'To give or not to give, that's the question'

How methodology is destiny in Dutch giving data

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Abstract (115 words)

In research on giving, 'methodology is destiny'. The volume of donations estimated from sample surveys strongly depends on the length of the questionnaire used to measure giving. We show that a short questionnaire on giving not only underestimates the volume of giving, but also biases the effects of predictors of giving by comparing two giving surveys from the Netherlands. Specifically, we find that a Very Short module leads to an underestimation of the effects of predictors of giving on the amount donated, but an overestimation of their effects on the probability of charitable giving. Short survey modules may lead researchers to falsely reject or accept hypotheses on determinants of giving due to underreporting of donations.

<u>Introduction</u>

There is a lively debate in research on giving and volunteering on how to ask respondents about their philanthropic behavior. Different survey methodologies to measure giving and volunteering lead respondents to report dramatically different levels of philanthropic and civic engagement (O'Neill, 2001; Rooney, Steinberg, & Schervish, 2001; Steinberg, Rooney, & Chin, 2002). More extensive questionnaire modules with a higher number of survey prompts uncover a greater incidence of giving and volunteering, as well as higher amounts of money donated and a higher number of hours volunteered by respondents. A problem with these method effects is that it becomes very difficult to make statements about the volume (that is, for example the mean or median) of philanthropic donations and volunteering activity in a specific population.

There is, however, another methodological issue in survey methodology of philanthropic behaviour that may be even more pressing. Economists and social scientists are not so much interested in the absolute magnitude of giving, but rather in the effects of economic and social conditions on giving. Rooney, Steinberg, & Schervish (2001) assume that 'the various survey modules do not alter the coefficients of other variables' (i.e., predictors of giving and volunteering). However, it is unlikely that this assumption is valid. Actually, Rooney, Steinberg, & Schervish (2001), and Steinberg, Rooney, & Chin (2002) question the validity of this assumption themselves when they call for further research on 'what kinds of giving people tend to remember and forget without being prompted' and on 'regional, racial, social class or other differences in how respondents react to [different types of] surveys'. Recently, Rooney et al. (2005) investigated whether the effects of gender and race differ systematically between questionnaires with more or less extensive modules on giving, and found that males and single minorities report higher donations in more extensive modules.

This paper extends this line of research, addressing the issue how different questionnaires to measure charitable giving lead to different parameter estimates for effects of predictor variables. Our objective is to answer the question: "*How are the effects of key predictors on donating behaviour biased by the length of the questionnaire used to measure giving?*"

Our main argument is that shorter survey modules lead to underreporting of smaller donations. Because small donations are made by respondents with different characteristics than large donations, different survey modules lead to different parameter estimates for effects of predictor variables. This implies that results from studies on giving using concise questionnaires need to be interpreted with care. In order to develop this argument more fully, we first establish a list of key predictors of philanthropic behaviour based on a survey of recent studies on charitable donations. Next, we discuss how the effects of these predictors may be biased in surveys using concise questionnaires on giving. Then we discuss our data and present our results. Finally, we discuss implications for future research.

Key predictors of charitable giving

In recent years, a considerable amount of empirical research on charitable giving has been published. Below, we summarize the effects of predictors in empirical studies of donating behaviour on the tendency to make a charitable donation and the amount donated.

Income – Most studies show that income level has an effect on the probability of making a donation. Households with a higher income are more likely to donate money to charitable causes (Hodgkinson, & Weitzman, 1996; Regnerus, Smith, & Sikkink, 1998; Andreoni, 2001; Meuleman, & Beckers, 2003). Only Smith, Kehoe, & Kremer (1995) find no relationship between household income and the incidence of giving. There is no doubt about the positive effect of income on the amount of money donated. An average higher household

income leads to higher donations (on the US, see -among others- Smith, Kehoe, & Cremer, 1995; Regnerus, Smith, & Sikkink, 1998; Rooney, Steinberg, & Schervish, 2001; Auten, Sieg, & Clotfelter, 2002, other countries: Damen, et al., 2000 on Belgium; Meuleman & Beckers, 2003 on Germany and Bekkers, 2003a, 2003b, 2004a, 2004b and Wiepking 2004, both on the Netherlands). [1]

Age - A second predictor variable that is often included in research on charitable behaviour is age. The general picture emerging from different studies is that older donors are more likely to donate and also donate more money to philanthropic causes than younger donors (Bekkers, 2003a, 2003b, 2004a, 2004b; Hodgkinson, & Weitzman, 1996; Midlarsky, & Hannah, 1989; Putnam, 2000; Regnerus, Smith, & Sikkink, 1998; Schuyt, 2003; Wright, 2002. Rooney, Steinberg, & Schervish (2001) however, find no significant effect of age, but their analysis included a quadratic age term to investigate non-linear age effects.

