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Donations, volunteering, and life satisfaction in Germany

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Abstract

Donations and volunteering are two important forms of non-market activities that are usually considered separately in the literature. The purpose of this paper is to work out central determinants of giving to organizations. Especially, the importance of volunteering is analyzed. In addition, the aim is to find out whether mutual dependencies exist and to what extent benefits, measured by satisfaction, can be derived from both forms. Estimates using data from the German Socio-Economic Panel for the years 2019/2020 lead to the following results: - Personality traits and individual assessment, under which conditions a society is judged to be just, are important for donation behavior. These two aspects are widely neglected in the literature. - If honorary offices are exercised as a major activity, a clear positive donation effect is derived in contrast to a secondary activity. - Donations to organizations and voluntary work show mutual dependencies. - Life satisfaction is increased both by donating and voluntary work.

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1. Introduction

Donations and volunteering are two activities that are usually observed as complementary to free-market activities, which come into greater play when extraordinary events such as wars, disasters, catastrophes or large movements of refugees have occurred, to which normal economic activity reacts inadequately or too late. But also annual fundraising appeals and donations to churches, sports clubs and political parties lead to an increasing donation amount.

There is a general interest in finding out why people donate money. Konrath and Handy (2017) explore the following questions: What are the main reasons for donating money? Do these reasons depend on demographic characteristics and personal attributes? Are these determinants overlaid on decisions about whether people take up voluntary positions? How stable are the relationships between these decisions and personal giving behavior?

Model-theoretical studies of giving behavior have been conducted by Feldman (2010) and Steinberg (1987). Overall, there is a broad spectrum of theoretical explanations as to why people donate. In principle, a distinction must be made as to whether donations are selfishly motivated or whether altruistic considerations dominate (Andreoni 1990). In the first case, it is about expected personal advantages through tax benefits or positive public perception, about reputation. In the second case, donations are made for the benefit of others. These two reasons need not be mutually exclusive. In addition, people donate because they recognize a failure in the free-market system and believe that donation organizations distribute their funds in the spirit of social justice.

Numerous studies on honorary offices can be found in the literature, e.g. Brown/Lankford (1992), Day/Devlin (1998), Freeman (1997) and Giusta/Jewell (2021). Questions are primarily aimed at why people take on honorary offices. Very similar considerations as for donations can be found here. Altruistic justified and personal advantages can be derived from honorary offices just as much as an exchange.

Donations and the willingness to take on honorary offices are also driven by individual attitudes and behavior, by experiences and assessments. Discussions focus either on studies, why and to what extent donations are made or on the effects of various forms of non-remunerated activities. Hardly any theoretical and empirical connections between these areas are in the center of the discussion. Exceptions are Apinunmahkul et al. (2009), Hill (2012) and Turcotte (2015). Every individual can decide whether to transfer money to organizations or persons or whether to participate in the distribution of relief goods and sacrifice time for it. Giving money or time are alternatives that are not mutually exclusive. In addition to contractually agreed contributions, someone can voluntarily donate more money to sport clubs or church, and they can also agree to take on an honorary position in the club, in society. There are various motives for this. For example, he/she wants to be involved in the proper use of funds or he/she believes that he/she can best help a good cause through his/her commitment. The latter can also be done without monetary participation. The decision for an either-or rather than a both-and depends on

personality traits. Those on low incomes are often left with no choice. If they have the necessary skills or if they are senior experts, they will only be available for voluntary work.

To the best of our knowledge the only contribution to the relationship between happiness, volunteering and donating is that of Krasnozhon/Levendis (2020). The authors use data of the American General Social Survey. They find evidence that happiness is more closely correlated with volunteering than with donating money. Volunteering and charitable donation are only loosely associated with happiness after controlling for socioeconomic factors. An ordered logit model is estimated. The standard economic variables are more important than giving or donating. Income is positively associated with happiness.

We replicate this approach as far as possible. Major differences are that this study uses German and more recent data. A Cobb-Douglas function is the theoretical base with life satisfaction as outcome variable. Volunteering and donations are the central input factors. Additionally, interaction variables as well as further control variables like personality traits or similar to that of Krasnozhon/Levendis (2020) are incorporated.

