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Gender differences in volunteer activities: Evidence from German survey data

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Abstract

Using unique data from a large-scale online survey conducted in Germany, we examine gender differences in volunteering for charitable organisations. Our findings suggest that men are more likely than women to engage in regular volunteer activities. Additionally, we find that men devote more time to charitable causes than women. However, disaggregating the volunteer labour supply by different organisations reveals that women spend more time performing volunteer work for organisations that help the poor or elderly.

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1 Introduction

Voluntary contributions to charity represent an important source of funding of public goods. Charitable giving, however, is not homogeneous, as there are at least two major types: donating money and donating time (monetary donations and volunteer activities, respectively). Monetary donations have been widely studied in the literature. One of the key findings is that the amount of donations differs significantly between genders, with most studies finding that women give more than men. It is often argued that such differences are associated with differences in preferences between women and men (Croson and Gneezy, 2009). In addition to monetary donations, however, charitable contributions include the amount of time spent performing volunteer work. Although gender differences in monetary donations have received considerable attention, possible differences with respect to volunteering for charitable organisations have received less attention.

The present paper provides new evidence on gender differences with respect to volunteer activities. We use unique survey data of a large sample of individuals who are representative of the German population in terms of key characteristics, such as gender, age, and region of residence. Our data, which include responses to a variety of questions about volunteer activities, enable us to examine whether women and men differ in their general decisions to perform volunteer work. Moreover, the survey asks whether and how often people volunteer for religious organisations, schools or youth programmes, and organisations that help the poor or elderly.

Our findings suggest that, in general, more men than women engage in volunteer activities. In addition, men are found to spend more time in volunteer work than women. However, we find that more women than men volunteer for organisations that help the poor and elderly and, additionally, that women spend more time engaged in volunteer work for such organisations than men. Finally, we find no gender differences with regard to volunteer activities for religious organisations and schools and youth programmes.

The paper is organised as follows. Section 2 provides a brief review of the literature on gender differences in charitable giving. In section 3, we present our data. Section 4 describes our empirical approach and presents our results. Section 5 concludes the paper.

2 Related literature

This paper builds on the literature on gender differences in charitable giving. In general, there are two major types of charitable giving: monetary donations and volunteering. Monetary donations have been studied extensively, e.g., in controlled laboratory experiments in which the driving forces behind gender differences, such as altruism, can be isolated (for an overview see Croson and Gneezy, 2009; Eckel and Grossman, 2008). The literature predominantly suggests that women tend to be more altruistic than men with respect to monetary giving (Andreoni and Vesterlund, 2001; Dufwenberg and Muren, 2006; Eckel and Grossman, 1996, 1998; Fehr et al., 2006; Selten and Ockenfels, 1998).

Altruism, concerns for social reputation, being asked to volunteer, consumption and investment motives, and social and human capital are determinants found to be important for the decision to volunteer (Carpenter and Myers, 2010; Freeman, 1997; Hackl et al., 2007; Musick and Wilson, 2008; Wilson, 2000, 2012; Wilson and Musick, 1997).