Education - Next to income and age, the level of education is a third predictor variable that is often studied. The effect of education on whether or not people give and on the amount of money donated is positive in all but one of the studies we considered (Andreoni, 2001; Brown, 2001; Bekkers, 2003a, 2003b, 2004a, 2004b; Jencks, 1987; Hodgkinson, & Weitzman, 1996; Rooney, Steinberg, & Schervish, 2001; Schuyt, 2003). Regnerus, Smith, & Sikkink (1998), however, did not find an effect of education on making a donation, but their analysis was limited to donations towards 'the poor'.

Religious involvement - Furthermore, religion and church attendance are important predictor variables in research on charitable behaviour. Church attendance increases the amount donated, not only to religious organizations (Jackson et al., 1995; Park & Smith, 2000), but also to non-religious organizations – at least in the Netherlands (Bekkers, 2003b; Schuyt, 2003). In the US, a recent experimental study among students did not reveal an effect of religion on donations to non-religious charities (Eckel & Grossman, 2004). Meuleman &

Beckers (2003) find that the frequency of church attendance does not increase the incidence of donations in Germany, whereas Regnerus, Smith, & Sikkink (1998) and Schuyt (2003) do find a positive relationship between church attendance and making charitable donations.

There are also differences in the amount donated between members of different congregations (Bekkers, 2003b; Jencks, 1987; Hodgkinson & Weitzman, 1996; Reed & Selbee, 2001; Regnerus, Smith, & Sikkink, 1998). In general, Protestants, especially those belonging to smaller denominations, tend to donate larger amounts than Catholics.

Gender is the fifth predictor variable that is often used in research on donating behaviour. Because most studies of donations examine household giving, gender effects in such analyses are to be interpreted as effects of decision making patterns (Andreoni, Brown, & Rischall, 2002) or reporting differences by males and females (ignoring gender disparities among one-person households). Jencks (1987), Rooney, Steinberg, & Schervish (2001), and Schuyt (2003) report no significant differences between men and women in the tendency to make a donation and in the amount they donate to charitable causes. However, other researchers (Hodgkinson & Weitzman, 1996; Regnerus, Smith, & Sikkink, 1998) report more and higher donations by female donors, while Wright (2002) reports differences between countries in the effect of gender on donating behaviour: in the Unites States males donate more money, and in the United Kingdom females donate more.

These five variables seem to be the key variables that are most often studied in current day research on philanthropic donations. Other socio-demographic characteristics that are less often studied include:

- household size – showing no effects on both the probability and the level of giving in (Schuyt, 2003; Smith, Kehoe, & Cremer, 1995);

- <u>community size</u> – showing negative effects on the incidence of donations (Bekkers, 2003b, 2004a; Regnerus, Smith, & Sikkink, 1998; Putnam, 2000), but not on the amount donated;

- <u>marital status</u> – showing a positive effect of marriage on making a donation and on the amount donated (Jencks, 1987; Hodgkinson & Weitzman, 1996; Regnerus, Smith, & Sikkink, 1998; Rooney, Steinberg, & Schervish, 2001; Schuyt, 2003);

- <u>home ownership</u> and <u>wealth income</u> – both increasing the level of donations (Auten, Sieg, & Clotfelter, 2002). We have been unable to locate studies on the effect of home ownership and wealth income on the probability of giving.

In addition, we have data available on <u>political ideology</u> (conservative – liberal) and <u>political values</u> ('postmaterialism'). We consider their effects as well, but without a firm base of previous research we do not have strong expectations about these variables. Based on studies of membership of voluntary associations and volunteering, we also expect that citizens with more liberal and postmaterialistic attitudes in politics donate more often and higher amounts (Bekkers, 2005).

<u>Rationale</u>

How likely is it that different methods to measure giving yield different estimates of the effects of predictor variables on giving behaviour? We expect that method effects lead to considerable biases in the effects of characteristics of (non)donors. Hall (2001) discussed a number of measurement issues in research on giving and concluded that more salient events are more likely to be reported accurately. Many charitable gifts are not very salient acts in life. For instance, small donations in response to door-to-door fundraising campaigns or street canvassing are part of everyday routine. Such donations are less likely to reflect a strong

