviour is tested, mainly replicating previous research. We find that people with more social trust volunteer more and engage in more small acts of kindness, while people with more institutional trust donate more money and volunteer more. We also find, through interaction, that the effect of institutional trust on financial donations is stronger when people know about the existence of accreditation seals, a kind of trademark for charitable organizations to show their trustworthiness. The suggested mechanisms of previous research are discussed in regard to our results and suggestions are made for policy of charitable organizations and future research.

Introduction

Charitable behaviour has been an important pillar of society for many decades. Examples of particular charitable organizations are Unicef, the World Wildlife Fund, and Doctors Without Borders, which were founded in 1946, 1961 and 1971 respectively (Markisz, 2015; World Wildlife Fund; Médicins Sans Frontièrs). Records of charitable behaviour can even be found in old texts from Ancient Greece and from the Middle Ages (Philanthrocapitalism; Rubin, 1978).

Charitable behaviour encompasses different acts of a charitable or altruistic nature. Nowadays, charitable behaviour continues to be relevant in society, as is shown by multiple trends. Bekkers (2011), for example, calls voluntary associations the back bone of civil society. Furthermore, the amount of money people donate to charitable organizations in the Netherlands has been growing since 2004 from roughly 250 euros per household to roughly 400 euros, a positive trend that remains even when taking inflation into account (Statistics Netherlands, 2015). There is a similar trend in the United States, one in which the amount of money people donate increases over time. There is an (inflation-adjusted) increase of 5.4 percent in 2014 when compared to the donations in 2013. Furthermore, 2014 was the fifth year in a row with an increase in the amount of donated dollars. The total amount of dollars people donate per year had never been this high before (The Giving Institute, 2015).

Volunteering is a way of practicing charitable behaviour. For which we see, compared to the trend of donated money, a different trend in the Netherlands. According to the Netherlands centre for social development (MOVISIE), based on the results of several researchers, the amount of time people do volunteering work has either stayed the same or gone down over the years in the Netherlands. Where one research found a trend of 21 hours per month to 18 hours per month

from 2013 to 2014, others find a stable trend of either a small hour or 4 hours per week. The amount of people doing the volunteering in the Netherlands has gone down as well (Hetem, R. & Franken, M., 2015). Other research also finds a decrease in the amount of people volunteering and a trend of volunteering staying just under an hour per week (Cloïn et al., 2013).

Aside from donating money or engaging in volunteering there are more ways of engaging in charitable behaviour. One of these ways is engaging in any act, however small, that is done out of good-will to help a particular person or group of people. These small acts are done in our day to day lives. For example, we may choose to help someone carrying groceries or a heavy suitcase. Another example is lending an item to someone you do not know very well.

In many modern societies government intervention is declining and thus charities receive less support. More and more emphasis lies on the role of grassroot and bottom-up initiatives (Hartley, 2010). In other words, the role of private financial donations and civil participation of individuals in society is growing. This trend is happening in the Netherlands (Rijksoverheid, 2013). The government wants people to take care of each other instead of relying on collective facilities provided by the state (Cloïn et al., 2013). In Great Britain a similar development arose, known as 'big society'. The state withdraws and hands over responsibilities to private institutions (Kisby, 2010). In a global perspective this trend is known as the 'global civil society' (Keane, 2003). The growing reliance on charitable and prosocial behaviour creates demand for research to better understand how they work. Furthermore, volunteering carries an enormous economic value in the world which is yet another reason to increase efforts to understand charitable behaviour (ILO, 2011).

Previous research discovered many factors that influence charitable behaviour. Extensive research has been carried out on structural factors that predict charitable behaviour. Charitable behaviour has been research through analysing financial donations and engagement in volunteering. Results have shown the importance of age, education, marital status and social networks (Bekkers & Wiepking, 2011b; Wiepking & Bekkers, 2012; Taniguchi & Marshall, 2014), gender, family composition, income (Wiepking & Bekkers, 2012) church attendance, prosocial personality characteristics (Bekkers & Schuyt, 2008; Wiepking & Maas, 2009), financial resources, requests for donations (Wiepking & Maas, 2009), changes in needs of the recipients of charity (e.g. epidemics and natural disasters) and the reputation of charitable organizations and their staff (Bekkers & Wiepking, 2010; Bekkers & Wiepking, 2011a; Ribar & Wilhelm, 2002) as predictors for charitable behaviour. Furthermore, research is increasingly focussing on attitudinal predictors for charitable behaviour, in particular attitudes such as trust (Bekkers, 2003; Taniguchi & Marshall, 2014). Trust, according to Piff et al. (2010), is essential to

many types of prosocial behaviour as it determines the willingness of people to accept vulnerability and thus cooperate with others.

Trust comes in different dimensions and types. There are two types of trust. We can choose to put trust in people we know, often based on past experiences. This is called 'strategic trust' (Uslaner, 2000) and strongly relates to reciprocity. But there is another side to trust, one that drives people to be kind and considerable towards others they do not necessarily know (Ashraf, 2006). The trust in people we don't know and to whom we likely don't share the same background is called 'moralistic trust'. Researchers use various terms to indicate this kind of trust, it has been called, general social trust, generalized social trust and social trust. This kind of trust has the potential to provide a link between people who are, in any way, different from each other (Uslaner, 2000). Therefore, it is believed that 'moralistic trust' is fundamentally important to pro-social behaviour.

Taniguchi and Marshall (2014) argue that the effect of attitudinal resources, such as trust, on charitable behaviour may depend on the social context it is measured in. In the social context of the Netherlands, the topic of trust and charitable behaviour has been researched by Bekkers (2003), Bekkers and Schuyt (2008), Wiepking and Maas (2009) and more. However, more research is needed, since the evidence of attitudinal variables, like trust, is still relatively limited (Taniguchi, 2013). Furthermore, society is changing all the time (Cloïn et al., 2013), which makes it even more important to keep testing the effects of trust on charitable behaviour. In addition, further research would be beneficial in understanding the effects of trust on charitable behaviour more thoroughly by acknowledging different kinds of trust and various forms of charitable behaviour. There is limited research that focusses on the role trust plays in predicting charitable behaviour that either involves investing money or investing personal time (Taniguchi & Marshall, 2014), especially in the social context that is the Netherlands.

We seek to replicate previous research (mainly: Bekkers, 2003; Taniguchi & Marshall, 2014) and further confirm the positive effect of trust on charitable behaviour by researching it in today's society in the social context of the Netherlands. We pose the following research question:

Does trust have a positive effect on charitable behaviour?

Giving in the Netherlands Panel Survey

The dataset used to replicate previous research and to provide answers our research question is the *Giving in the Netherlands Panel Survey* (GINPS, 2002-2012). Its primary focus lies on charitable giving and other forms of charitable behaviour, such as volunteering. Furthermore, it

contains information on various types of trust, as well as various items on socioeconomic and demographic characteristics of the respondents.

Overview

First of all subconcepts and definitions are given for the concepts charitable behaviour and trust. After that previous research is discussed, looking at what we do and do not know about the effects of trust on charitable behaviour. *Theories* on the effects are explored and hypotheses are presented. Then we discuss the *data and methods* of the study. The items and variables we use are discussed and we present our strategy for our analyses. The analyses and the *results* are presented and the ramifications this has on our hypotheses. Finally, in the *conclusion and discussion* section, the research question and the hypotheses are discussed, we present the conclusions and discuss what has been learned and discovered. In the last part of this section, we reflect on our research and what implications this has for future research and practical implementation of this addition in knowledge.

Theory

First, we will define subconcepts for charitable behaviour and trust. Second, a theoretical framework is provided concerning the relation of the subconcepts for trust on the subconcepts for charitable behaviour. Finally, based on the theoretical framework, hypotheses are presented.

Definitions

One of the subconcepts of charitable behaviour involves *financial donations* to charitable causes (Taniguchi and Marshall, 2014). Most researchers will not bother to define it any further than that, since this concept is quite clear. However, Bekkers and Wiepking (2010) did and define it as the donation of money to an organization that benefits others beyond one's own family. Typically the beneficiary of such a donation is absent. Wiepking and Maas (2009) add that charitable giving is a form of prosocial behaviour.

Next to financial donations, *volunteering* is also a way to behave charitably, but instead of investing money, people invest time to certain charitable causes and organizations (Taniguchi and Marshall, 2014), working towards a mutual goal (Newton, 2001). There are several requirements to determine if something is truly volunteering. It has to be unpaid (Taniguchi & Marshall, 2014; Van Ingen & Bekkers, 2015), excluding payment for expenses and the like (Van Ingen & Bekkers, 2015), it is carried out through formal organizations (Taniguchi & Marshall, 2014) or informal organizations and can either be on an irregular basis and on regular basis (Taniguchi,

2013). The International Labour Organization proposes the following working definition: “unpaid non-compulsory work; that is, time individuals give without pay to activities performed either through an organization or directly for others outside their own household” (2011, p.13).

Bekkers and Wiepking (2010) define volunteering differently. In their research the distinction is made between charitable giving and charitable action. Charitable action includes actions such as volunteering, recycling, help with carrying groceries and sort household waste. Therefore, next to volunteering, which is a kind of work, we recognize *small acts of kindness* as part of charitable behaviour. Examples of these small acts include, carrying someone’s groceries or give up your seat in a crowded train so that someone else can sit on your place.

