MEASURING AND MONETISING

THE BENEFITS OF VOLUNTEERING TO SUSTAINABLE DEVELOPMENT

Reimagining Volunteering
for the 2030 Agenda

JULY 2020

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MEASURING AND MONETISING THE BENEFITS OF VOLUNTEERING TO SUSTAINABLE DEVELOPMENT ACROSS THE GLOBE

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In 2014 Andy Haldane, the Chief Economist at the Bank of England (the UK Central Bank), estimated that the contribution of volunteering in the UK, if measured to its fullest extent (including wellbeing benefits), could be somewhere between GBP 50 and GBP 200bn per year. This is between 2.5 per cent and 10 per cent of the GDP in the UK.[1] Haldane called volunteering a 'hidden jewel' of the UK economy.

Volunteering is very clearly one of the most positive activities in terms of contributing to happier and healthier communities. Volunteering operates on multiple levels - from the benefit to the individual volunteer in terms of their health, skills development, confidence, wellbeing and social connections to the services that volunteers provide in the community (sports clubs, charities, crisis centres, food banks, Citizens' Advice). If the Sustainable Development Goals (SDGs) are to be achieved, volunteering has a pivotal role to play. And we have now all seen this across the globe under the COVID-19 crisis. Volunteers are vital to community health and wellbeing.

What makes this type of social, wellbeing and economic analysis of volunteering possible in the UK is detailed extensively in this chapter, drawing on our work under the State of Life project. The objective is to share this knowledge as part of a shared global community of practice on volunteering. The chapter is structured in three sections answering the following questions:

1. **Is there evidence in the UK data that volunteering is beneficial to sustainable development and the UN SDGs in particular?**
2. **How can one establish the full social and economic value of volunteering in monetary terms,** using the latest welfare economics and social value methodologies?
3. **Can this open data approach be successfully replicated across the globe?**

Research Question 1 – Volunteering is beneficial to Sustainable Development

The first step is to present the evidence that volunteering is beneficial for a number of UN SDG, as follows:

- SDG 3 (Good health and wellbeing) – a key finding in State of Life work to date is that volunteering in the UK has an unambiguous benefit to the volunteer's health and wellbeing
- SDG 10 (Reduced inequalities) and SDG 5 (Gender equality) – the extent to which this benefit varies with age, gender, and income is examined.
- SDG 11 (Sustainable cities and communities) – Other socially desirable outcomes, such as trust and community cohesion, are also positively affected by volunteering.
- SDG 16 (Peace, justice and strong institutions) and SDG 17 (Partnerships for the goals) – It is shown that regular church attendance and membership of a sport group or organization is positively associated with both volunteering and wellbeing. These are examples of institutions that can work in partnership with volunteers to achieve higher wellbeing in society.

Work to date in the UK

Since 2014 State of Life (working as Jump Projects) has undertaken pioneering, innovative, scientific, data-led analysis of the UK-wide nationally representative population surveys. All of this data and modelling is directly relevant to the Challenge Fund brief around the social and economic value of volunteering and how this helps achieve the Sustainable Development Goals.

- In 2014 the State of Life team were responsible for Hidden Diamonds,[2] which explored the social, wellbeing and economic benefits from volunteering in sport.
- In 2016 the GIVERS[3] report further investigated whether these findings held true for other types of volunteering and developed a behavioural model to understand the motivations, barriers and benefits to volunteering.
- In 2018/9 State of Life continued this pioneering work with research on the important distributional impact of volunteering and how volunteering is relevant to diversity of ethnicity and income in the UK. The results of this work can be found in The ABC of BAME and A Bit Rich[4] reports.
- Finally, in 2019 in a paper called Happy Days, State of Life undertook advanced analysis to establish the most robust quasi-causal estimates to date of the impact that volunteering has on an individual's wellbeing and self-perceived health.