involvement with the cause supported than large donations that are the outcome of careful deliberation. Because small donations are not very salient acts, they are likely to be underreported in concise questionnaires that do not use extensive prompts. However, taken together, these small donations do represent a considerable portion of all charitable contributions. In the Netherlands, door-to-door canvassing is the most common fundraising-method employed by charities. In a randomly chosen period of two weeks in 2001 no less than 44 % of the Dutch population made a donation by means of a door-to-door collection (Schuyt, 2003). We argue that underreporting is indeed more common for some groups of respondents than for others, as Rooney, Steinberg & Schervish (2001) and Rooney, Steinberg & Chin (2002) suspected. As a rule, those who give more will know better what they give because 'to give or not to give' is a more salient issue in their lives. Therefore, short questionnaires will reveal stronger relations of independent variables with the probability of giving. Figure 1 contains a hypothetical example to illustrate this (see left panel). Assume that persons with a lower level of education are more likely to make small (rather than large) donations. When these small donations are more likely to be underreported in short surveys, the difference between persons with low and high levels of education with respect to the likelihood of reporting donations in a short giving questionnaire is large.

<<Insert figure 1 about here>>

The right panel of figure 1 illustrates how short surveys bias estimates of the effects of predictors of giving on the amount donated. While short surveys will lead to an underestimation of the effects of predictors of giving on the probability of charitable giving, we hypothesize that these effects will be underestimated when the amount donated is considered. In short surveys, small donations are more likely to go unreported. In extensive surveys,

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households who made small donations will be included among the households who donated. As a result, the amounts donated reported in a short survey module have a smaller variance than in an extensive survey module. When the variance in amounts donated is smaller, the effects of predictors of giving appear to be smaller than they actually are.

Similar arguments can be made for other variables that are known to be related to the amount of money donated. We expect that the effects of age, income, home ownership, wealth, religious affiliation, church attendance, marital status, political ideology and postmaterialistic values will also be overestimated in surveys using concise questionnaires.

However, the accuracy of reports on giving is not only a function of actual giving, but also of the division of labor within households on financial decisions and of general cognitive competence. Assuming that more salient acts in life are more likely to be reported correctly in surveys, we predict that giving in concise questionnaires will be more accurately reported by those who bear responsibility for donations in the household and by those with higher cognitive ability. Persons who bear responsibility for decisions on donations are more likely to remember correctly what the household donated in the past year. Those persons in the household who are not involved in donation decisions will probably underestimate the amount donated in a short module because they do not have information on all gifts made, and the information they do have concerns less salient events in their lives.

Because women more often make decisions about charitable giving within households than males (Andreoni, Brown & Rischall, 2003; Schuyt & Gouwenberg, 2005), females will report more accurately in short modules. Males, on the other hand, will underestimate the household's donations if not prompted extensively because their information concerns a less salient event in their lives. The higher educated are also more likely to report accurately what they give because they have a better memory. The converse holds for the effect of age. The

elderly will be more likely to underreport their giving behavior in concise questionnaires due to memory problems.

Data

We test the impact of differences in survey methods to measure giving with two national surveys from the Netherlands. The first survey is the Giving in the Netherlands Panel Survey (GINPS, Schuyt, 2003), a national survey among 1,707 randomly sampled individuals and an oversample of 257 Protestant individuals from a pool of 40,000 households (about 70,000 individuals) who regularly participate in poll surveys. The respondents were originally recruited from a random sample of citizens from the Dutch population register by ordinary mail. Data for the present survey were collected in May 2002 with a web-based Computer Assisted Self Interview (CASI), for which participants received an invitation by e-mail. Respondents reported on their giving behavior in the calendar year 2001. Further details on sampling procedure and questionnaire design are reported in Schuyt (2003).

The GINPS contains an extensive 'Method and Area' module on giving. Respondents were first given a list of 25 methods that they may have used to donate money. Respondents indicated whether they donated any money to charities using each of these methods. Next, they were given a list of 9 subsectors in which charities and nonprofits are active, and a category 'other'. For each of these subsectors, respondents indicated whether their household had donated money to charities in those sectors, and if so, how much. (Rooney, Steinberg, & Schervish, 2001) show that a Method+Area module reveals the higher estimates of the incidence of giving and the higher amounts of money donated. A comparison with the Boston Area Diary Study showed that the higher estimates are probably also more accurate.

Presenting the method questionnaire first helps respondents to recall their giving behavior more accurately.

The second dataset that we use is the Family Survey of the Dutch Population, conducted in the year 2000 (De Graaf et al., 2000; see also Bekkers, 2004a; henceforth: FSDP). The FSDP is a general household survey on many topics, similar to the General Social Survey in the US. Multiple person households were oversampled on purpose, and both partners in multiple person households were interviewed. The FSDP contained a 'Very Short' module for charitable giving. The giving module was part of a write-in questionnaire left at the respondents' home after the personal interview. Data collection for the FSDP took part in March-November 2000. Respondents in this survey reported on charitable giving in the preceding 12 months. The Very Short giving module consisted of only two questions: (1) whether households in which respondents resided had donated any money to charities in the past year, and if so, (2) how much.