There are numerous ways to define trust and the various types and dimensions of trust can be complex. We propose to define it with two clear-cut subconcepts, social trust and institutional trust. We define *social trust* as the trust in unknown and anonymous others (Rothstein & Stolle, 2008; Evers & Gesthuizen, 2011; Bekkers & Wiepking, 2011a; Taniguchi & Marshall, 2014), not aimed at particular people but in a general sense (Uslaner, 2000; Uslaner 2002; Delhey et al., 2011; Taniguchi, 2013), expecting goodwill and benign intent (Yamagishi & Yamagishi, 1994; Newton, 2001; Uslaner, 2002) and based on a shared fate with others (Taniguchi & Marshall, 2014). It is usually measured with the question "Generally speaking, do you believe that most people can be trusted, or can't you be too careful in dealing with people?" (Glaeser et al., 2000; Newton, 2001; Uslaner, 2000; Reeskens & Hooghe, 2008; Evers & Gesthuizen, 2008; Bekkers, 2011; Delhey et al., 2011; Taniguchi, 2013; Taniguchi & Marshall, 2014).

Institutional trust is defined as the trust in institutions and organizations (Evers & Gesthuizen, 2011; Taniguchi, 2013; Taniguchi & Marshall, 2014) in a general sense (Taniguchi, 2013).

Other concepts that have been previously connected to charitable behaviour are included in our research. These concepts are religion, education, age (Bekkers & Wiepking, 2011b; Taniguchi & Marshall, 2014), gender, marital status, children (Wiepking & Bekkers, 2012; Taniguchi & Marshall, 2014), income (Bekkers, 2003; Wiepking & Bekkers, 2012) and employment status (Taniguchi & Marshall, 2014).

Previous research

The effect of trust on charitable behaviour has been researched before, but in different ways, with different reasons. As part of the growing research on the relationship between trust and charitable behaviour, Taniguchi (2013) examined the effects of both social trust and institutional trust on different types of volunteering. Both regular and irregular formal volunteering were considered.

Using the Japanese General Social Survey from the year 2005, the results show that the effect of trust depends upon whether the volunteering was regular or irregular. Social trust is found to have a positive and significant effect on irregular volunteering, but not on regular volunteering. This shows that the regularity of volunteering work is important to take into account. A simple question on whether a respondent does or does not engage in volunteering does not provide enough information to thoroughly research the effect of trust. Taniguchi and Marshall (2014) researched the effects of social trust and institutional trust on volunteering and financial donations, along with structural predictors, such as age and education, using data from the JGSS 2005. Their research was performed with a combined model of both subconcepts of trust in one model predicting volunteer work and financial donations, since this kind of model is underexplored by previous research. They find that trust matters more in predicting charitable giving than formal volunteering, the latter of which did not yield statistically significant results in their research. However, this might be caused by the tradition of compulsory volunteering in Japan, so that the volunteering is not caused by trust anymore (International Labour Organization, 2011). Furthermore, Taniguchi and Marshall (2014) find that social trust has a statistically significant positive effect on financial donations. While institutional trust also has a statistically significant positive effect on it, the influence of social trust was found to be stronger. This shows the importance of distinguishing both institutional trust and social trust in research on the effect of trust on charitable behaviour.

Evers and Gesthuizen (2008) researched the effects of social and institutional trust on financial donations, using the European Social Survey 2002 to analyze 19 European countries and the United States. In their research they looked at both the individual level and the national level. On the individual level they find that both forms of trust have a statistically significant positive effect on financial donations. This research again highlights the importance of researching different types of trust. Moreover, this research found that on a national level the effects partially disappear for social trust and become a statistically significant negative effect for institutional trust. Bekkers (2011) researched the relation between social trust and volunteering in both directions. He used three waves of the Giving in the Netherlands Panel Survey of the years 2002 to 2006. The results show that changes in volunteering are not related to changes in trust and there is no causal effect of volunteering on trust. Therefore, he reïnforced the idea that trust affects charitable behaviour and that charitable behaviour does not play a large role in generating trust. Earlier research by Bekkers shows the role that the knowledge of accreditation seals plays on the relationship between trust and financial donations. Using these accreditation seals, charitable organizations signal their trustworthiness and show their good ethics and reputation.

Bekkers (2003) finds that trust in institutions increases the amount of money people donate to charities. When people have knowledge of accreditation seals the effect of people's trust in institutions on financial donations strengthens. Therefore we account for the influence of these accreditation seals in our models.

Previous research differs in how they treat causality in addressing the relation between trust and charitable behaviour. However, in recent years authors have provided more and more grounds to expect a relation in which trust influences charitable behaviour and not so much the other way around. Uslaner (2000) provides a theoretical argument to this rhetoric. He states that we learn social trust, the general trust in unknown others, in an early stage of our lives. Therefore, the fundamentals that we base our social trust on are well established before we reach the age in which we engage in charitable behaviour. In later research Uslaner adds to this that, when we engage in, for example, volunteering we socialize with people that are similar to ourselves, with people who are within our social bubble (Uslaner, 2002). By doing volunteering work we do not "expand the scope of our moral community". Therefore, by doing volunteering we cannot generate trust in others that are unknown to us. A similar argument can be made in regard to financial donations. Donating money in modern society involves very little social contact that could provide as a basis to develop social trust. Bekkers (2003) states that it is very unlikely that trust is formed from the contact we have with a stranger collecting money and even more so when financial donations are done through a check or internet banking. Ingen & Bekkers (2015) conducted empirical research on the causal relation between social trust and charitable behaviour. They find that the causal effects of charitable behaviour on social trust are "very small or nonsignificant". They conclude that charitable behaviour does not play an important role in creating social trust.

Previous research provides different explanations as to how the specific effects of trust on charitable behaviour function. Generally, research appears to predict positive effects of trust on charitable behaviour. Several mechanisms that underlie the effects of trust on charitable behaviour are discussed here. A mechanism that is repeatedly referred to, explaining the positive effect of social trust on financial donations, is the efficacy mechanism (Bekkers & Wiepking, 2010; Bekkers & Wiepking, 2011a; Bekkers & Wiepking, 2011b; Wiepking & Bekkers, 2012; Taniguchi & Marshall, 2014). This mechanism states that people who are trusting have a more positive view on unknown others. They are inclined to feel that their donations make a difference and are effective. This leads to more willingness to commit, thus people with more trust will donate more and more often. The importance of the estimation that people make on how effective their contribution is is backed up by Yamagishi & Yamagishi (1994). They state that people with

more social trust may overestimate the good intent of others and thus experience a cognitive bias. As people with more social trust have a positive, though sometimes unrealistic, view on the good intent of others they will be more likely to assume that their contribution is used in effective manner. Another reasoning for a potential mechanism that links social trust with volunteering is provided by Taniguchi (2013). He argues that social trust generates a sense of a shared, stable and long-lasting collective fate among people, a sense of a shared fate. Therefore, social trust creates the idea that on the whole people are good natured and can be trusted. People with more social trust will be inclined to believe that they will not be taken advantage of and will thus be more likely to let their guard down, overcome uncertainty and engage in "the act of generosity or cooperate with anonymous others". This results from the acknowledgement that in order to engage in charitable behaviour, such as volunteering, one must deal with uncertainty related to the charitable activity. People are uncertain on whether volunteering actually helps people and if the organization operates effectively. People can never be fully informed and thus lack information on how effectively their donated money is spent by the charitable organization. They can merely trust that the charitable organization spends the money effectively and efficiently. Social trust could play a role in countering this occurrence of uncertainty (Taniguchi, 2013). If people are undecided on whether or not to engage in volunteering, social trust may play a defining role.

Piff et al. (2010) argue that people who cooperate with others in certain charitable activities need to overcome vulnerability. Having social trust in others could help people to accept the vulnerability and thus cooperate with others, which is fundamental to engaging in charitable behaviour. Taniguchi and Marshall (2014) argue that people with higher social trust tend to be more civically engaged. They see volunteering and financial donations as moral obligations. Bekkers (2011) argues that the positive effect of social trust on volunteering is caused by selective attrition. In other words, people with less trust are more likely to quit volunteering. When people have more social trust they are also more likely to be asked to volunteer and sustain volunteering. A more psychological explanation is given by Ashraf et al. (2006). They explain that trust is based on "unconditional kindness" towards others. People who trust others will experience psychological benefits such as feeling a "warm glow" inside that results from engaging in charitable behaviour. Opposed to research on social trust, institutional trust and its effect on charitable behaviour has received considerable less attention by researchers.

Taniguchi (2013) highlights the importance of institutional trust, the trust in the workings of organizations and provides arguments on how exactly institutional trust leads to more volunteering. People with more institutional trust might deal differently with organizations or

officials that do not share the same general beliefs as they do. People with more trust will be more likely to dismiss this contradiction in beliefs as an exception and they therefore do not regard it as a standard to which they measure all organizations. Therefore, they will be more likely to engage in volunteering and disregard certain contradictions in beliefs. In addition, Taniguchi (2013) proposes that institutional trust creates more acceptance towards the fact that organizational oversight within an institution is never perfect. People with more trust will be more likely to look past that flaw, disregard it as something inevitable and thus continue to have faith in the charitable cause. Lastly, institutional trust may influence the likeliness that people disregard signals of trustworthiness that an organization displays. People who have less trust in institutions in general will be more inclined to label the signal of trustworthiness as manipulation by the official, hence being less inclined to engage in charitable behaviour.