The objective of this empirical paper is to work out central individual determinants of donations. Seven groups of explanations are distinguished. The importance of voluntary offices is analyzed. It is asked whether donations and volunteering each other and whether they affect the life satisfaction. New modelling and explanations are presented, supported by empirical results.

2. Data and descriptive statistics

In Germany, in 2018, the proportion of men, who volunteered, was 16.9 percent compared to 18.3 percent for women. In 2021, the percentage of volunteering women was lower than for men, although among the population are more women than men (VaMA 2022). The statistics show that the number of volunteer positions is increasing. Between 2017 and 2020 there was an increase of 2.22 million. In 2021, the number of people doing voluntary work in Germany was 16.24 million (IfD Allensbach 2021). An increase cannot be observed for all types of unpaid activities. For example, the number of federal volunteers has decreased since 2017, while from 2012-2014, there was an increase (BMFSFJ 2021). Official statistics on voluntary work usually publish not more than three distinguishing features. However, it is necessary to have a broad spectrum of personal determinants of voluntary work available.

The Socio-Economic Panel (SOEP) provides aperiodic data on the participation of persons aged 17 and over in voluntary work in Germany (Burkhardt/Schupp 2019). It is recorded whether a person volunteers daily, at least once a week, once a month or less or not at all. Information on donations is also included in the SOEP survey (Gricevic et al. 2020). It is asked whether and, if so, how much is donated. The survey on volunteering is available for 2009, 2011, 2013, 2015, 2017, 2019 and 2020. For donations, data for 2010, 2015, 2018 and 2020 can be used. Empirical

analyses that take into account donations or the exercise of volunteering do not consider a joint estimation but present annual statistics of one of these two features.

The following study focusses on newest data, 2019 and 2020. About a little more than a quarter of all respondents donate nothing or at most 100 € or between 100 and 500 €. In 2020, according to the SOEP survey, the maximum individual donation was 20,000 €.

3. What does it depend on whether and how much someone donates?

In addition to the central determinants of giving mentioned in the literature and empirically investigated, the extent to which other explanatory blocks are significant for giving is first examined separately. A distinction is made between the following specifications where in parentheses the variables are enumerated that are used in the empirical analysis Table 1a and 1b:

- standard model, which is some sense a replication of estimates in the literature ;

- personality traits (big 5, internal and external locus of control (LoC);

- characteristics developed in adolescence (whether parents take care of children, conflicts with father, conflicts with mother, sports and music activities in adolescence, number of siblings, number of years in school, school-leaving grades, military service, voluntary social year;

- parents markings (whether mother is Christian, father is non-denominational, whether father is Moslem, whether mother belongs to another religion, mother's years of schooling, whether father has German citizenship);

- features of professional life (company size, public service, tenure, overtime, gross income, test correct assignment of symbols-numbers, test incorrect assignment of symbols-numbers, number of memorized terms from a previously mentioned list;

- forms of unpaid work (voluntary work, member of a civic initiative, unpaid overtime);

- assessments what a society makes just (A-when people who work hard earn more than others (hard work), B-when people from respected families have advantages in life (inheritance), C-when the society takes care of the weak and needy (poverty); D-when income and wealth are equally distributed among all people (equal distribution): 1-disagree completely, …, 7-agree completely).

When trying to replicate approaches from the literature (standard model), i.e. probit estimates for the probability of someone donating, only two determinants turn out to be significant, namely age and full-time employment - cf. Table 1a, column (1). In the first case, a positive sign emerged. This confirms the result of Dvorak/Toubman (2013). In the second case, the significant negative influence corresponds to the result in Priller/Schupp (2011) only in terms of the sign.

From a significance point of view, the big 5 characteristics are clearly more significant for whether someone donates money - cf. Table 1a, column (2). Overall, however, the explanatory power is by no means greater. This applies more to the third and fifth partial approaches (columns (3) and (5)), if characteristics that developed in adolescence and those that are significant for professional life are taken into account. Some obvious parental influences are not reflected in the estimates if they are already accounted for by other characteristics as proxies - cf. Table 1a, column (4). Further determinants that are characteristics of parents like income or IQ are not available in the data set.

It should be emphasized at this point that among the unpaid activities recorded, only voluntary work is of significance for donation behavior. No statistically significant correlation between participation in citizens' initiatives and unpaid overtime, respectively, and donation is revealed - cf. Table 1b, column (6).