We expect that the Very Short module will reveal a lower incidence of giving as well as lower amounts of money donated than the Method and Area module. However, differences observed between the giving modules may also be due to other differences between the two surveys. In table 1, we give an overview of the main differences between the surveys.

<<Insert table 1 about here>>

The two surveys do not differ merely in the length of the questionnaire modules on giving, but also in other ways: with respect to the data collection period, interviewing method, and sampling frame. We have good reasons to believe, however, that these differences do not lead to serious problems for our argument that the questionnaire length is the key difference.

It is unlikely that the time lag between the two surveys affects the amount of donations reported and/or the effects of predictor variables on charitable giving. Due to the economic downturn, charitable donations hardly increased (but neither decreased) in the period between the two surveys and the profile of donors reported in two consecutive editions of the 'Giving in the Netherlands' survey (Schuyt, 2001, 2003) remained almost the same. One difference, however, could be the increase of political interest that took place in 2001 and 2002. In that period, a new conservative political party, named after its leader Pim Fortuyn, gained popularity. In addition, political debates became more polarized. This change may become apparent in larger effects of political attitudes in the Method+Area module, which was conducted a few weeks after Pim Fortuyn was assassinated and in the midst of large electoral movements.

The interviewing method is not likely to make a difference either. Reports on charitable giving in the Very Short module were obtained in a write-in questionnaire, while the Method+Area module was included in a Computer Assisted Self Interview. Both types of questionnaires are likely to minimize the danger of socially desirable responses (exaggerated reports on giving) because they are completed without the presence of an interviewer.

Finally, differences in sampling procedures and selectivity of non-response are not likely to affect either the reports on the amount of money donated or the relation with predictor variables. The respondents in the Method+Area module were drawn from a pool of Dutch citizens who regularly participate in (poll) surveys. This pool is maintained to be representative of the Dutch population on key socio-demographic indicators for which actual population values are known (gender, age, region). In contrast, the respondents in the Very Short module were drawn from a two stage stratified sampling frame. The resulting sample was somewhat selective with regard to region (De Graaf et al., 2000). However, selective non-response is not a very large problem for our purposes. Non-representative data with

regard to <u>independent</u> socio-demographic variables may be a problem for accurate population estimates of the volume of giving, but do not affect parameter estimates for effects of independent variables. Selective non-response with regard to the <u>dependent</u> variables would be a more pressing problem. To assess this problem, we used data on blood donation, for which actual population data are known from the registration of Sanquin, the Dutch blood collection agency. Both datasets produce similar numbers of respondents reporting blood donations in the past year: 10.6% of the respondents in the Very Short module indicated that they had given blood, against 11.5% of the respondents in Method+Area module. Both proportions are more than twice the population value, which is 4,0% (Sanquin, 2003). This indicates that charitable giving – which is correlated with blood donation (Bekkers, 2004a) – may be overestimated in the two data sets, but that it is overestimated to the same extent.

Summing up: while the two surveys differ in a number of respects, none of these differences is very likely to have caused differences in the volume of giving, nor in the parameter estimates for predictor variables of giving. Therefore, we feel confident that differences in the incidence and determinants of giving between the two surveys are due to the different modules used to measure charitable giving. A comparison of the Method+Area module and the Very Short module shows <u>how dirty</u> a 'quick and dirty' measurement of giving actually is.[2]

Analytical Strategy

First we present basic estimates from the two giving modules of the incidence of giving and the amount donated. Among donors, we recoded 'Don't know' responses to the questions on the amount donated into the median value, because Brooks (2004) shows that treating 'Don't know' responses as zeros leads to biases in effects of predictors of giving.[3] In the multivariate analyses, we estimate Heckman Two Stage regression models (Heckman,

1979; for an application to charitable giving, see Smith, Kehoe & Cremer, 1995). The Heckman Two Stage regression model analyzes donations in two separate stages. Reports on the amount donated are broken down into two separate variables: whether or not a donation was made (all positive observations are contrasted with zero-observations), and the amount donated (if the household donated). In the first stage, called the 'selection model', the dependent variable is whether or not a household reports having made donations. In the second stage, called the 'amount model', the dependent variable is a latent variable representing the amount people would want to donate, even if they did not make a donation. Thus, the Heckman Two Stage regression analysis yields two sets of results: first, the effects of predictor variables on the likelihood that a household reports donations, and secondly, effects of predictor variables on the (latent) amount donated.