Evers and Gesthuizen (2011) provide argumentation for why people with less institutional trust are less likely to contribute to charitable causes. When people have trust in the workings and success of a charitable organization, they may think that their donations are not necessary for the success of the cause.

Particular mechanisms that address the link between trust and small acts of kindness are lacking, although one could argue that the mechanisms proposed that link social trust and financial donations or volunteering are similar in nature. Mechanisms in which, the previously mentioned concepts of "unconditional kindness" and uncertainty play a role.

Previous research has provided many arguments when it comes to the effects of social trust on charitable behaviour. It has also provided some evidence for the causal direction of the relation between trust and charitable behaviour. However, the concept institutional trust remains relatively unexplored, especially when both social trust and institutional trust are looked at together in a single model, as Taniguchi (2013) and Taniguchi and Marshall (2014) show. Furthermore, the concept of small acts of kindness has not been explored before as a concept on its own. Based on these findings and the theoretical framework, the following hypotheses are proposed:

Hypothesis 1: People with more social trust are more likely to donate more money to charitable causes

Hypothesis 2a: People with more institutional trust are more likely to donate more money to charitable causes

Hypothesis 2b: The positive effect of institutional trust on financial donations is stronger when people know about accreditation seals

Hypothesis 2c: People with more institutional trust donate less money to charitable organizations

Hypothesis 3: People with more social trust are more likely to engage in volunteering

Hypothesis 4: People with more institutional trust are more likely to engage in volunteering

Hypothesis 5: People with more social trust are more likely to engage in small acts of kindness

Hypothesis 6: People with more institutional trust are more likely to engage in small acts of kindness

Data and methods

The *Giving in the Netherlands Panel Survey* (GINPS, 2002-2012) is used to test our hypotheses (*N*=2518)[1]. After removing respondents with missing variables from the analyses, 847 respondents remain in our analyses (*Valid N* = 847). The panel survey is conducted by the Centre of Philanthropic Studies (*Centrum voor Filantropische Studies*). The dataset contains demographic and socioeconomic variables as well as a broad range of items on charitable behaviour. The descriptives of the variables are shown in *table 2*.

Variables

The dependent variable for the *amount of euros donated* is constructed by using *"Did you or others in your household give money in 2011 to…?"* and one other item that measures various ways of donating money to organizations related to a variety of charitable causes. The possible responses included 0 "not mentioned" and 1 "mentioned", resulting in a dummy variable on whether or not the respondent gave money in 2011. The second item features a follow up question *"How much, in total, did your household donate in 2011 to…?"* with the categories mentioning a variety of charitable causes. These items are combined into a single variable that shows the total amount of euros donated by the household of each respondent. Each respondent in our data has donated between 0 and 15000 euros to a charitable cause in the year 2011. On average respondents donated 310.72 euros in 2011.

The dependent variable for *volunteering* is constructed by using *"Have you been active during the past 12 months as a volunteer at…?",* with a list of various charitable organizations a respondent could have volunteered in and one category entailing total inactivity at any organization as a volunteer during this time period, and *"How many hours per month did you spend during the last year on unpaid work?"*. These two items are combined into a variable that

measures how many hours per month a respondent volunteered, including the respondents who did not volunteer at all. Each respondent in our data has volunteered 0 to 200 hours per month on volunteering. On average respondents engaged in volunteering around 14 hours per month.

The dependent variable for *small acts of kindness* is constructed using eight items that asked how many times the respondent has carried out various small act of kindness in the past year. For example, *"How many times did you in the last 12 months: Carry things, such as groceries or a suitcase, for someone you don't know?"*. The other items measure if the respondent has given back change after having received too much of it, let a stranger go first in a queue, has given a stranger his or her seat in a bus or other public space, has given food or money to a homeless person, has taken care of plants or mail or animals while someone else was on vacation, has lend one of their possessions to someone they do not know well, and if the respondent has filled out a survey for scientific research without being paid for it. The response categories are "1 more than once a week" to "6 never". The values for the response categories have been edited so six means that the respondent did more often. The GINPS dataset contains eight of these items of which the Cronbach's alpha is .54 (N of items = 8). A higher Cronbach's alpha score cannot be attained if one of the items removed. Further reliability analysis is performed through a maximum likelihood factor analysis with promax rotation. This shows three distinct factors with eigenvalues higher than one. Two items, measuring taking care of the house while someone is away and filling out a survey, are removed, based on this test, resulting in one remaining factor that is in line with the concept of *small acts of kindness* as part of charitable behaviour. From the remaining six items a scale was constructed with the final Cronbach's alpha score of .53 (N of items = 6). Before constructing the scale the items were standardized to account for different answer categories.

For the independent variables that measure trust, the direction of all items for the scales are coded so that a higher score means more trust. A scale for *social trust* is constructed by taking the mean of two items. One item measures social trust, formulated as *"In general do you think people are trustworthy?"* with responses ranging from 1 "strongly disagree" to 5 "strongly agree". The other item that measures social trust is formulated as *"You can't be careful enough with other people."*, featuring the same response categories. The Cronbach´s alpha reliability of the social trust scale is .60 (N of items = 2), which is high considering the scale only consists of two items. On the social trust scale that ranges from 1 to 5 respondents scored on average 3.03.

A scale for *institutional trust* is constructed by taking the mean of seven items. The first three items ask the respondent how much they trust a particular institution. The questions are formulated as follows *"How much trust do you have in …"* with regard for charities, churches

and the government all in the Netherlands. These items feature response categories on a 5-point Likert scale ranging from "none at all" to "very much". The other four items were statements regarding the workings of charities, namely *"Many charities do their work ineffectively"*, *"It doesn't matter to give money to development aid"*, *"Charities deliver an effective addition to solving the problems in the world"* and *"Charities often don't operate effectively"*. Responses to these statements were given on a 5-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree". The institutional trust scale has a very high Cronbach's alpha reliability of .82 (N of items = 7). On average people scored 2.80 on the institutional trust scale which ranges from 1 to 4.43.

To further test the created scales for social trust and institutional trust we performed a maximum likelihood factor analysis with promax rotation. The factor analysis examines nine trust items and shows two factors with eigenvalues larger than 1. The two factors that are found correspond with our theoretical distinction between social trust and institutional trust, as is shown in table 1. Therefore, we continue to use these concepts separately in our analyses.

Table 1. Factor loadings based on a maximum likelihood analysis with promax rotation for 9 items related to social trust and institutional trust (N=847)

	Institutional Trust	Social Trust
In general do you think people are trustworthy?		.80
You can't be careful enough with other people		.53
How much trust do you have in charities?	.70	
How much trust do you have in churches?	.40	
How much trust do you have in government?	.33	
Many charities do their work badly	.74	
It doesn't matter to give money to development aid	.72	
Charities deliver an effective addition to solving the problems in the world	.62	
Charities often don't operate effectively	.72	

Note. Factor loadings <.3 not reported.

As for the control variables, several demographic and socioeconomic variables are selected mainly following Bekkers (2003) and Taniguchi and Marshall (2014). We control for knowledge of accreditation seals (0 'no' 1 'yes'), such as the ANBI or CBF status in the Netherlands, female (0 'male' and 1 'female'), age, marital status (Married [reference category], divorced/widowed, never married), whether there are children in the household in various

categories (0-11 years old, 12-17 years old and 18 years and older), highest obtained education level categorized following International Standard Classification of Education (ISCED) (lower (no diploma, low high school education, lower education and community college) [reference category], middle (higher levels of high school and community college), higher (college, university and higher)) , employment status (no employment [reference category], part-time employment, full-time employment), religion (dummy for religious or not) and income (low income (0-26,200), middle income (26,200-41,300) and high income (41,300 and higher)[2]. Organizations who maintain the ANBI accreditation seal receive favourable tax policies and the government recognizes their role as civic service. The CBF accreditation seal bears the approval of an independent foundation who monitors the financial systems of charitable organizations. Around 44% percent of people, 372 respondents, in our data know about either or both of these accreditation seals.

Most variables are measured on the individual level, but donations and income are measured on the household level. As is shown in *table 2*, the descriptives of most variables conform to the expected values, since, for example, the euros donated to charity has a range of thousands, while there is a seemingly equal amount of men and women in the dataset. However, the mean scores of children in the household and the highest obtained education show anomalies in their mean values. Both of these concepts should count up to a mean score of at least 1, since you either have or have no children in your household and you have either a low, middle or high education achieved. This may be caused by deleting respondents with missing responses from the analyses, combining two items together or problems with missing variables in the data itself. The descriptives are retrieved after the deletion of respondents who have missing values on any of the variables that are used in the analyses. We keep the two concepts in our analyses and keep their flaws in mind during the final discussion.