Gender differences in volunteer activities, the second major type of charitable giving, have been studied less frequently, at least from an economic perspective. One form of non-monetary donation is studied in Mellström and Johannesson (2008), who examine how blood donations differ between genders in various incentive-compatible treatments. Women's blood donations are found to be higher if they are not financially compensated, while men's donations are not influenced by the incentive structure. Menchik and Weisbrod (1987) study volunteer labour supply and suggest, while not focusing on but controlling for gender, that women who are single or are married but single earners donate more time to volunteer activities than men. However, disaggregating time spent volunteering, Menchik and Weisbrod (1987) find a positive coefficient for female involvement in organisations concerned with education or social welfare but a negative coefficient for female involvement in environmental issues. Mesch et al. (2006) examine giving behaviour in terms of monetary and time donations, using data from households in Indiana. The authors report significant gender differences; for example, single females are more likely than single men to volunteer and donate nearly twice as many hours. Using Midlife in the United States (MIDUS) survey data, Einolf (2011) finds that a greater proportion of women than men volunteer. Taniguchi (2006) also uses MIDUS data, reporting gender differences in the manner in which employment status affects men's and women's volunteering behaviour. Taniguchi (2006) finds that part-time employment is positively associated with women's—but not men's—decisions to volunteer, whereas unemployment is negatively associated only with men's volunteer activities. Moreover, women spend more time providing unpaid care to aging family members. Day and Devlin (1997) explore the relationship between gender, volunteering, and labour market returns. Using data from the Canadian Survey of Volunteer Activity, the authors report that male volunteers earn about 11% higher incomes than their non-volunteering counterparts, whereas the incomes of female volunteers and non-volunteers do not differ. In addition, Day and Devlin (1998) find that volunteers earn about 7% higher incomes than non-volunteers. Using a representative sample of the Dutch population, Bekkers (2010) reports that females are more likely than males to volunteer. Clary et al. (1996) examine different motivations for volunteerism, such as values, social reasons, career concerns, and personal benefit. These researchers find that women are more involved than men in volunteer activities and place significantly greater emphasis than men on all these motivations, except career concerns. The ranking of motives, however, was the same for both genders. Men and women volunteer for social reasons, to feel needed and, to a lesser extent, to improve their career options. Moreover, Clary et al. (1996) report that various motivations can guide decisions to volunteer for particular organisations. Thus, women and men appear to have differing preferences and accordingly commit to different types of volunteer activities. Examining the same influencing variables on male and female subsamples of money and time donations, Simmons and Emanuele (2007) find that women spend more time than men. Themudo (2009) finds

a positive relationship between women’s empowerment, their voluntary action, and the strength of the nonprofit sector. Focussing on consumption and investment motives of volunteerism, Hackl et al. (2007) report negative female coefficients, suggesting that this is due to time spend on childcare and increased informal help which is provided mostly by females. Using Dutch Time Use Survey data between 1975 and 2005, van Ingen and Dekker (2010) examine volunteerism on an aggregate level and find no gender effects in the likelihood to volunteer. However, they report that women spend significantly less time than men, which might be due to the fact that women have fewer resources available. This is supported by the finding that the increased female labor supply and having children reduce the volunteering participation of married women (Carlin, 2001; Tiehen, 2000). Examining the relationship between happiness and volunteering in Germany using SOEP data, Meier and Stutzer (2008) find robust evidence that volunteers are more satisfied with their lives than non-volunteers. Although the authors do not focus primarily on gender differences, they report that approximately 28% of men volunteer compared with only 20% of women. Moreover, the proportion of males who frequently volunteer is higher than that of women who frequently volunteer. Prouteau and Wolff (2008) study a relational motive for volunteering and find that women are less likely to volunteer and to have friends in a volunteer organisation. Cappellari et al. (2011) examine money and time donations, discerning a gender component. Calculating predicted probabilities, they find that women are less likely than men to donate time. Joint probabilities reveal that men are more likely than women to donate money and time simultaneously. Hartmann and Werding (2012) apply bivariate probit regression analysis to data from the European Social Survey and report that men are more likely than women to volunteer or donate time and money simultaneously.

In this paper, we provide new evidence of the existence of gender differences in charitable giving using unique German survey data. Rather than monetary donations, which have been widely studied, we focus on time contributions. Moreover, we disaggregate time volunteered for different types of organisations and account for whether women and men differ in their decisions to engage in volunteer activities.

3 Data

The analysis presented in this paper is based on unique data obtained through an anonymous online survey conducted in September 2011 by a certified professional research company, based on our instructions. Participants were recruited from an online panel of approximately 90,000 individuals living in Germany. Participants were invited via e-mail by the organizing research company. The e-mail included a personalized hyperlink directing subjects to the web-based questions. To avoid possible biases and framing effects, however, we did not provide any information about the aim of the study.

A total of 1,012 subjects (516 females and 496 males) participated in the survey. The sample was chosen according to various criteria to ensure that our data are representative of the German population with respect to key characteristics, such as gender, age,

religious affiliation, and region of residence.¹ The survey includes a variety of questions on volunteer activities, socio-demographic characteristics, income, and living situation. Respondents required approximately 15 minutes to complete the survey and received €4 for participating.²

To analyse gender differences in volunteer behaviour, we first asked subjects how often they undertake volunteer activities. We defined volunteering as activities for which they are not compensated (except perhaps for expenses). Subjects marked on a five-point scale whether they volunteer (1) “almost everyday”, (2) “several times a week”, (3) “once a week”, (4) “almost never” or (5) “not at all”. Subjects who volunteer at least once per week indicated the amount of time spent performing volunteer work. If subjects indicated, in answering the first question, that they perform volunteer activities “almost never” or more often, they were asked how often they volunteer for three specific types of organisations: (i) religious organisations, (ii) schools or youth programmes, and (iii) organisations that help the poor or elderly. Again, the subjects indicated on a five-point scale how often they volunteer for these types of organisations.