Whether a donation is observed or not is not only a function of predictor variables that are related to the act of giving, but also of reporting bias. Thus, significant effects of predictor variables in the first stage of the analysis can be due to real differences between individuals in donation incidence and to reporting differences. We expect that the Very Short module will reveal a larger number of significant effects of predictor variables in the selection stage, but fewer significant effects in the second stage.

To enable comparisons of effect sizes between the two datasets, we made all independent variables comparable by recoding them into the same categories. We also z-standardized all variables to enable comparisons of effect sizes within the two datasets. The dependent variable, the amount donated, was log-transformed to correct for the non-normal distribution. To control for the oversampling of multiple person-households in the survey with the Very Short module, we included a dummy-variable 'sharing household' for respondents who were members of multiple person-households.

We estimate these regression models two times. First, we run separate regressions on data from both surveys, to see the differences in the parameter estimates for predictor variables of giving and volunteering in the two surveys. Second, we pool the data from the two surveys in one dataset, include a dummy variable 'Method+Area module' (0: no for all observations from the FSDP, where the Very Short module was used; 1: for all observations from the GINPS, where the Method+Area module was used) and test for differences in effects of predictor variables in the two surveys by including interactions with the 'Method+Area module'-dummy variable and the predictor variable of interest.

Results

Table 2 shows the incidence of giving and the amount donated in the Very Short module and Method+Area module.

<<Insert table 2 about here>>

As in previous research (Rooney, Steinberg, & Schervish, 2001, 2004; Rooney, Steinberg, & Chin, 2002), we find that the Method+Area module reveals a higher incidence of donations, as well as a higher amount donated. The Very Short module revealed a lower incidence of giving (77%) than the Method+Area module (97%).[4] The Very Short module also revealed a 60% lower mean donation than the Method+Area module (110 euro vs. 273 euro).

Multivariate results on charitable giving

Table 3 shows results of regression models of amount donated with sample selection, using the Heckman-procedure.

<<Insert table 3 about here>>

First, we discuss the results of the selection stage (whether respondents report gifts at all). In both datasets, donations to charitable causes are less often observed among respondents younger than 30, more often among respondents affiliated with the Rereformed Protestant churches, and among respondents from higher income households.

We find a large number of differences between the two surveys in the analysis of whether respondents report gifts at all. First of all, the Wald-test for independent equations is significant in the analysis of the Very Short module but not in the Method+Area module, indicating that there are significant selection effects in the former but not in the latter module. Together with the results in table 2, this result is in line with our argument that a concise questionnaire leads to selective underreporting of giving. Second, we find that certain groups are more likely to report donations in a Very Short module than in a Method+Area module. Females, Reformed Protestants, frequent church attendees, the higher educated, those with more income from wealth, home owners and those with a left wing political orientation more often report donations in a Very Short module, while they are not more likely to do so in a Method+Area module. Small town residents and postmaterialists are more likely to report donations in the Method+Area module, but not in the Very Short module. These differences are in line with our argument that predictors of giving show stronger effects in the Very Short module with two exceptions. We find no effect of small town residence in the Very Short module, and a more pronounced effect of postmaterialism in the Method+Area module. The stronger effect of postmaterialism in the Method+Area module may be due to the political changes that took place in the Netherlands between 2000 and 2002. We are not sure how to interpret the difference in the effect of town size.

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The results of the second stage (the amount donated) indicate that the level of charitable donations in both surveys increase with middle age (respondents younger than 30 reporting lower gifts), Reformed and Rereformed Protestant denomination, the frequency of church attendance, the level of education, wealth income, home ownership, and postmaterialist value orientation. In the Method+Area module, we also find significantly positive effects of being over 55, Catholic and other religious affiliation, income, and left-wing political self-placement, while we do not find these effects in the Very Short module. These differences are also in line with our expectations. The effects of household size and sharing a household, however, are more pronounced in the Very Short module than in the Method+Area module. We find no effect of female gender and town size on the level of charitable donations with either one of the survey methods.

In table 4, we conduct a formal test of the effect of the Method+Area module, controlling for sampling differences (model 1). We also conduct significance tests on the differences in the effect sizes of predictors of giving between the two modules (model 2). In this analysis, we pooled the data from the two surveys and included a dummy variable for the Method+Area module.

<<Insert table 4 about here>>

The first model shows that the Method+Area module-dummy variable is significant in both stages of the analysis. This supports the conclusion that controlling for sampling differences, the Method+Area module reveals a higher incidence of donations as well as a higher amount donated than the Very Short module.