Table 2. Descriptive statistics of variables

	N	Mean	Standard Deviation	Minimum	Maximum
Dependent variables					
Euros donated	847	310.72	834.60	0	14750
Volunteering	847	13.57	29.99	0	200
Small acts of kindness	847	-.04	.49	-.75	2.30
Independent variables					
Social Trust	847	3.03	.72	1	5
Institutional Trust	847	2.80	.67	1	4.43
Control variables					
Knowledge	847	.44		0	1
Female	847	.50		0	1
Age	847	58.81	18.58	18	91
Marital status					
Divorced	847	.16		0	1
Never Married	847	.23		0	1
Married	847	.61		0	1
Children					
No Children	847	.17		0	1
Children 0-11 Years	847	.07		0	1
Children 12-17 Years	847	.06		0	1
Children 18 and Older	847	.08		0	1
Highest Obtained Education					
Lower Education	847	.52		0	1
Middle Education	847	.11		0	1
Higher Education	847	.21		0	1
Employment					
Not Employed	847	.08		0	1
Part-time Employed	847	.31		0	1
Full-time Employed	847	.61		0	1
Income					
Low Income	847	.35		0	1
Middle Income	847	.47		0	1
High Income	847	.18		0	1
Religious	847	.37		0	1

Note: Giving in the Netherlands Panel Survey (2002-2012)

Analysis strategy

To analyse the effects on the dependent variables financial donations and volunteering, tobit regressions are performed. A tobit regression effectively combines a linear regression with a logistic regression making it possible to analyse variables that contain censoring. The distribution of both dependent variables are censored at a value of 0. A substantial proportion of the respondents did not donate any money at all to charitable causes in that year. The same holds for volunteering: many respondents did not do any volunteering. This results in left-censored variables. Therefore, the lower bound of the Tobit regression is defined as 0 and a logistic model is selected. A multiple linear regression is performed to analyse the effects on the dependent variable small acts of kindness.

Two or more models are performed for each analysis. The reported p-values are two-sided, since there is no expectation of direction for many of the control variables, even though the hypotheses do imply direction. The way the models are constructed is the same for each analysis, the only difference being the dependent variable. Model 1 is nested within model 2 and only looks at the effects of the control variables. In model 2 the independent variables, social trust and institutional trust, are added. Model 2 not only shows the effects of the control variables on donating and volunteering, but also shows to what extent model improves when the independent trust variables are introduced to the model. Model 2 is regarded as the more important and full model. The difference between the two models can be tested. In the case of the analyses for 'euros donated', a third model is used to test hypothesis 2b. Model 2 is nested within this model 3. Model 3 investigates the effect of institutional trust on euros donated with an added interaction effect of institutional trust and knowledge of accreditation seals. As previously discussed, Bekkers (2003) found that the effect of trust on financial donations strengthens when people know about accreditation seals. The results of the analyses are shown in *table 3*.

Results

Financial donations

Model 1 shows that women donate significantly higher amounts of money euros than men. Furthermore, the model shows that people with a higher education donate significantly more than people with a lower education. The model also shows that people with a middle or high income (26200 euros and above) donate significantly more euros than those with a lower income. Model 1 also shows that religious people donate significantly more money than people who are not religious.

Model 2 is a significantly better fit for the analysis (chi square = 60.45, $p<.001$ with df = 2), which shows that trust significantly improves the estimation of the effects on financial

donations. More social trust does not have a significant effect on how much people donate, which rejects *hypothesis 1*, which expects a significantly positive effect. However, the effect of institutional on financial donations is significantly positive. This finding supports *hypothesis 2a* and rejects *hypothesis 2c*, which respectively expect a significantly positive and significantly negative effect. Compared to model 1, the significance of the effect of being female disappears and the effect of middle income becomes weaker. In model 2 being older has a significant effect on how much money you donate, which was insignificant in model 1.

Model 3 is a significantly better fit than model 2 (chi square = 15.35, $p<.001$ with df = 2), which shows that the added interaction effect of knowledge of accreditation seals and institutional trust significantly improves the model. The interaction has a significantly positive effect on how much money people donate. This supports *hypothesis 2b*, which predicts that knowledge of accreditation seals significantly increases the effect of trust on financial donations. The effect of institutional trust accounts for roughly 130 more donated euros for a one-point increase of institutional trust when people do not know about accreditation seals, and when someone knows about accreditation seals a one-point increase of institutional trust means that people will donate even more. The effects of all other variables, including the not significant effect of social trust stay the same in this model, except for the effect of age which grows stronger. Each respondent on average gives 4 euros more for every year they are older, 140 euros more than lower educated people if they are higher educated, 70 euros more than people with low income if they have a middle income, 175 euros more than people with a low income if they have a high income and almost 200 euros more than people who are not religious if they are religious.

Volunteering

Model 1 shows that people with a higher education volunteer significantly more hours than people with a lower education. The model also shows that religious people volunteer significantly more hours than people who are not religious.

Model 2 fits significantly better than model 1 (chi square = 11.12, $p<.01$ with df = 2), which shows that trust significantly improves the estimation of the effects on hours volunteered. Having more social trust and institutional trust both have a significantly positive effect on how many hours someone volunteers. This supports *hypothesis 3* and *hypothesis 4*, which both expect a significantly positive effect of trust on volunteering. The effects of social trust and institutional trust each account for 7 more hours volunteering per respondent for a one-point increase of social or institutional trust. Furthermore, compared to model 1, the significant effect of having a higher education disappears and the effect of being religious grows weaker.

Small acts of kindness

Model 1 is significant (F(14,832)=5.332, p<.001) and explains 8.4% of the variance. It shows a significantly positive effect of being a woman on engaging in small acts of kindness towards strangers. This shows that women are more likely to engage in small acts of kindness in day to day life than men. Furthermore, it shows a significantly negative effect of age on small acts. Older people are less likely to perform these small acts of kindness. A positive and significant effect was found of married people on small acts. This means that married people are more likely to engage in small acts of kindness, compared with people who have never married at all. Moreover, table 3 shows a significantly positive effect of middle and higher education levels on small acts. This shows that in respect to people with a lower education, people with a middle or high education engage are more likely to engage in small acts of kindness. Religious people also perform significantly more small acts of kindness than people who are not religious in this model.

Model 2 explains significantly more of the variance of small acts than model 1 (R square change = .012, F(14,830)=5.406, p=.004), which shows that trust significantly improves the estimation of the effects on small acts from. Model 2 explains 9.4% of the variance. In model 2 the social and institutional trust variables were added and shows a positive effect of social trust on small acts. People with higher social trust are more likely to engage in small acts of kindness than people with low social trust. This supports *hypothesis 5* which states that people with a higher degree in social trust are more likely to engage in small acts of kindness. The effect of institutional trust on small acts of kindness is not significant. Therefore, *Hypothesis 6*, which states that people with more institutional trust are more likely to engage in small acts of kindness, remains not supported. Furthermore, the effect of the control variables remains largely the same in respect to model 1. The effect of sex on small acts of kindness is weaker in model 2. The effect sizes of the models on the small acts variables cannot be interpreted, due to the use of a scale variable which consists of six items.

Table 3. Tobit regression of euros donated and volunteering and multiple linear regression of small acts on trust variables and control variables (N = 847).

	Euros Donated						Hours Volunteered				Small Acts			
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 1		Model 2	
Variable	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Social trust			29.23	21.86	18.90	21.56			7.25**	2.68			.07**	.03
Institutional trust			168.18***	25.63	129.10**	31.25			7.18*	3.01			.02	.03
Knowledge of accreditation					-181.64	130.72								
Knowledge of accreditation * Institutional trust					113.48*	45.23								
Female	25.33**	32.18	.64	31.65	-2.46	31.14	.22	3.73	-1.07	3.73	.10**	.04	.09*	.04
Age	4.17	1.26	4.06**	1.23	4.05***	1.21	.00	.15	-.02	.15	-.01***	.00	-.01***	.00
Never married (ref)														
Divorced/widowed	-77.39	57.89	-68.45	56.87	-64.56	55.95	3.73	7.06	3.57	7.06	.07	.07	.07	.07
Married	-5.42	48.80	26.49	48.18	21.70	47.41	3.26	6.03	4.07	6.08	.14*	.06	.14*	.06
No children (ref)														
Children (age 0-11)	89.52	65.93	88.11	64.94	94.99	64.31	-14.60	8.29	-14.80	8.34	-.09	.07	-.08	.07
Children (age (12-17)	87.22	63.59	99.14	61.96	92.48	60.46	-6.37	7.68	-6.39	7.72	-.11	.07	-.10	.07
Children (age 18 and older)	-25.03	55.06	-29.85	54.16	-28.29	53.03	8.06	6.32	8.67	6.32	.04	.06	.05	.06
Lower education (ref)														
Middle education	78.89	47.03	44.69	46.27	16.77	46.16	4.35	5.67	2.20	5.64	.13*	.05	.11*	.05
Higher education	211.77***	39.11	163.92***	38.40	140.55***	38.19	10.82*	4.26	6.46	4.30	.22***	.04	.19***	.04
Not employed (ref)														
Part-time employed	4.27	57.51	-34.65	55.95	-21.09	54.69	9.64	7.29	6.23	7.26	.00	.07	-.02	.07
Full-time employed	28.34	57.34	-3.51	55.81	-2.10	54.52	12.70	7.26	9.50	7.21	.01	.07	-.01	.07
Low income (ref)														
Middle income	86.56**	33.24	72.81*	32.47	68.83*	31.96	-2.79	3.93	-4.10	3.93	.00	.04	-.01	.04
High income	191.71***	46.64	168.60***	45.56	174.72***	44.81	-1.28	5.29	-3.08	5.26	-.04	.05	-.05	.05
Religious	264.34***	31.53	206.78***	31.54	193.85***	31.06	14.45***	3.46	11.31**	3.62	.07*	.03	.06	.04
Log likelihood	-5563.80 (df 16)		-5533.35 (df 18)		-5518.96 (df 20)		-2164.14 (df 16)		-2153.02 (df 18)					
Constant											.12	.09	-.09	.11
R^2											.08		.09	

Note: data from the Giving in the Netherlands Panel Survey (2002-2012); *p<.05, **p<.01, ***p<.001

Conclusion and discussion (Wybe Janssen)

Charitable behaviour has an important place in society and has been thoroughly researched by many. Out of all known factors that influence how much money someone gives or how much someone volunteers this research focuses on the researching the attitudinal predictor trust with the research question: *Does trust have a positive effect on charitable behaviour?*. Trust has been a relatively recent focus for researchers. According to Piff et al. (2010), trust is essential to many types of prosocial behaviour. Uslaner (2002) even refers to trust as the chicken soup of social life, due to the many good things it brings us.