The results to the link between the assessment, under which conditions the society is fair, and donation behavior are remarkable - cf. column (7), Table 1b. Four different positions (a)-(d) are distinguished. Only two positions show a clear result. First, those who believe that it is fair that those who work hard should also earn more (position (a)) have a lower willingness to donate than others. And second, those who believe that a society is only just if it takes care of the weak and needy (position (b)) are individually more inclined to donate than others. In contrast, the opinion that equal income, but also equal wealth, holds fair (position (c)) does not seem to have any significance. Finally, no connection can be found between donations and the assumption that it is just when respected families have advantages in life (position (d)).

Instead of separated estimates for different explanation approaches they can be combined and then relevant regressors are selected based on different selection methods. Lasso, lars and stepwise regression are applied - Belloni et al. (2012), Efron et al. (2004), Bendel/Afifi (1977). The signs of the coefficients and significance do not differ for these three approaches. Results are presented in Table 2. Importantly, the influence of honorary positions on donation activity is quite similar. Those who hold voluntary positions are more inclined than others to make donations to organizations. Furthermore, we should stress that

- sports during youth is positively associated by donations;

- people with a high degree of extraversion have a relatively low tendency to donate;

- people who do not believe they can make a difference, who have little motivation to influence the outcome of a situation themselves, who place a high value on chance as to how an outcome turns out (external locus of control), are less likely than others to donate money;

- those who see it as fair when people who work hard earn more than others are less willing to donate. The opposite was found for those who see it as fair when poor people are supported.

It would be mistaken to believe that general appeals for donations can increase individual willingness to donate, but groups must be specifically targeted. This, however, says little about the volume of donations.

4. Do donations and volunteering influence each other and do they have an effect on life satisfaction?

Supported by the approach in the literature, it is quite obvious to initially only investigate whether volunteering influences donation behavior. However, caution is required when interpreting the direction of the effect. There is also some evidence for reverse causality. Those who were dissatisfied with the use of their own donations in the past may feel called upon to change this for the future. Taking on an honorary position connected with the distribution of funds could be the consequence. This becomes particularly relevant when donations are high.

There is no comprehensive data available. The cases in which voluntary positions are held in the very area for which the donation was made are likely to be in the minority. In this case, however, the argument, that when I donate, I also want to influence that the funds end up in the right place, is hardly sustainable. Indirectly, however, a general effect of donating on the decision to do voluntary work is plausible. Experience with donations leads to the attitude that people who have a neutral attitude towards the object of donation or are guided by altruistic motives that see the social benefit of donating in the foreground are better suited for a voluntary office than those who are driven by self-interest. An honorary office in this sense should be held by someone who acts as an impartial spectator in the sense of Adam Smith.

It is tested whether the hypothesis of an exogenous influence of an honorary office on the donation activity (H_0) should be rejected. The Wu-Hausman tests lead to rejection in the majority of cases – see Table 3. Therefore, IV estimators are preferable. Natural instruments are not found or not available in our data set like volunteering of parents or siblings. Therefore, we follow the Lewbel (2012) who proposes artificially derived instruments from the data. We use three different instruments:

(i) averages of volunteering from the industries;

(ii) German federal states as dummies and nationality dummy (= 1 if German; = 0 otherwise);

(iii) combination of (i) and (ii).

The basic results in Table 3 compared with those from previous conventional regressions – column (1) - are robust. In particular, volunteering continues to be positively associated with giving. The instrumental variables estimators in columns (2) – (4) in Table 3 show significant

associations between donations and volunteering. These coefficients are higher than that in column (1).

In the next step it will be investigated whether donations and honorary positions influence individual benefits. The utility can be represented as life satisfaction S. Supplemented by earnings Y life satisfaction S is modelled as a double Cobb-Douglas function with variable partial elasticities

$$S = c\, Y^{\beta} W^{(1-\beta)} = c\, Y^{\beta} (V^{\alpha} D^{1-\alpha})^{1-\beta}. \quad (1)$$

This is an alternative to Krasnozhon/Levendis (2020). Neglecting income as determinant of life-satisfaction and as a proxy for assets would lead to biased estimates of donations and honorary offices. The assumption of a double Cobb-Douglas function allows the modelling with varying systematic coefficients of our two major determinants. After taking the logarithm it follows

$$\ln S = \ln c + \beta \ln Y + (1-\beta) \ln W = \ln c + \beta \ln Y + (1-\beta) [\alpha \ln V + (1-\alpha) \ln D]. \quad (2)$$