The results in model 2 show which variables have significantly different effects in the two modules. A significantly positive interaction of a predictor variable with the

Method+Area dummy indicates that the variable has a more positive effect in the Method+Area module than in the Very Short module (negative interactions indicate less positive effects).

In the selection stage (the likelihood of reporting a gift) we find significantly negative interaction effects of gender, level of education, and home ownership, indicating that the Very Short module yields a lower incidence of giving among men, the lower educated and those who do not own a home. These results are in line with our expectations. We find positive interaction effects of Rereformed Protestant affiliation, rural residence and income, indicating that Rereformed Protestants, rural residents, and respondents from higher income households are significantly more likely to report donations in the Method+Area module than in the Very Short module. The effects of the other predictor variables do not differ significantly between the two survey modules.

In the second stage (the amount donated) we find that the interaction effects of age, religious affiliation, and income with the Method+Area module are significantly positive, indicating that those below 30 and over 55 years of age, those who are religiously affiliated and those with a higher income report higher amounts donated in the Method+Area module than in the Very Short module, as expected. A similar tendency (although not significant) is observed for household size. The interaction effects of level of education and postmaterialism with survey module are significantly negative, indicating that differences between the lower and higher educated and differences between respondents with materialistic and postmaterialistic values are more pronounced in the Very Short module. A similar tendency (although not significant) is observed for sharing a household and left-right political self-placement.

Conclusion and discussion

We compared determinants of giving in two national surveys from the Netherlands, using different modules to measure giving. As in previous research (Rooney, Steinberg & Schervish, 2001, 2004; Rooney, Steinberg, & Chin, 2002), we found that lengthier modules reveal a higher incidence of giving, as well as higher amounts of money donated. We extended previous research by examining the effect of a long (Method+Area) rather than a short (Very Short) survey module on different predictor variables of donating behaviour. We found that different survey modules lead to different parameter estimates for determinants of giving. A Very Short module leads to stronger selection effects as well as fewer significant parameter estimates for predictors of the amount donated than a Method+Area module. Thus, the Very Short module overestimates the effects of these variables on the probability of giving, but underestimates the effects of variables on the amount donated. Specifically, we found no effects of old age, income, being Catholic, and left-right political self-placement on the amount donated in the Very Short module, while these effects were significant in the Method+Area module. We find that effects of the level of education, female gender, and home ownership on the probability of giving are overestimated in the Very Short module due to selective underreporting.

Implications

What are the implications of our results for research on philanthropy? First of all, our results confirm that shorter questionnaires on giving lead to an underestimation of the volume of charitable giving. Researchers should be aware that population estimates are a function of the length of the questionnaire used to measure giving and volunteering. The shorter the questionnaire, the larger the underestimation.

Secondly, the validity of research on determinants of charitable giving is compromised when a Very Short module is used to measure giving. A Very Short module leads to underreporting of donations, especially among respondents who mainly make small donations, among respondents who do not bear responsibility for donations made within the household, and among respondents with lower cognitive ability. A longer questionnaire helps these respondents to recall their donations. Researchers should be aware that the effects of predictor variables observed in Heckman Two stage regression analyses of the probability of giving are biased in short questionnaires. The bias is upward in analyses of the probability of giving. Effects of predictors of giving in short questionnaires appear larger than they actually are in analyses of having made a donation in the past year due to selective underreporting. The bias is downward in analyses of the amount donated. The effects of predictors of giving appear smaller than they actually are due to the smaller variance in the amount donated. Correction for selective reporting using a Heckman Two Stage regression model partly solves this problem, but not completely.[5]

The amount of time that is available to researchers to measure giving is always limited. When giving is not the primary focus of interest in a survey, the module to measure giving is often shorter. In many surveys that contain data on charitable giving, short modules are used. When researchers use such data, they should use appropriate regression models to correct for selective underreporting, and be very careful in the interpretation of the results.

Notes

[1] There appear to be large cross-national differences in the size of these effects. For instance, the income elasticity in US-studies (.40 to .95) is usually much larger than that in studies bearing on the UK (.40; Banks & Tanner, 1999) or the Netherlands (.20 to .40; Bekkers, 2004a). Although these differences are very interesting and call for an explanation, we leave them aside in the present paper.

[2] We also analysed reports on volunteering in the month prior to conducting the survey, which were obtained with a Method+Area module in GINPS and with an Area module in FSDP. We find that females, Rereformed Protestants, frequent church attendees more often report volunteering activities in the Method+Area module used in the GINPS than in the Area module used in the FSDP.