Our research is a replication of previous research on the effects of trust on charitable behaviour (mainly: Bekkers, 2003; Taniguchi & Marshall, 2014), but does not simply copy all aspects of this previous research. We split up the concept of trust in social trust, the trust in unknown others, and institutional trust, the trust in institutions. We split up the concept of charitable behaviour in financial donations, volunteering, and small acts of kindness. Predictors found in previous research, such as age and marital status, are also included in the research.

By using the data of the *Giving in the Netherlands Panel Survey* (2002-2012) we performed a tobit regression to analyze the effects on the dependent variables financial donations and volunteering and we performed a linear regression to analyze the effects on small acts of kindness. The tobit analysis is used to take into account and censor the dependent variable for the large group of respondents that did not donate any money or did not volunteer at all, without deleting this large group from the analysis. The discussion of the results is mostly based on the full models, which means we discuss model 2 and 3 of financial donations, model 2 of volunteering and model 2 of small acts of kindness, which proved to be significantly better fitting models than the models nested within them. We find no significant effects of having children in our models, but this might be due to errors in our data, as we previously discussed. Furthermore, we are not completely sure about our interpretation of the interaction effect of knowledge on accreditation seals and institutional trust on financial donations, so we suggest the reader keeps this in mind while reading the rest of our discussion.

Hypothesis 1 on financial donations predicted that people with more social trust will donate more money to charitable causes. Based on our not significant results, this hypothesis is rejected. There is no previous research that has found this result and there are no known mechanisms for this. However, it is possible that this lack of significance is caused because people have faith in other people to donate and support charitable organizations in their place, while other people want to support the organizations together with others, believing that their donations will make a difference (Bekkers & Wiepking, 2010; Bekkers & Wiepking, 2011a;

Bekkers & Wiepking, 2011b; Wiepking & Bekkers, 2012; Taniguchi & Marshall, 2014), which would cause the effect to be neither significantly positive or negative. This is similar to how Evers and Gesthuizen (2011) argued for the significantly negative effect of institutional trust on financial donations. Their explanation was the reason for creating *hypothesis 2c*, expecting a significantly negative effect of institutional trust on financial donations. However, our results indicate that people with more institutional trust donate significantly more money to charitable organizations, thus rejecting *hypothesis 2c.* On the other hand, these results support *hypothesis 2a*, which expected a significant positive effect. Taniguchi (2013) suggests that people with more institutional trust have more acceptance towards imperfections within organizations and understand that oversight in institutions is never perfect. People with more institutional will also be more inclined to accept signals of trustworthiness of organizations. Bekkers (2003) also describes these signals and explains that the effect of people's trust in organizations grows stronger when people know about accreditation seals of charitable organizations. Therefore, *hypothesis 2b* predicted that same positive effect of the interaction of institutional trust and knowledge on volunteering and the results support this hypothesis as well. People are uncertain whether organizations operate effectively, but when organizations have an accreditation seal people get confirmation on the good workings of an organization and they will donate more money. Furthermore, our results indicate that some previously discovered predictors also positively predict how much money someone donates. These predictors are age, education, income and religiosity.

Hypothesis 3 on volunteering predicted that people with more social trust will volunteer more. This is supported by our results. Taniguchi (2013) argues that social trust generates a sense of a shared fate and are therefore more likely to cooperate with anonymous others. Taniguchi and Marshall (2014) argue that people with higher social trust tend to be more civically engaged and see volunteering as moral obligations. Bekkers (2011) argues that the positive effect of social trust on volunteering can be attributed to selective attrition, which means that people with low social trust will stop volunteering, while people with higher social trust continue to volunteer and thus the effect is created. *Hypothesis 4* on volunteering predicted that people with more institutional trust will volunteer more. This is supported by our results. Just like with the effect of institutional trust on financial donations, this is explained by Taniguchi (2013) who says that people have trust in the institutions, even if the institutions do not uphold the same beliefs as they do and are more likely to go along and cooperate and engage in more volunteering. The results also showed that someone who is religious volunteers more hours than someone who is not religious.

Hypothesis 5 on small acts of kindness predicted that people with more social trust are more likely to engage in these small acts. There is, to our knowledge, no previous research of small acts of kindness in particular, but it can be argued that the efficacy mechanism (Bekkers & Wiepking, 2010; Bekkers & Wiepking, 2011a; Bekkers & Wiepking, 2011b; Wiepking & Bekkers, 2012; Taniguchi & Marshall, 2014) applies here. This means that people who have more social trust have a more positive view on unknown others and are inclined that they make a difference by performing small acts of kindness. *Hypothesis 6* on small acts of kindness predicted that people with more institutional trust are more likely to engage in these small acts. However, this was not supported by our results. Even though it could be argued that a positive effect should exist through the trust in institutions and campaigns of the government and churches that we as people should take care of each other, institutions are only indirectly connected to how someone acts in public in most cases. It could be that, like the argument of Evers and Gesthuizen (2011) for institutional trust and charitable giving, people trust the government, police and other institutions to take care of other people through policy or more direct involvement with society. As for the other predictors, women perform more acts of kindness, people with middle or higher education perform more small acts than people with a low education and people who are older perform less small acts of kindness. However, since small acts involve things like carrying someone's bags or letting someone else have your seat, it makes sense that older people do these things less, because they might be unable to do them. More research will have to be done on small acts of kindness to really delve into what could really explain the effects of social trust, institutional trust, and other predictors on small acts of kindness.

Does trust have a positive effect on charitable behaviour? According to our results and how they support many of our hypotheses, trust does indeed influence charitable behaviour. Institutional trust has a positive effect on how much people donate and volunteer. Social trust has a positive effect on how much people volunteer and perform small acts of kindness. In our replication of previous research (mainly: Bekkers, 2003; Taniguchi & Marshall, 2014) we have found proof for the effects of trust on charitable behaviour, while adding a form of charitable behaviour that has not been researched before as a stand-alone concept, which is the concept *small acts of kindness*. For future research on this concept, we would recommend for the measurement that respondents give an estimation of how many times they performed small acts of kindness in total and, if possible, that respondents give these estimations for each different kind of small acts. The interpretation of how many different kinds of small acts someone has performed, like it is interpreted in our research, is not that great for interpreting small acts of kindness as its own concept. We have discussed what the effects are and also possible

explanations for these effects. Our research gives an overview on the current state of research on the effects of trust on charitable behaviour. Future research should focus on exploring and testing the proposed mechanisms. This was already suggested by Taniguchi and Marshall (2014), but we were unable include this in our research. Still, with our research we managed to provide more proof for the relatively unexplored predictor institutional trust and also for the interaction effect of institutional trust and knowledge about accreditation seals. Our research provides more information about the effects of the more well-known predictors and provides charitable organizations with the knowledge that people who trust organizations will donate significantly more money when they know about accreditation seals. We recommend charitable organizations to display and explain these seals to the public, if possible. Also important for charitable organizations is to keep in mind that trust is very important if you want people to donate or volunteer to your cause, so we recommend being trustworthy and transparent to the public. As a final statement, we hope that future research will be able to properly test the mechanisms of both social trust and institutional trust on the different forms of charitable behaviour.

Notes

[1]The Giving in the Netherlands Panel Survey was conducted by TNS Nipo, a large Dutch research bureau ("Geven In Nederland", n.d.). The response of this survey is not known, but the response of surveys conducted by TNS Nipo is approximately 70% on average ("Panel: relevante kennis over uw doelgroep en concurrenten", n.d.).

[2]These numbers are based on the percentages used by official Dutch institutions, such as Statistics Netherlands (Van Den Brakel and Ament, 2010; De Vries, 2005). The lower income group exists of the lower 40% of the sample, the middle income group exists of the following 40% of the sample and the higher income group exists of the top 20% of the sample.

Acknowledgements

This research uses data from the Giving in the Netherlands Panel Survey (GINPS) collected by the Center for Philanthropic Studies at VU University Amsterdam. GINPS is largely supported by a grant from the Netherlands Ministry of Justice. We would like to thank René Bekkers and Dave Verkaik of the VU University Amsterdam for providing us with the dataset. We would also like to thank our project supervisor Vincenz Frey for his guidance and patience during the writing process of this project.