4 Results

We now turn to our empirical results. We first analyse whether women and men differ in their decisions to engage in volunteer activities. In the next step, we examine gender differences with respect to the amount of time spent performing volunteer work.

4.1 Gender differences in the decision to volunteer

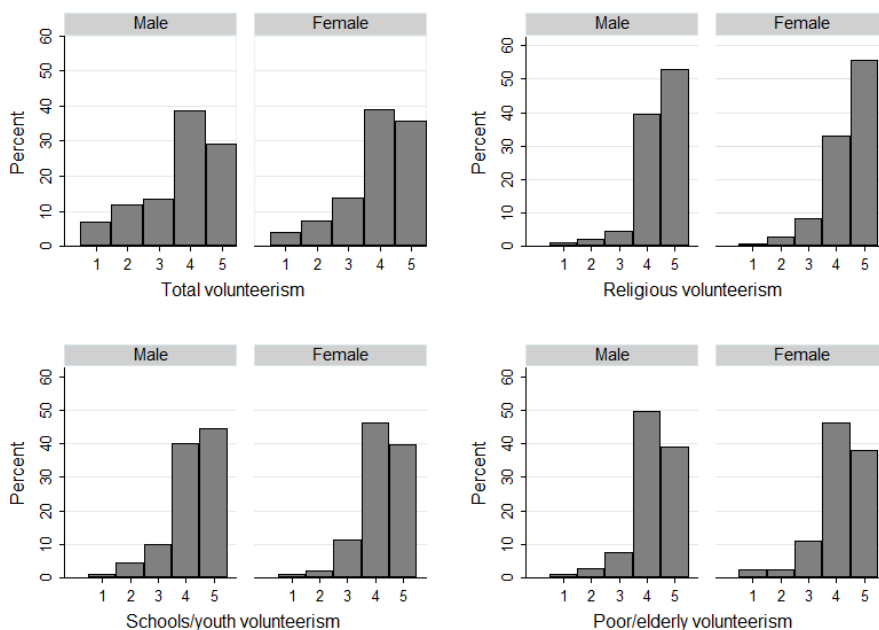
Figure 1 presents the distribution of volunteer activities by gender. A Mann-Whitney test indicates that the difference between women and men with respect to volunteer work is significant (upper left box in Figure 1; $p < 0.01$). Figure 1 also presents the distributions of volunteering for religious organisations, schools or youth programmes, and organisations that help the poor or elderly. However, a Mann-Whitney test shows no gender differences with respect to volunteering for any of these types of organisations.

In further analysis, we focus on gender differences with regard to regular volunteer activities. We categorise subjects into two groups: those who regularly volunteer (V) and those who do not regularly volunteer (N). The first group consists of all subjects who indicate that they volunteer “almost everyday” (1), “several times a week” (2) or “once a week” (3). Subjects belong to the second group if they volunteer “almost never” (4) or

¹Some descriptive statistics of the socio-demographic characteristics and the original survey questions are presented in the appendix.

²The online survey was originally conducted for a research project on worldviews and intergenerational altruism. In this paper, we analyse only the gender-related data on volunteering activities; data that had not been analysed previously.

Figure 1: Volunteering by gender.



1: “almost everyday”, 2: “several times a week”, 3: “once a week”, 4: “almost never”, 5: “not at all”. Observations: 496 men and 516 women. For the analysis of specific volunteer activities we consider only individuals who indicated to volunteer “almost never” or more often in the first question on general volunteerism (351 men and 331 women).

“not at all” (5).³ The results of a Mann-Whitney test confirm our above findings that, in general, more men than women engage in volunteer activities. Regarding the frequency of volunteering, more men than women indicated frequencies of “almost everyday”, “several times a week” or “once a week” ($p = 0.013$). By contrast, more women than men indicated frequencies of “not at all” or “almost never”. With respect to specific volunteer activities, we find statistically weak evidence that women provide more regular volunteer labour than men to religious organisations and to organisations that help the poor and elderly ($p < 0.1$).