The partial elasticities α and β are modelled by linear functions, supplemented by a disturbance term u_1 or u_2

$$\alpha = \gamma_0 + \gamma_1 X_1 + u_1 \quad (3)$$

$$\beta = \delta_0 + \delta_1 X_2 + u_2. \quad (4)$$

The idea of (3) and (4) is that the elasticities are varying due to individual or group-specific characteristics X_1 and X_2. Under using of (3) and (4), we obtain

$$\ln S = b_0 + b_1 \ln Y + b_2 X_2 \ln Y + b_3 \ln V + b_4 X_1 \ln V + b_5 X_2 \ln V + b_6 X_1 X_2 \ln V + b_7 \ln D + b_8 X_1 \ln D + b_9 X_2 \ln D + b_{10} X_1 X_2 \ln D + u, \quad (5)$$

where u is a mixture of u_1 and u_2. Specific cases arise if we assume that the coefficients of donations do not vary systematically ($b_8 = 0$, $b_9 = 0$ and $b_{10} = 0$)

$$\ln S = b_0 + b_1 \ln Y + b_2 X_2 \ln Y + b_3 \ln V + b_4 X_1 \ln V + b_5 X_2 \ln V + b_6 X_1 X_2 \ln V + b_7 \ln D + u \quad (6)$$

or if additionally $b_6=0$. An even more restricted case follows if the elasticities do not vary systematically ($\gamma_1 = 0$ and $\delta_1 = 0$) or if they are constant

$$\ln S = b_0 + b_1 \ln Y + b_3 \ln V + b_7 \ln D + u. \quad (7)$$

Estimates can be found in Table 4. Column (1) is based on specification (5) of the life satisfaction model. In column (2) we follow model (6). In column (3), we additionally assume $b_5=0$. And finally, column (4) is based on model (7).

The estimates for model (5), reproduced in column (1) of Table 4, indicate that the full interaction model is oversized. Things look better for the restricted models in columns (2) - (4). A complete omission of interaction effects in column (4) is not advisable, as F-tests show. Accordingly, of the four specifications in Table 4, column (2) is preferable.

Column (4) first makes statements about the volunteering elasticity of satisfaction ($\eta_{V,S} = 0.131$), the donation elasticity of satisfaction ($\eta_{D,S} = 0.035$) and the income elasticity of satisfaction ($\eta_{Y,S} = 0.040$) based on the estimated coefficients. Thus, the satisfaction of volunteering increases more than that of donating. The basic result does not change if the preferred estimation in column (2) is used.

It is assumed that, on the one hand, donation behavior is shaped early on in youth. On the other hand, experiences in working life play a role. In the first case, it is assumed that the life satisfaction with respect to volunteering is affected by where someone grew up in a large city or in the countryside (X_1 = large city size, middle large size, small city size, village). In the countryside, the village community is formative for one's own behavior. Cohesion and mutual support also influence individual giving behavior and the resulting satisfaction. Interaction effects between X_1 and donations D should also be characterizing for satisfaction. In the big city, anonymity and self-interest are more pronounced. However, there are more opportunities to choose an honorary office and to exercise the one that leads to higher satisfaction. Here, interactions between X_1 and voluntary work V are to be examined in terms of life satisfaction.

In the second case, the importance of the length of working hours is recorded (X_2 = overtime work). Those who work overtime earn more and this leads to more satisfaction. This is contrasted with less leisure time. Whether the income effect or the substitution effect predominates is not clear a priori. Both effects must be recorded separately. Interactions between X_2 and V as well as between X_2 and D are included in the empirical investigation.

Life satisfaction may be affected by further determinants and if this is neglected biased estimates can be the consequence. We test, whether care activities for relatives (X_3) and childcare (X_4) induce such a result – see Table 4. Life satisfaction decreases with X_3 but increases with X_4. In Tables 5 further control variables are considered. Here, I follow Krasnozhon/Levendis (2020) and Einolf (2011). Their major point is on the one hand that neither volunteer work nor charitable donation is strongly associated with happiness, whereas employment history and income are strongly associated with happiness (Krasnozhon/Levendis 2020, p.10). On the other hand it is argued and empirically shown that sex differences in the institutional helping behavior of volunteering and charitable giving are small or underestimated because men have more resources and more social capital than women, which compensates for their lower level of motivation. To test this, Einolf (2011) considers income, education, trust, and secular social networks because he expects that men score higher on these items. But he stresses too that women have broader social networks through religious participation. This variable is incorporated.