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Appendix

```
* Encoding: UTF-8.
*Sander Valkenburg & Wybe Janssen

GET  FILE='C:\Users\Sander\Desktop\Scriptie\20160317_Valkenburg_Janssen.sav'.
DATASET NAME GIN2014 WINDOW=FRONT.

*-------------------------------------------------------------------------------
---------------------------------------------------------------------------------
----------------------------------.
*Trust.
*-------------------------------------------------------------------------------
---------------------------------------------------------------------------------
----------------------------------.

*General Social Trust.
FREQUENCIES V62_1 .
*V62_1 = (x5. gegeneraliseerd vertrouwen) In het algemeen zijn de meeste
mensen wel te vertrouwen.
COMPUTE trust_gs1 = V62_1 .
FREQUENCIES trust_gs1 .

FREQUENCIES V62_2 .
*V62_2 = (x5. gegeneraliseerd vertrouwen) Je kunt niet voorzichtig genoeg zijn
in de omgang met andere mensen.
RECODE V62_2 (5=1) (4=2) (3=3) (2=4) (1=5) (ELSE=COPY) INTO trust_gs2.
VALUE LABELS trust_gs2 5 'helemaal mee oneens' 4 'mee oneens' 3 'noch mee
oneens noch mee eens' 2 'mee eens' 1 'helemaal mee eens'.
FREQUENCIES trust_gs2.

*Computing social trust scale.
COMPUTE trust_gs_scale=mean(trust_gs1, trust_gs2).
FREQUENCIES trust_gs_scale .

*Institutional trust.
FREQUENCIES V360 .
*V360 = Hoeveel vertrouwen heeft u in de goede doelen in Nederland? "1
Helemaal geen", "2 Weinig", "3 Matig", "4 Redelijk veel", "5 Erg veel".
COMPUTE trust_char = V360 .
FREQUENCIES trust_char .
```

```
FREQUENCIES V370 .
*V370 = Hoeveel vertrouwen heeft u in de kerken in Nederland? "1 Helemaal geen", "2 Weinig", "3 Matig", "4 Redelijk veel", "5 Erg veel".
COMPUTE trust_chur = V370 .
FREQUENCIES trust_chur .

FREQUENCIES V6006 .
*V6006 Hoeveel vertrouwen heeft u in de overheid in Nederland? "1 Helemaal geen", "2 Weinig", "3 Matig", "4 Redelijk veel", "5 Erg veel".
COMPUTE trust_gov = V6006 .
FREQUENCIES trust_gov .

FREQUENCIES V380_1.
*C12 Wat is uw mening over de volgende stellingen? Veel goede doelen leveren slecht werk.
RECODE V380_1 (5=1) (4=2) (3=3) (2=4) (1=5) INTO char_bad.
FREQUENCIES char_bad.

FREQUENCIES V380_2.
*C12 Wat is uw mening over de volgende stellingen? Geld geven aan ontwikkelingshulp heeft geen zin.
RECODE V380_2 (5=1) (4=2) (3=3) (2=4) (1=5) INTO char_mon.
FREQUENCIES char_mon.

FREQUENCIES V380_3.
*C12 Wat is uw mening over de volgende stellingen? Goede doelen leveren een effectieve bijdrage aan de oplossing van
problemen in de wereld.
COMPUTE char_sol = V380_3.
FREQUENCIES char_sol.

FREQUENCIES V380_4.
RECODE V380_4 (5=1) (4=2) (3=3) (2=4) (1=5) INTO char_eff.
FREQUENCIES char_eff.

*Computing the institutional trust scale.
COMPUTE trust_in_scale=MEAN(trust_char, trust_chur, trust_gov, char_bad, char_mon, char_sol, char_eff).
FREQUENCIES trust_in_scale.

*Knowlegde on accreditation seals of charitable institutions.
```

```
FREQUENCIES V3100 .
*6_1 Kent u het CBF-Keur?.
RECODE V3100 (2=1) (1=0) INTO trust_k1.
VALUE LABELS trust_k1 1 'Yes'  0 'No'.
FREQUENCIES trust_k1 .

FREQUENCIES V6005 .
* C6_2 Kent u de ANBI status?.

RECODE V6005 (2=1) (1=0) INTO trust_k2.
VALUE LABELS trust_k2 1 'Yes' 0 'No'.
FREQUENCIES trust_k2 .

*Knowlegde based scales.
FREQUENCIES trust_k1 trust_k2.

COUNT know_temp=trust_k1 trust_k2 (1).
VARIABLE LABELS  know_temp  'Knowledge on charitable institutions'.
FREQUENCIES know_temp.
RECODE know_temp (1=1) (2=1) (ELSE=COPY) into know .
FREQUENCIES know.

*-------------------------------------------------------------------------------
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----------------------------------.
*Charitable behaviour.
*-------------------------------------------------------------------------------
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----------------------------------.

*Donating money.
FREQUENCIES V171_1 V171_2 V171_3 V171_4 V171_5 V171_6 V171_7 V171_8 V171_9
V171_10 V171_11.
FREQUENCIES V173_1 V173_2 V173_3 V173_4 V173_5 V173_6 V173_7 V173_8 V173_9
V173_10 V173_11.
MISSING VALUES V173_1 V173_2 V173_3 V173_4 V173_5 V173_6 V173_7 V173_8 V173_9
V173_10 V173_11 (999999).

*A2b Wat is dan het totaalbedrag dat <uw huishouden> in 2011 aan Kerk en
levensovertuiging ... heeft gegeven? (999999 = niet weet)
```

```
*These items are the total amount of money donated per charitable organization.
*We create new variables per item so people who donate no money are included.

COMPUTE donate_chu = V173_1.
IF (V171_1 = 1) donate_chu = V173_1.
IF (V171_1 = 2) donate_chu = 0.
FREQUENCIES donate_chu.

COMPUTE donate_hlth = V173_2.
IF (V171_2 = 1) donate_hlth = V173_2.
IF (V171_2 = 2) donate_hlth = 0.
FREQUENCIES donate_hlth.

COMPUTE donate_hum = V173_3.
IF (V171_3 = 1) donate_hum = V173_3.
IF (V171_3 = 2) donate_hum = 0.
FREQUENCIES donate_hum.

COMPUTE donate_mil = V173_4.
IF (V171_4 = 1) donate_mil = V173_4.
IF (V171_4 = 2) donate_mil = 0.
FREQUENCIES donate_mil.

COMPUTE donate_nat = V173_5.
IF (V171_5 = 1) donate_nat = V173_5.
IF (V171_5 = 2) donate_nat = 0.
FREQUENCIES donate_nat.

COMPUTE donate_ani = V173_6.
IF (V171_6 = 1) donate_ani = V173_6.
IF (V171_6 = 2) donate_ani = 0.
FREQUENCIES donate_ani.

COMPUTE donate_res = V173_7.
IF (V171_7 = 1) donate_res = V173_7.
IF (V171_7 = 2) donate_res = 0.
FREQUENCIES donate_res.

COMPUTE donate_cul = V173_8.
IF (V171_8 = 1) donate_cul = V173_8.
```

```
IF (V171_8 = 2) donate_cul = 0.
FREQUENCIES donate_cul.

COMPUTE donate_spo = V173_9.
IF (V171_9 = 1) donate_spo = V173_9.
IF (V171_9 = 2) donate_spo = 0.
FREQUENCIES donate_spo.

COMPUTE donate_soc = V173_10.
IF (V171_10 = 1) donate_soc = V173_10.
IF (V171_10 = 2) donate_soc = 0.
FREQUENCIES donate_soc.

COMPUTE donate_misc = V173_11.
IF (V171_11 = 1) donate_misc = V173_11.
IF (V171_11 = 2) donate_misc = 0.
FREQUENCIES donate_misc.

FREQUENCIES donate_chu donate_hlth donate_hum donate_mil donate_nat donate_ani donate_res donate_cul donate_spo donate_soc donate_misc .

*A2b Wat is dan het totaalbedrag dat <uw huishouden> in 2011 aan Kerk en levensovertuiging ... heeft gegeven? (999999 = niet weet).
COMPUTE donate_mon= SUM(donate_chu, donate_hlth, donate_hum, donate_mil, donate_nat, donate_ani, donate_res, donate_cul, donate_spo, donate_soc, donate_misc).
FREQUENCIES donate_mon.
DESCRIPTIVES donate_mon .
*We add all the donations per charitable organization together so we get a total amound of money spend on charities during the previous 12 months.

*Volunteering.
FREQUENCIES V8119_1.
*D11 Hoeveel uren besteedde u het afgelopen jaar normaal gesproken per maand aan onbetaald werk? (999=niet weet).
MISSING VALUES V8119_1 (999) .
COMPUTE volun_f = V8119_1.
FREQUENCIES volun_f .

FREQUENCIES V411_19 .
```

```
*D1: Bent u in de afgelopen 12 maanden (mei 2011-mei 2012) als vrijwilliger
werkzaam geweest bij ....: Geen enkele organisatie.
COMPUTE volun_h = volun_f.
IF (V411_19 = 0) volun_h = volun_f.
IF (V411_19 = 1) volun_h = 0.
FREQUENCIES volun_h.
*Two variables are combined so we get a single variable containing the amount
of hours the respondents do volunteering per month,
including the people who do not engage in volunteering at all, thus counting
0.

*Small charitable actions.
FREQUENCIES
V8010_1
V8010_2
V8010_3
V8010_4
V8010_5
V8010_6
V8010_7
V8010_8.

*B9 Hoe vaak heeft u in de afgelopen 12 maanden:
char1: Wisselgeld terug gegeven dat u te veel had gekregen?
char2: Een onbekende voor laten gaan in een rij?
char3: Uw zitplaats in de bus of een andere openbare ruimte afgestaan aan een
onbekende
die moest staan?
char4: Van iemand die u niet kende spullen gedragen, zoals boodschappen of een
koffer?
char5: Voedsel of geld gegeven aan een dakloze?