Because the results in Figure 1 do not account for other potentially influential factors, we apply a multivariate regression analysis. Our dependent variable *RegVolunteer* has a value 1 if a subject regularly volunteers and 0 otherwise. The independent variables are gender, annual individual income, employment status, marital status, age and age squared, number of children and persons living in the household, time devoted to child-care, education, and residential region. We apply a logit specification and present the

³We combine the answers “almost never” and “not at all” because we are interested in regular volunteer work. By contrast, “almost never” implies participation in volunteer activities only several times per year. Moreover, we did not collect actual time data from these volunteers. As this method could result in an underestimation of true volunteer labour, we provide additional results for all volunteers in the appendix.

results in Table 1.⁴

Table 1: Logit estimates for regular volunteerism.

Variable	<i>RegVolunteer</i> (1)	<i>RegReligious</i> (2)	<i>RegSchool</i> (3)	<i>RegPoor</i> (4)
<i>Female</i>	-0.377** (0.184)	0.159 (0.383)	-0.139 (0.298)	0.527* (0.306)
<i>Income</i>	0.007** (0.004)	0.005 (0.008)	-0.002 (0.005)	0.018*** (0.006)
<i>Employed</i>	-0.161 (0.246)	-0.065 (0.484)	-0.071 (0.412)	-0.669 (0.438)
<i>Married</i>	0.128 (0.220)	-0.702 (0.461)	-0.258 (0.312)	0.483 (0.435)
<i>Age</i>	-0.038 (0.039)	-0.132* (0.076)	0.087 (0.057)	-0.045 (0.066)
<i>Age</i> ²	0.000 (0.000)	0.001* (0.001)	-0.001 (0.001)	0.001 (0.001)
<i>Childcare</i>	0.010 (0.007)	-0.014 (0.016)	0.006 (0.010)	0.038*** (0.011)
<i>Children</i>	0.187** (0.091)	0.273 (0.166)	0.074 (0.134)	-0.154 (0.167)
<i>PersonHH</i>	-0.185* (0.111)	0.005 (0.213)	0.279* (0.146)	-0.491** (0.231)
<i>Education</i>	0.471** (0.190)	0.740* (0.411)	0.377 (0.290)	-0.862** (0.352)
<i>WestGermany</i>	0.262 (0.249)	0.580 (0.613)	0.221 (0.401)	0.004 (0.402)
<i>RegSchool</i>		1.127*** (0.367)		0.203 (0.382)
<i>RegPoor</i>		0.936** (0.421)	0.165 (0.376)	
<i>RegReligious</i>			1.084*** (0.360)	0.727 (0.448)
<i>Constant</i>	-0.428 (0.931)	-0.892 (1.874)	-4.179*** (1.335)	-1.056 (1.549)
Obs.	707	486	486	486
Pseudo log-likelihood	-413.95	-128.63	-207.61	-172.14

Robust standard errors in parentheses. Significance: ***, **, * for 1%, 5%, and 10%. In the models (2)-(4) we only use data for individuals who did not indicate “not at all” in the first question.

The results show that gender is a significant predictor of volunteering. Conditional on the control variables, women are less likely than men to provide volunteer labour at least once per week ($p = 0.041$). Our results also suggest that higher income and better education are positive predictors for volunteerism. The positive income effect might be counterintuitive at first glance. One would rather assume a negative effect because a higher income raises the opportunity costs of time and, thus, should negatively affect the provision of volunteer labor. However, if volunteering is seen as a consumption

⁴A probit specification yields similar results.

good, then higher income can have a positive effect (Menchik and Weisbrod, 1987). Moreover, having more children increases the probability of volunteering, though there is no significant effect of time devoted to childcare. Moreover, we find weak evidence that living in a larger household lowers the probability of volunteering.

Examining regular volunteer work for different organisations, we again estimate the previous model with the above noted predictors, but with volunteer work for specific types of organisations as the dependent variables. Interestingly, we find no gender differences along the different volunteer domains. The only (weak) exception is that women are more likely to volunteer for organisations which help poor and elderly individuals ($p < 0.1$). The indicator variables for specific volunteer activities, e.g., *RegSchool* as independent variable for *RegReligious*, show some interdependencies between different volunteer organisations. People who volunteer for one organisation seem to be more likely to volunteer in other fields as well.