I investigate whether the effect of volunteering and donating on life satisfaction S is over- or underestimated when socio-economic characteristics like sex, nationality, working hours, locus of control, income, education, nationality, religious participation and regional differences are neglected. A first comparison of column (1) in Table 4 and Table 5 shows that the coefficients of ln V and ln D are lower, when some of these economic variables are included. But this impression changes if further variables are added – see columns (3) and (4). Nevertheless the correlation with life satisfactions stays significant. Our estimates in Table 5 reveal modified results compared with that of Krasnozhon, Levendis and Einolf: Einolf's compensating effects of sex differences on lnV transfer to life satisfaction. The coefficient of volunteering is smaller if the mentioned economic variables are neglected. The effect via donations is only small. Nevertheless the statistical effect stays significant. In the simplest model no direct effect of the sex variable can be observed the strongest link with Einolf's reflections. Among the other economic variables ln Y is most important. The others together seem to have a small dampening influence of ln V and ln D on ln S.

The differences between our approaches and those in Krasnozhon/Levendis (2020) and Einolf (2011) could be due to country specific effects or to the use of logarithmic variables in the former and linear measurement in the latter. As a robustness check, the estimates with non-log variables based on linear probability models are shown in Table 6. By and large, the results of ln V are confirmed. By contrast, the association between donations D and life satisfaction S in columns (2) - (4) of Table 6 is insignificant.

5. Conclusions

Volunteering and financial donations are not only linked by the fact that these two activities are primarily located in the non-market sector, but there are also very direct connections between these activities. Those who donate want the money to reach the right place. One way to achieve this is to get involved in the distribution. This is usually done through volunteering. Conversely, those who volunteer gain insight into what is happening in these fields and encourage better achievement of the goals through their own financial support.

Previous research on determinants of donations has identified key determinants and replications confirm their importance. However, there are other influences that have been largely neglected in the past. This paper shows whether and to what extent different life phases, family relationships, personality traits, the individual assessment of when a society is considered just, and taking on volunteering are important for donations. Empirical evidence can be found for each of these explanatory areas.

Those who hold an honorary office also demonstrate a higher willingness to donate than others. The hypothesis of independence is rejected, so that instrumental variable estimators are to be preferred. The basic correlation is not affected. Estimating both, the influence of donations and

volunteering, the latter reveals clear positive associations with life satisfaction. The importance of voluntary work is rated higher than that of donations. Although the consideration of interaction effects leads to a shift in relative importance, the basic explanatory pattern remains robust.

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Appendix

Table 1a: Probit estimates of monetary donations with cluster robust standard errors

approach→	(1) standard	(2) big 5	(3) characteristics	(4) parents	(5) professional
↓ variable	model	LoC	adolescence	markings	life
male	-.11020876				-.02169504
age	.05328928*				.05133033*
partner	-.06986316				.27700202
life satisfaction	.05683508				-.02998023
lnY	.21581805				
schooling	.03080876		.2595347***		.13243246
German	.99713711				1.2869195
Germany_East	-.14623286				-.21679485
full-time work	-.04315712*				-.04787066*
part-time work	-.01552394				-.02444732
siblings_N	.00243133		.0882549		
Christian_m	.0059198			.04743517	
non-denom_m	.38070487			.01494434	
extraversion		-.08325307*			
neuroticism		-.0177179			
agreeableness		-.09795837*			
conscientiousness		-.09046932*			
openness		.05955825*			
LoC_internal		-.03750458			
LoC_external		-.03965322*			

parents_care			.03830806		
German_grade			-.00337073		
math_grade			-.10572713		
language_grade			.1574374		
conflics_father			-.05702453		
conflics_mother			.0118731		
sports_youth			.3726909*		
music_youth			-.77339648***		
army			-.25567052		
volunt. soc. Year			-.75439111		
schooling_mother				.0267326	
German_father				.3865856	
firm size					-.1097608*
public service					.51980339
tenure					-.00447686
overtime hours					.07017001
earnings					.00005476
tests_correct					.01202303
tests_f alse					.19847071
_cons	-4.4080925***	5.1355263***	.63555585	.1967083	-2.2231358
N	3245	6327	5428	6321	2882
r^2_pseudo	.0945	.0777	.1692	.0029	.1468