char6: Voor de planten, post of huisdieren gezorgd van iemand die op vakantie
was?
char7: Spullen uitgeleend aan iemand die u niet zo goed kent?
char8: Een vragenlijst ingevuld voor een wetenschappelijk onderzoek waar u
geen geld voor kreeg?.

*Reversing the values of the response categories so that a high score means
more often enaging in these actions.
RECODE V8010_1 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char1.
RECODE V8010_2 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char2.
```

```
RECODE V8010_3 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char3.
RECODE V8010_4 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char4.
RECODE V8010_5 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char5.
RECODE V8010_6 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char6.
RECODE V8010_7 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char7.
RECODE V8010_8 (1=5) (2=4) (3=3) (4=2) (5=1) (6=0) (7=SYSMIS) INTO char8.

FREQUENCIES char1 char2 char3 char4 char5 char6 char7 char8.

*Standardizing variables since one variable has a highest value of 4 while
the other variables have highest value of 5.
DESCRIPTIVES  VARIABLES = char1 char2 char3 char4 char5 char6 char7 char8
 /SAVE.
FREQUENCIES Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar6 Zchar7 Zchar8.

*Computing a scale for the small action.
COMPUTE  char_scale=MEAN(Zchar1,  Zchar2,  Zchar3,  Zchar4,  Zchar5,  Zchar6,
Zchar7, Zchar8).
FREQUENCIES char_scale .

*-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
----------------------------------.
*Interaction Variables.
*-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
----------------------------------.

*To  create  our  interaction  variable  we  create  a  new  variable  through
multiplying institutional trust and knowledge on accreditation seals.
FREQUENCIES trust_in_scale know.
COMPUTE trustin_know= trust_in_scale * know.
FREQUENCIES trustin_know.

*-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
----------------------------------.
*Control Variables.
*-----------------------------------------------------------------------------
-----------------------------------------------------------------------------
----------------------------------.
```

```
*Sex.
*We recode this so the value 1 means women and 0 men.
FREQUENCIES SEX .
RECODE SEX (2=1) (1=0) (ELSE=COPY) INTO women.
VALUE LABELS women 1 'Women' 0 'Man'.
FREQUENCIES women.

*Age.
FREQUENCIES LFT .

*Education (highest obtained).
FREQUENCIES V6169.
*Code into "hoog opgeleid", "middel hoog opgeleid" en "laag opgeleid".
RECODE V6169 (1 2 3 4 5 =1) (ELSE =0) INTO educ_low.
RECODE V6169 (6 7 =1) (ELSE =0) INTO educ_mid.
RECODE V6169 (8 9 10 =1) (ELSE =0) INTO educ_hig.
*Indexed according to CBS-categorization which corresponds
with the ISCED (International Standard Classification of Education).

*Marriage.
FREQUENCIES V80 .
*Dummy variables for different marriage categories.
*In line with research from Taniguchi and Marshal (2014) en Bekkers (2003).

*Divorced/widowed.
RECODE V80 (5 6=1) (1 2 3 4=0) (ELSE=COPY) INTO mar_div.
VALUE LABELS mar_div 1 'Divorced/widowed' 0 'Not Divorced/widowed'.
FREQUENCIES mar_div.
*Never married.
RECODE V80 (1 2 3=1) (4 5 6=0) (ELSE=COPY) INTO mar_nev.
VALUE LABELS mar_nev 1 'Never married' 0 'Not Never married'.
FREQUENCIES mar_nev.
*Married.
RECODE V80 (4=1) (1 2 3 5 6=0) (ELSE=COPY) INTO mar_mar.
VALUE LABELS mar_mar 1 'Married' 0 'Not Married'.
FREQUENCIES mar_mar.

*Kinderen.
FREQUENCIES V81.
*Y2 Wonen er kinderen in uw huishouden?.
```

```
RECODE V81 (1=0) (2=1) INTO kid_0.
FREQUENCIES kid_0.

*We create dummy variables per age category for the children variables.
*These dummies were created using seperate items from the questionnaire,
taking into account the respondents who do not have children.

FREQUENCIES V82_1.
*Y3 In welke leeftijden? aantal: 0-3 jaar:.
RECODE V82_1 (0=0) (1 THRU HIGHEST=1) (ELSE=SYSMIS) INTO kid_3_temp.
FREQUENCIES kid_3_temp.

COMPUTE kid_3 = kid_3_temp.
IF (kid_0 = 1) kid_3 = kid_3_temp.
IF (kid_0 = 0) kid_3 = 0.
FREQUENCIES kid_3.

FREQUENCIES V82_2 .
*Y3 In welke leeftijden? aantal: 4-11 jaar: .
RECODE V82_2 (0=0) (1 THRU HIGHEST=1) (ELSE=SYSMIS) INTO kid_11_temp .
FREQUENCIES kid_11_temp.

COMPUTE kid_11 = kid_11_temp.
IF (kid_0 = 1) kid_11 = kid_11_temp.
IF (kid_0 = 0) kid_11 = 0.
FREQUENCIES kid_11.

FREQUENCIES V82_3 .
*Y3 In welke leeftijden? aantal: 12-17 jaar: .
RECODE V82_3 (0=0) (1 THRU HIGHEST=1) (ELSE=SYSMIS) INTO kid_17_temp .
FREQUENCIES kid_17_temp.

COMPUTE kid_17 = kid_17_temp.
IF (kid_0 = 1) kid_17 = kid_17_temp.
IF (kid_0 = 0) kid_17 = 0.
FREQUENCIES kid_17.

FREQUENCIES V82_4 .
*Y3 In welke leeftijden? aantal: 18 jaar en ouder: .
RECODE V82_4 (0=0) (1 THRU HIGHEST=1) (ELSE=SYSMIS) INTO kid_18_temp .
FREQUENCIES kid_18_temp.
```

```
COMPUTE kid_18 = kid_18_temp.
IF (kid_0 = 1) kid_18 = kid_18_temp.
IF (kid_0 = 0) kid_18 = 0.
FREQUENCIES kid_18.

FREQUENCIES kid_0 kid_3 kid_11 kid_17 kid_18.

*Merge kid_3 and kid_11, to reduce the amount of dummy categories.
*Combining the first two categories:.
COUNT kid_0to11_temp=kid_3 kid_11(1).
VARIABLE LABELS  kid_0to11_temp 'Kids under 12'.
FREQUENCIES kid_0to11_temp .
RECODE kid_0to11_temp (0=0) (1=1) (2=1) (ELSE=COPY) into kid_0to11 .
FREQUENCIES kid_0to11 .

*Employment.
FREQUENCIES P_WERKZAAMNU.
*Op dit moment werkzaam?.
RECODE P_WERKZAAMNU (1=1) (2=0) (3=SYSMIS) INTO empl_yn.
*Recoded so being employed = 1 and unemployed = 0.

FREQUENCIES WERKUREN.
*Aantal uren werkzaam.
COMPUTE empl_cat = WERKUREN.
IF (empl_yn = 0) empl_cat = WERKUREN.
IF (empl_yn = 1) empl_cat = 0.
FREQUENCIES empl_cat.

*Creating dummy categories for, no employment, part-time employment, full-time
employment.
RECODE empl_cat (1=1) (2 3 4 5 6 7 8 9 10 = 0) (11=SYSMIS) INTO empl_no.
RECODE empl_cat (2 3 4 5 6 7=1) (1 8 9 10 = 0) (11=SYSMIS) INTO empl_part.
RECODE empl_cat (8 9 10=1) (1 2 3 4 5 6 7 = 0) (11=SYSMIS) INTO empl_full.
FREQUENCIES empl_no empl_part empl_full .
*dummy categories based on Bekkers (2003):.

*Income of household.
FREQUENCIES INK.
MISSING VALUES INK (28 29).
*Defining extra missing values, for 'I don't know' and 'I don't want to say'.
```

```
*Low, middle and high inkomen
*(1 THRU 12) = low income (35.1%) (0 to 26.200)
(13 THRU 15) = middle income (53.2%) (26.200 to 41.300)
(16 THRU 27) = high income (18.1%) (41.300 and higher).
*Based on the above, we define dummy variables for different income
categories:.
RECODE INK (1 THRU 12 = 1) (13 THRU 27 = 0) (28 29=SYSMIS) INTO inc_low.
RECODE INK (13 THRU 15 = 1) (1 THRU 12 = 0) (16 THRU 27 = 0) (28 29=SYSMIS)
INTO inc_mid.
RECODE INK (16 THRU 27 = 1) (1 THRU 15 = 0) (28 29=SYSMIS) INTO inc_hig.
FREQUENCIES inc_low inc_mid inc_hig.

*Religion.
FREQUENCIES V61321.
RECODE V61321 (1=1) (2=0) (ELSE=COPY) INTO religion.
VALUE LABELS religion 1 'religious' 0 'not religious' .
FREQUENCIES religion.
*Creating dummy variable religion, either being relious or not.

*-------------------------------------------------------------------------------
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----------------------------------.
*Listwise deletion.
*-------------------------------------------------------------------------------
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----------------------------------.

*Counting respondents who have missing values on any of the variables we use
in our models and creating a new variable.
COMPUTE missval =nmiss(donate_mon, volun_h, char_scale, trust_gs_scale,
trust_in_scale, know, women,
LFT, mar_div, mar_nev, mar_mar, kid_0, kid_0to11, kid_11, kid_17, kid_18,
educ_low,
educ_mid, educ_hig, empl_no, empl_part, empl_full, inc_low, inc_mid, inc_hig,