To test the robustness of our results, we also estimate the logit models without individuals aged 70 and older because the age distribution is very different between men and women in that category. Our results do not change substantially: the gender coefficient slightly exceeds the 5% level in model (1) (-0.392 , s.e. 0.201 , $p = 0.051$) and is not significant anymore in model (4) (0.358 , s.e. 0.354 , $p > 0.1$).

4.2 Gender differences in the time spent on volunteering

We now examine gender differences with respect to time regularly spent engaged in volunteer work. We argue that this measure includes volunteering at least once a week.⁵ Table 2 shows that men and women do not differ greatly with respect to actual time devoted to volunteer work. However, a Mann-Whitney test reveals that women provide approximately 1.5 times more time than men for organisations that help the poor or elderly. This result at least supports the finding regarding the probability of volunteering presented in the previous section.

The time spent on volunteering might be affected by the employment rate. Thus, we stratify the hours presented in Table 2 by employment status. We find (weak) evidence that not-employed individuals differ in their amount provided. Not-employed men contribute more time to school and youth organisations (3.2 hours) than women (1.9 hours, $p = 0.053$). Not-employed women, however, volunteer nearly twice as much as men for organisations that help poor and elderly people (6.8 vs. 3.6 hours, $p = 0.085$).

Next, we use a multivariate tobit specification to examine gender differences and control for other potentially influential variables. We use a tobit model because we observe a masspoint of zeros in our data. The observed dependent variable *RegTime* is time

⁵In the survey, the amount of time is indicated in hours per week for volunteering “once a week” and “several times a week” and in hours per day for volunteering “almost daily”. To compare total time, we construct a time variable and assume that “almost daily” implies volunteering five days per week. Thus we multiply the hours from “almost daily” by 5. Our results are robust, such that assuming four or six days per week for “almost daily” does not change them. To account for underestimation, we assume some time data for individuals who volunteer “almost never”, as the survey does not collect data for these subjects. The results can be found in the appendix.

Table 2: Time spent on regular volunteering by gender.

	Total		Religious		Schools/youth		Poor/elderly	
	Men	Women	Men	Women	Men	Women	Men	Women
Obs.	160	130	27	38	54	47	40	52
Min	0.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5
Max	20	40	15	25	8	25	20	30
Mean	5.0	4.7	3.8	3.2	2.7	2.8	3.3	5.1
Std. dev.	4.7	6.3	3.8	4.3	2.0	3.8	3.7	5.9
<i>p</i>	0.141		0.218		0.493		0.036	

Minimum, maximum, and mean time in hours per five-day week for regular volunteers, conditional on being a regular volunteer. *p*-values correspond to a two-tailed Mann-Whitney test.

regularly contributed to volunteer activities. The disaggregated dependent variables are *RegTimeREL*, for volunteer time contributed to religious organisations; *RegTimeSY*, for volunteer time contributed to schools and youth programmes; and *RegTimePE*, for volunteer time contributed to organisations that help the poor and elderly. All variables are measured in hours per five-day week. We regress the time devoted to regular volunteer labour on gender, annual individual income, employment status, marital status, age and age squared, children and time spend on childcare, number of persons living in the household, education and region of residence.⁶ The results are summarised in Table 3.

We find that women spend less time on regular volunteer activities than men ($p = 0.082$). Higher income, having more children, spending more time on childcare, and higher education increase the time provided to charitable causes. We find that living in a larger household ($p = 0.059$) is a negative predictor for the provided amount of volunteer work. Though the coefficient slightly exceed the 5% level of significance, one could argue that caring for a larger household create time constraints which influence the amount of volunteer labor.

Although gender is not a significant predictor of religious and schools/youth volunteering, we find evidence that women spend more time than men performing volunteer work for organisations that help the poor or elderly ($p = 0.031$). Women might devote more time to care for elderly and poor individuals as part of a general helping behaviour (Menchik and Weisbrod, 1987). We find again a positive relationship between volunteering for religious organisations and schools/youth programs.

For robustness purposes, we exclude all individuals aged 70 and older and again estimate the tobit models. Our results change only slightly. The gender coefficient is now significant at 5% in model (1) (-1.761 , s.e. 0.877 , $p = 0.045$) but is not significant anymore in model (4) (2.272 , s.e. 1.445 , $p > 0.1$).