[3] In additional analyses (available from the authors) we find that excluding 'Don't Know' responses leads to different conclusions for both the effects of predictor variables in the Very Short module, and in the Method+Area module. Specifically, we find that effects of age and income on the amount donated in the Method+Area module are stronger than in the analyses reported in this paper. Furthermore, the effects of age, Rereformed Protestant affiliation, church attendance, town size and income are smaller in the Method+Area module in the analysis of probability of giving when excluding 'Don't Know' responses. For the Very short module, excluding 'Don't Know' responses only lead to (some) smaller parameter estimates in the selection stage.

[4] The high proportion of respondents who reported charitable donations in the Method+Area module makes the Heckman Two Stage model less appropriate, but for the Very Short module it is useful because 23% of the respondents indicated having made no donations in the past year. In order to enable comparison of the parameter estimates, we choose to use the Heckman model in the analyses of both modules. An implication of the high proportion of

positive observations in the Method+Area module is that the parameter estimates in the first stage can have extreme values.

[5] When respondents who report no gifts are included as zeros in an OLS regression, the bias is downward for most variables (results available from authors). Because a Very Short module yields more respondents who report no gifts, analyses of the amount donated in such a module will reveal fewer significant and generally weaker effects of predictor variables.

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Table 1 Methodological differences between the two giving modules

	Method+Area Module	Very Short Module
Dataset	Giving in the Netherlands Panel Survey, Wave 1	Family Survey of the Dutch Population, Third edition
Data collection dates	May 2002	Summer- Fall 2000
Interviewing methods	CASI	CAPI and write-in
Sampling frame	Random sample from a large pool of respondents representative of the Dutch population	Two stage random probability sampling
n	1,964	1,587

Table 2 Reports on giving and descriptive information for predictor variables in two giving modules

	Method+Area	Very Short
Donated in past year	97.11%	77.45%
Mean donation	€273.07	€109.73
Median donation	€91.00	€45.38

Table 3 'Heckman Two Stage'-regression analysis of natural log of amount donated

(analyses based on independent samples)

	Selection stage (stage 1)		Amount donated (stage 2)	
	Method+Area Module	Very Short Module	Method+Area Module	Very Short Module
Younger than 30	**-0.419	*-0.269	**-0.339	**-0.840
	(0.147)	(0.129)	(0.082)	(0.129)
Older than 55	-0.059	-0.153	**0.460	0.143
	(0.171)	(0.118)	(0.067)	(0.112)
Female	-0.007	**0.411	0.036	-0.024
	(0.115)	(0.089)	(0.052)	(0.079)
Catholic	+0.390	0.043	**0.346	+0.146
	(0.215)	(0.093)	(0.079)	(0.084)
Reformed protestant	0.360	*0.555	**1.031	*0.386
	(0.286)	(0.228)	(0.082)	(0.161)
Rereformed Protestant	**8.401	**0.612	**1.320	**0.808
	(0.319)	(0.214)	(0.089)	(0.150)
Other religion	0.481	0.093	**1.382	+0.433
	(0.467)	(0.252)	(0.143)	(0.251)
Church attendance	1.507	*0.169	**0.324	**0.273
	(1.054)	(0.068)	(0.028)	(0.052)
Small town	**0.227	-0.067	0.039	-0.040
	(0.059)	(0.043)	(0.027)	(0.038)
Educational level	-0.028	**0.196	**0.184	**0.381

	(0.067)	(0.045)	(0.029)	(0.042)
Income(ln)	**0.235	*0.020	**0.290	0.003
	(0.091)	(0.010)	(0.050)	(0.009)
Wealth(ln)	0.001	**0.057	**0.045	*0.034
	(0.040)	(0.021)	(0.013)	(0.014)
Home owner	0.191	**0.566	*0.125	**0.427
	(0.129)	(0.088)	(0.058)	(0.096)
Household size	0.038	-0.055	0.008	*-0.111
	(0.090)	(0.058)	(0.036)	(0.048)
Shares household	0.103	0.163	-0.028	*0.347
	(0.198)	(0.161)	(0.093)	(0.161)
Left-right self placement	-0.023	**-0.129	**-0.072	-0.014
	(0.054)	(0.044)	(0.027)	(0.039)
Postmaterialism	*0.159	0.039	*0.058	**0.157
	(0.068)	(0.041)	(0.029)	(0.034)
Constant	-0.195	0.051	*1.019	**2.861
	(1.048)	(0.191)	(0.505)	(0.207)

Robust standard errors in parentheses. N in Very Short module: 1489 (1209 uncensored, 280 censored); in

Method+Area Module: 1964 (1885 uncensored, 79 censored). Wald tests for independent equations: Very Short

module 2.11 (ns); Method+Area Module 18.86 (p<.01).