religion).
FREQUENCIES missval.
*Excluding respondents who have missings on any of the variables.
RECODE missval (0=1) (1 THRU HIGHEST=0) INTO nomissval.
FREQUENCIES nomissval.
```

```
*Selecting respondents who have no missing values on any of the used
variables, so N is equal troughout.
SELECT IF nomissval=1.

*-------------------------------------------------------------------------------
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----------------------------------.
*Reliability analysis.
*-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
----------------------------------.

*General Social Trust reliability.
*trust_gs1 trust_gs2.
RELIABILITY
  /VARIABLES=trust_gs1 trust_gs2
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL MEANS VARIANCE COV CORR.
*Cronbach's Alpha ,603
*N of items 2

*Institutional Trust items.
*trust_char trust_chur trust_gov char_bad char_mon char_sol char_eff.
RELIABILITY
  /VARIABLES=trust_char  trust_chur  trust_gov  char_bad  char_mon  char_sol
char_eff
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL MEANS VARIANCE COV CORR.
*Cronbach's Alpha ,820
*N of items 7

*Knowledge items.
RELIABILITY
  /VARIABLES=trust_k1 trust_k2
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
```

```
  /SUMMARY=TOTAL MEANS VARIANCE COV CORR.
*Cronbach's Alpha ,495
*N of items 2

*Factor analyses on trust items.
FACTOR
  /VARIABLES  trust_gs1  trust_gs2  trust_char  trust_chur  trust_gov  char_bad
char_mon char_sol char_eff
  /MISSING LISTWISE
  /ANALYSIS  trust_gs1  trust_gs2  trust_char  trust_chur  trust_gov  char_bad
char_mon char_sol char_eff
  /PRINT UNIVARIATE INITIAL EXTRACTION ROTATION
  /PLOT EIGEN
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION ML
  /CRITERIA ITERATE(25)
  /ROTATION PROMAX(4).
* 2 factors with eigenvalue above 1
* factor 1 corresponds with the theoretical concept of institutional trust.
* factor 2 corresponds with the theoretical cocept of social trust

*Small acts.
RELIABILITY
  /VARIABLES=Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar6 Zchar7 Zchar8
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL MEANS VARIANCE COV CORR.
*Cronbachs Alpha (standardized) .536 (N=8), no higher Cronbachs Alpha can be
attained should items be deleted.

FACTOR
  /VARIABLES Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar6 Zchar7 Zchar8
  /MISSING LISTWISE
  /ANALYSIS Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar6 Zchar7 Zchar8
  /PRINT UNIVARIATE INITIAL EXTRACTION ROTATION
  /PLOT EIGEN
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION ML
  /CRITERIA ITERATE(25)
  /ROTATION PROMAX(4).
```

```
*Results in 3 factors with an eigenvalue higher than 1.
*Removing char6 and char8 on basis of factor analysis

FACTOR
  /VARIABLES Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar7
  /MISSING LISTWISE
  /ANALYSIS Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar7
  /PRINT UNIVARIATE INITIAL EXTRACTION ROTATION
  /PLOT EIGEN
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION ML
  /CRITERIA ITERATE(25)
  /ROTATION PROMAX(4).
*Shows 1 factor with an eigenvalue higher than 1.

RELIABILITY
  /VARIABLES=Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar7
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL MEANS VARIANCE COV CORR.
*Cronbachs Alpha .528 (N=6), no higher Cronbachs Alpha can be attained should
items be deleted.

*Trying a Split half for Small acts of kindness items.
RELIABILITY
  /VARIABLES=Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar6 Zchar7 Zchar8
  /SCALE('ALL VARIABLES') ALL
  /MODEL=SPLIT.

RELIABILITY
  /VARIABLES=Zchar1 Zchar2 Zchar3 Zchar4 Zchar5 Zchar7
  /SCALE('ALL VARIABLES') ALL
  /MODEL=SPLIT.
*Split half method of testing reliability shows similar reliability as the
Cronbach's Alpha test.

*-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
----------------------------------.
*Descriptives.
```

```
*-------------------------------------------------------------------------------
---------------------------------------------------------------------------------
----------------------------------.
DESCRIPTIVES   VARIABLES   donate_mon   volun_h   char_scale   trust_gs_scale
trust_in_scale know women LFT
mar_div  mar_nev  mar_mar  kid_0  kid_0to11  kid_17  kid_18  educ_low  educ_mid
educ_hig
empl_no empl_part empl_full inc_low inc_mid inc_hig religion.
FREQUENCIES donate_mon volun_h trust_gs_scale char_scale trust_in_scale women
LFT
mar_div  mar_nev  mar_mar  kid_0  kid_0to11  kid_17  kid_18  educ_low  educ_mid
educ_hig
empl_no empl_part empl_full inc_low inc_mid inc_hig religion.
EXAMINE VARIABLES=donate_mon volun_h char_scale trust_gs_scale trust_in_scale
women LFT INK
  /STATISTICS ALL
  /CINTERVAL 95
  /MISSING LISTWISE
  /NOTOTAL.

*-------------------------------------------------------------------------------
---------------------------------------------------------------------------------
----------------------------------.
*Analysis.
*-------------------------------------------------------------------------------
---------------------------------------------------------------------------------
----------------------------------.

*Model 1 (Amount of Money Donated).
SPSSINC TOBIT REGR DEPENDENT = donate_mon
  ENTER = women LFT mar_div mar_mar kid_0to11 kid_17 kid_18 educ_mid educ_hig
empl_part empl_full inc_mid inc_hig religion
  LOWERBOUND=0 DISTRIBUTION=LOGISTIC
  /OPTIONS MISSING=LISTWISE
  /SAVE.

*Model 2 (Amount of Money Donated).
SPSSINC TOBIT REGR DEPENDENT = donate_mon
  ENTER = trust_gs_scale trust_in_scale women LFT mar_div mar_mar kid_0to11
kid_17 kid_18 educ_mid educ_hig  empl_part empl_full inc_mid inc_hig religion
  LOWERBOUND=0 DISTRIBUTION=LOGISTIC
```

```
  /OPTIONS MISSING=LISTWISE
  /SAVE.

*Model 3 (Amount of Money Donated).
SPSSINC TOBIT REGR DEPENDENT = donate_mon
  ENTER = trust_gs_scale trust_in_scale know trustin_know women LFT mar_div
mar_mar kid_0to11 kid_17 kid_18
  educ_mid educ_hig  empl_part empl_full inc_mid inc_hig religion
  LOWERBOUND=0 DISTRIBUTION=LOGISTIC
  /OPTIONS MISSING=LISTWISE
  /SAVE.

*Checking interaction plots.
GRAPH
  /LINE(MULTIPLE)=MEAN(donate_mon) BY trust_in_scale BY know.

TEMPORARY.
SELECT IF NOT (donate_mon=0).
GRAPH
  /SCATTERPLOT(BIVAR)=trust_in_scale WITH donate_mon BY know
  /MISSING=LISTWISE.
*We realize this does not provide the same coefficients as the tobit
regression,
it gave us an idea of the interaction effect nonetheless.

*Model 1 (Volunteering).
SPSSINC TOBIT REGR DEPENDENT = volun_h
  ENTER = women LFT mar_div mar_mar kid_0to11 kid_17 kid_18
  educ_mid educ_hig  empl_part empl_full inc_mid inc_hig religion
  LOWERBOUND=0 DISTRIBUTION=LOGISTIC
  /OPTIONS MISSING=LISTWISE
  /SAVE.

*Model 2 (Volunteering).
SPSSINC TOBIT REGR DEPENDENT = volun_h
  ENTER = trust_gs_scale trust_in_scale women LFT mar_div mar_mar kid_0to11
kid_17 kid_18
  educ_mid educ_hig  empl_part empl_full inc_mid inc_hig religion
  LOWERBOUND=0 DISTRIBUTION=LOGISTIC
  /OPTIONS MISSING=LISTWISE
  /SAVE.
```

```
*Model 1 & model 2  (Small actions).
REGRESSION
  /DESCRIPTIVES MEAN STDDEV CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT char_scale
  /METHOD=ENTER women LFT mar_div mar_mar kid_0to11 kid_17 kid_18
  educ_mid educ_hig  empl_part empl_full inc_mid inc_hig religion
  /METHOD=ENTER  trust_gs_scale  trust_in_scale  women  LFT  mar_div  mar_mar
kid_0to11 kid_17 kid_18
  educ_mid educ_hig  empl_part empl_full inc_mid inc_hig religion.

*-------------------------------------------------------------------------------
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----------------------------------.
```