Legend: * p<0.05; ** p<0.01; *** p<0.001

Table 1b: Continuation - Probit estimates of monetary donations explained by unpaid activities and assessing of equity

	(6) unpaid activity	(7) equity
volunteering_D	.77350964*	
citizens' initiative_D	-.44695398	
unpaid overtime_D	-.39946905	
hard work		-.24806072***
poverty		.22450128**
equal income		-.0558929
inheritance		-.07779417
_cons	.32562568	1.0842443
N	2227	6454
r^2_pseudo	.0766	.0514

Legend: * p<0.05; ** p<0.01; *** p<0.001; (a) – hard work, (b) – poverty, (c) – equal income, (d) - inheritance

Table 2: Variable selection estimates

	(1) lasso	(2) lars	(3) stepwise
volunteering	.14581238***	.15382527***	.15396291***
schooling	.11763458**	.10471993*	.10535536*
age	.00311055	.00383778	.0037553
full-time work	.0103991	.00882931	.00883387
sports_youth	.42780911**	.4459632**	.44677189**
music_youth	-.20379467	-.14376238	-.14270682
extraversion	-.07680649*	-.09010102**	-.08999015**
agreeableness	-.01757132	-.02928463	-.02933832
LoC_external	-.03051501*	-.02799051*	-.02814336*
hard work	-.14879174**	-.1532901**	-.15068661**
poverty	-.0572195	-.07380337	-.07367952
conscientiousness		.00685092	
openeness		.03449441	.03486517
_cons	2.359702*	1.9155686	1.9899229
N	6206	6206	6206
r2	.15138867	.15960083	.15952545

Legend: * p<.1; ** p<.05; *** p<.01; base of the three selection approaches are all significant variables of Table 1a and 1b.

Table 3: Regression and IV Lewbel estimates of donations with respect to volunteering

	Regress	Lewbel_1	Lewbel_2	Lewbel_3
volunteering	.08650636***	.12964418***	.12629463***	.11930868***
life satisfaction	.05309625**	.05113705**	.05128918**	.05160646**
health	-.03993559	.03776409	-.0379327	-.03828436
risk	.00968052	.01342265	.01313208	.01252606
firm size	-.00743046	-.00558237	-.00572587	-.00602516
public service	-.00544228	.02917792	.0273349	-.02349103
tenure	-.00608819*	-.006937**	-.00687109**	-.00673363**
full-time work	-.0254865***	-.02885361***	-.02859216***	-.02804687***
city size_youth	.09204795***	.08956811***	.08976067***	.09016227***
siblings_N	.00255921	.0057882	.00553748	.00501456
experience	.04095124***	.04519843***	.04486864***	.04418083***
language_grade	.12467229***	.12864881***	.12834005***	.12769607***
sports_youth	.24294547***	.23951682***	.23148188***	.23349463***
music_youth	-.0782274*	-.05868792	-.0620512	-.06336944
tests_correct	.04449702***	.04935057***	.04901252***	.04830749***
tests_false	-.12220035***	-.12308478***	-.12301635***	-.122287364***
test words	.06132186***	.0601998***	.06020408***	.06040034***
extraversion	-.07239084***	-.07437866***	-.07422431***	-.07390239***
conscientiousness	-.01681198	-.01124011	-.01167276	.01257509
LoC_internal	.00098502	.00147274	.00143487	.00135588
LoC_external	-.01198421**	-.0111552**	-.01121987**	-.01135407**
non-denominational	.10480878	.12842951*	.12659542*	.12277016*
_cons	-2.2460889***	-2.4899604***	-2.7410244***	-2.4315306***

N	1,777	1,777	1,777	1,777
r^2	.2258	.2221	.2227	.2625
Wu-Hausman test		9.229	2.169	15.994
H_0: exogen; F(1;9859)		0.002	0.141	0.000

Legend: * p<0.05; ** p<0.01; *** p<0.001; LEWBEL_1 – average values of industrial volunteering, LEWBEL_2 - German federal states as dummies and nationality dummy (=1 if German; = 0 otherwise), LEWBEL_3 - average values of industrial volunteering, German federal states as dummies and nationality dummy.