+ significant at 10%; * significant at 5%; ** significant at 1%

Table 4 'Heckman Two Stage'-regression analysis of natural log of amount donated (pooled data)

	Selection stage (stage 1)		Amount donated (stage 2)	
	Model 1	Model 2	Model 1	Model 2
Younger than 30	**-0.272	+-0.232	**-0.549	**-0.792
	(0.095)	(0.131)	(0.069)	(0.123)
Older than 55	-0.136	-0.147	**0.348	0.174
	(0.095)	(0.118)	(0.059)	(0.108)
Female	**0.256	**0.432	-0.005	+-0.127
	(0.069)	(0.088)	(0.044)	(0.075)
Catholic	*0.183	0.045	**0.291	0.129
	(0.081)	(0.096)	(0.057)	(0.081)
Reformed Protestant	**0.565	*0.472	**0.855	+0.294
	(0.172)	(0.210)	(0.075)	(0.156)
Rereformed Protestant	**0.776	**0.561	**1.137	**0.708
	(0.188)	(0.212)	(0.080)	(0.148)
Other religion	0.166	0.021	**1.004	+0.424
	(0.209)	(0.254)	(0.131)	(0.244)
Church attendance	**0.204	*0.168	**0.305	**0.239
	(0.062)	(0.071)	(0.025)	(0.050)
Small town	0.046	*-0.087	+0.039	-0.017
	(0.032)	(0.042)	(0.022)	(0.036)
Educational level	*0.093	0.182	**0.283	**0.339
	(0.036)	**(0.045)	(0.024)	(0.040)

Income(ln)	+0.018	+0.018	+0.015	-0.000
	(0.010)	(0.010)	(0.009)	(0.009)
Wealth(ln)	**0.050	**0.061	**0.040	0.022
	(0.018)	(0.021)	(0.010)	(0.014)
Home owner	**0.493	**0.567	**0.240	**0.273
	(0.071)	(0.088)	(0.050)	(0.088)
Household size	-0.007	-0.042	-0.015	*-0.101
	(0.048)	(0.058)	(0.029)	(0.046)
Shares household	0.191	0.135	*0.180	*0.316
	(0.120)	(0.163)	(0.077)	(0.155)
Left-right self placement	*-0.085	**-0.112	+-0.040	0.011
	(0.034)	(0.043)	(0.022)	(0.037)
Postmaterialism	*0.079	0.036	**0.103	**0.149
	(0.034)	(0.042)	(0.022)	(0.032)
Method+Area Module (MA)	**1.005	-0.312	**0.847	**-2.370
	(0.074)	(1.081)	(0.055)	(0.535)
MA * younger than 30		-0.175		**0.442
		(0.197)		(0.147)
MA * older than 55		0.087		*0.284
		(0.208)		(0.128)
MA * female		**-0.448		+0.163
		(0.145)		(0.091)
MA * Catholic		0.357		*0.229
		(0.236)		(0.113)
MA * Reformed		-0.100		**0.748

	(0.351)	(0.176)
MA * Rereformed	**5.896	**0.628
	(0.366)	(0.172)
MA * other religion	0.439	**0.972
	(0.539)	(0.282)
MA * church attendance	1.228	0.087
	(1.069)	(0.057)
MA * small town	**0.311	0.060
	(0.073)	(0.045)
MA * educational level	**-0.207	**-0.157
	(0.080)	(0.049)
MA * income(ln)	*0.215	**0.296
	(0.092)	(0.050)
MA * wealth(ln)	-0.058	0.023
	(0.046)	(0.019)
MA * home ownership	*-0.372	-0.144
	(0.156)	(0.105)
MA * household size	0.078	+0.110
	(0.107)	(0.058)
MA * shares household	-0.026	+-0.342
	(0.257)	(0.181)
MA * political ideology	0.091	+-0.083
	(0.070)	(0.046)
MA * postmaterialism	0.127	*-0.088
	(0.079)	(0.043)

Constant	0.111	0.086	**2.944	**3.301
	(0.154)	(0.194)	(0.124)	(0.188)

Robust standard errors in parentheses. N=3453 (3094 uncensored, 359 censored). Wald test for independent

equations for Model 1: 8.84 (p<.05); model 2: 0.16 (ns).

+ significant at 10%; * significant at 5%; ** significant at 1%

Figure 1. Hypothetical effects of level of education on incidence of giving (left panel) and amount donated (right panel) in short and extensive survey modules