⁶Again, our results are robust, such that assuming four or six days per week for “almost daily” does not change them.

Table 3: Tobit regression estimates on regular volunteering.

Variable	<i>RegTime</i> (1)	<i>RegTimeREL</i> (2)	<i>RegTimeSY</i> (3)	<i>RegTimePE</i> (4)
<i>Female</i>	-1.577* (0.906)	0.519 (1.412)	-0.291 (0.751)	3.585** (1.659)
<i>Income</i>	0.042** (0.018)	0.037 (0.025)	-0.009 (0.014)	0.078** (0.030)
<i>Employed</i>	-1.079 (1.165)	-1.502 (1.782)	0.106 (1.021)	-3.771* (2.086)
<i>Married</i>	-0.896 (1.118)	-2.952 (1.881)	-0.393 (0.886)	0.438 (1.842)
<i>Age</i>	-0.235 (0.192)	-0.471* (0.274)	0.188 (0.149)	-0.145 (0.298)
<i>Age</i> ²	0.003 (0.002)	0.005* (0.003)	-0.002 (0.002)	0.003 (0.003)
<i>Childcare</i>	0.086** (0.039)	-0.043 (0.059)	0.022 (0.027)	0.199*** (0.064)
<i>Children</i>	1.009* (0.456)	0.769 (0.603)	0.256 (0.369)	-0.693 (0.771)
<i>PersonHH</i>	-0.989* (0.524)	0.195 (0.805)	0.568 (0.394)	-2.253** (1.044)
<i>Education</i>	1.547* (0.921)	1.767 (1.400)	1.335* (0.792)	-3.647** (1.745)
<i>WestGermany</i>	1.253 (1.242)	1.854 (2.035)	0.383 (1.048)	0.948 (2.001)
<i>RegTimeSY</i>		1.086*** (0.234)		0.323 (0.310)
<i>RegTimePE</i>		0.140 (0.174)	-0.030 (0.114)	
<i>RegTimeREL</i>			0.709*** (0.242)	0.371 (0.309)
<i>Constant</i>	-1.989 (4.428)	-3.926 (6.774)	-10.545*** (3.763)	-10.025 (7.196)
Obs.	707	486	486	486
Censored obs.	491	444	404	421
Pseudo log-likelihood	-1001.80	-230.10	-371.68	-340.67

Robust standard errors in parentheses. Significance: ***, **, * for 1%, 5%, and 10%. Results for the latent variable assumed by the tobit model. In the models (2)-(4) we only use data for individuals who did not indicate "not at all" in the first question.

5 Conclusion

Most previous studies of differences between women and men with respect to charitable giving have focused on monetary donations. The literature predominantly reports that women are more altruistic than men and that they frequently donate greater amounts of money. In contrast to such studies, we focus on gender differences with respect to time donations. Using unique survey data of a representative sample of the German population, we find that a higher percentage of men than women engage in volunteer activities. Controlling for socio-demographic characteristics as well as possible time

constraints due to childcare, increasing household size and employment status, we find that men are more likely than women to provide volunteer labour. In addition, men devote more time to regular volunteer work than women. We find evidence that the household size negatively predicts the amount of volunteer time, while having children and caring for them do not. We assume that having children and spending time with them fosters the probability to get in touch with volunteer work. However, living in a larger household might be a possible constraint.

Examining which type of organisations people volunteer for, we find that more women than men engage in volunteer activities for organisations that help the poor and elderly. Women also spend significantly more time engaged in volunteer work for such organisations. This result might show that women devote more time, e.g., to care for older family members, than men. Helping others, also in informal ways, is maybe more grounded in females (Wilson and Musick, 1997). However, we find no significant gender differences with respect to religious and schools/youth organisations. The examination of different volunteer areas might provide more evidence on gender preferences. Moreover, we acknowledge that our sample is rather small, especially compared to national panel data. While our data allows to study gender differences in various volunteering areas, the sample size in these subquestions is particularly small. Our sample is also limited by its cross sectional nature. Therefore, future research could use a larger sample size, examine variations over time, and focus on a greater differentiation of various types of organisations. Focusing on aggregate volunteer labour might conceal gender differences and results are likely to depend on the composition of the volunteer labour supply. These findings may have implications for, e.g., the design of nonprofit organisations.

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