Table 4: Extended Cobb-Douglas estimates of life satisfaction with respect to earnings, volunteering, donations, care of relatives and childcare

	(1)	(2)	(3)	(4)
lnY	.0396924***	.03922474***	.04100961***	.03102612***
X2*lnY	.00024945	.00066056	.00085918	
lnV	.15866249***	.18608755***	.16703987***	.12200074***
X1*lnV	-.03189243*	-.0416108***	-.03282476***	
X2*lnV	.01992122	-.01790954**	-.00494793	
X1*X2*lnV	-.00651844	.00625049**		
lnD	.05000037***	.04462701***	.04335418***	.03220738***
D1*lnD	-.00188523			
X2*lnD	-.00621636*			
X1*X2*lnD	.00225834*			
care of relatives	-.01505324***	-.01395051***	-.0132223**	-.00372045
childcare	.03100067***	.03008926***	.03173699***	.03457518***
_cons	1.3148055***	1.3182792***	1.3001834***	1.3516801***
N	1657	1657	1657	2049
r^2	.2394	.2369	.2329	.1803

Notes: * p<0.05; ** p<0.01; *** p<0.001; Y – monthly gross earnings, V – frequency of volunteering (classified: =4 if daily; =3, if one time per week or more; =2, if one time per month or more; =1 if rarely; =0 if never, D – donations, X_1 – city size during the youth (classified: = 1, if large city; =2, if middle large city; =3, if small city; =4, if village), X_2 – overtime hours per month.

Table 5: Further extension of Cobb-Douglas life satisfaction estimates by economic variables

	(1)	(2)	(3)	(4)
lnV	.08559027***	.11149274***	.16703806***	.22063451***
lnD	.01916745***	.03079574***	.04254196***	.04498866***
childcare	.02604978***	.03043186***	.02522545***	.0246842***
male	-.02082178*	-.04253397***	-.01438525	-.02783789*
German	.2051424***	-.290782**	-.28007994**	-.3192966***
working hours	.00141623***	-.00083158	-.00403599***	-.00243765**
non-denominational	.00924684	-.00281921		-.02718117
LoC_external	-.0102688***	-.0082064***		-.00836077***
lnY		.04347118***	.09390298***	.06921956***
X2*lnY			.00097247	.00109573
X1*lnV			-.03389624***	-.0483812***
X2*lnV			-.00683039	-.01669674*
X1*X2*lnV			.0036563	.00452611
care of relatives			-.00995171*	.00424908
Eastern Germany			-.05779218***	-.00792826
age			.00081952	.00007372
public service				-.01282145
city size_youth				.01250948
_cons	1.6285497***	1.7408456***	1.2847254***	1.5480398***
N	2167	1940	1653	1617
r^2	.1978	.2019	.2683	.2883

Legend: * p<0.05; ** p<0.01; *** p<0.001

Table 6: Linear probability function estimates of life satisfaction

	(1)	(2)	(3)	(4)
volunteering	.09057459***	.06969267***	.08298194***	.09762919***
donations	.04302789**	.02737856	.02818384	-.00538566
male	-.35181227***	-.24016343***	-.19695292***	-.25926704***
Eastern Germany	-.07102477	-.09835881	-.12540069	-.12375481
German	1.0561848***	1.2761627***	1.2647177***	1.2510723***
working hours	.01450931***	.01347274***	.01311523***	.0102691***
non-denominational	-.48596962***	-.51794737***	-.55340061***	-.53194788***
LoC_external	-.05839882***	-.02595298***	-.02451025***	-.02358532***
care of relatives		-.17701948***	-.18336139***	-.18076404***
childcare		.08976196***	.10320052***	.10817941***
city size_youth			-.13481332***	-.12957053***
income (Y)				.00003276***
_cons	7.1518438***	6.5403874***	6.8229852***	6.7671196***
N	3537	3525	3525	3525
r^2	.1208	.1504	.1627	.1684

Legend: * p<0.05; ** p<0.01; *** p<0.001