The work to date has focused on the UK Government wellbeing and civil society policy agenda and the need for greater wellbeing (mental health), resilience, trust and social cohesion in our communities. **These UK policies align directly with a significant number of the Sustainable Development Goals (SDGs).**

UK data sources on volunteering

The UK has world leading data sets that measure our wellbeing alongside activities like volunteering. Among these are the Taking Part survey[5] (approx 165,000 respondents with 40,000 volunteers) on participation in arts, culture and sport, the Community Life survey[6], which covers both formal and informal volunteering (43,000 total respondents with 29,500 volunteers) along with more details on the volunteering experience, and the more generalistic Understanding Society panel survey (131,000 respondents with 25,188 volunteers), which replaced the British Household Panel Survey (BHPS) starting from 2009[7].

The data is available for open source access at https://discover.ukdataservice.ac.uk// (registration and accreditation with the UK Data Service is required). State of Life already had access to the datasets mentioned above up to years 2016-17.

Estimation methodology

To provide evidence of the positive contribution of volunteering to the SDGs as mentioned above, we employ the following quantitative techniques:

- OLS regression analysis - this is the simplest form of regression analysis that reveals the correlation between volunteering and wellbeing while controlling for (removing from the

results) other factors in life that may improve health and wellbeing like earning, marriage, religion, education, gender etc.

- Fixed effect (FE) and First difference (FD) regression analysis - these are more advanced types of regression analysis that can be applied with panel data. They involve transformations to cancel out a person's individual characteristics even if they cannot be observed, exploiting the fact that we observe the same person at different points in time. This further isolates the impact of volunteering on wellbeing and other variables like trust and sense of belonging.

More details on the econometric model used (a list of outcome and control variables used, an overview of the derivation of the model estimates, the assumptions required for the validity of the model etc.) can be consulted in the Happy Days report[8] or in the derived academic publication.[9]

Results

SDG 3 – Good health and wellbeing

Does volunteering in the UK contribute to increased personal wellbeing and health?

Yes, it does. This question was the central topic of the Happy Days Report[10], published by State of Life in 2019. The report provides "the most robust quasi-causal estimates to date of the impact that volunteering has on an individual's life satisfaction and self-perceived health." This is achieved by using panel data estimation techniques - fixed effects and first differences regressions - on a large panel dataset featuring 10 waves of the UK's biggest longitudinal household study - known as the British Household Panel Survey (BHPS) until 2008 and as Understanding Society (USoc) from 2009 onwards.

The improvement in methodology is because the model based on panel data allows better corrections to remove biasing factors. Biasing factors are responsible for a positive correlation between wellbeing and volunteering but are not causal, for example, because people who are likely to volunteer come from a social subgroup which is happier to begin with - they could be more affluent, more social, lead a more active lifestyle and more likely to be students or retired - these are all associated with increased life satisfaction but are not necessarily a consequence of volunteering.

The paper finds that having volunteered in the last 12 months is associated with an increase in life satisfaction of 0.034 on a 1-7 scale in the first differences model. This corresponds to 0.057 on the ONS-endorsed 0-10 scale if we apply a linear transformation. The fixed effects model yields a slightly higher coefficient of 0.041 on a 1-7 scale (0.068 on a 0-10 scale). This effect is roughly comparable to living in a less deprived neighbourhood and also roughly equal in size to one-sixth of the increase in life satisfaction associated with full-time employment vs. being unemployed.

The Happy Days report shows that alongside life satisfaction, robust quasi-causal positive associations were also found between volunteering and self-reported general health, mental health measured by the GHQ index (note that it is an inverted index with 0 being the best possible mental health state), and happiness (a more momentary/experiential wellbeing measure than life satisfaction). There is also a positive association with the other ONS-endorsed measure of 'feeling that things in life are worthwhile,' but the lack of good panel data on this means that it is only the result of a cross-sectional regression.

Table 1 Volunteering and wellbeing: OLS regression coefficients

Dataset / Wellbeing variable	Understanding Society	Taking Part	Community Life
Life satisfaction (0 to 10[+])	0.057*** (0.095[+])	0.080***	-0.011
Happiness (0 to 10)		0.075***	0.012
Anxiety (0 to 10)		0.135***	0.140***
Worthwhile life (0 to 10)		0.204***	0.117***
General health (1 to 5)	0.110***	0.080***	0.067***
Mental health problems - GHQ index, 0(best) to 36(worst)	-0.316***		

Notes: Coefficients from OLS regression of life satisfaction on the variable indicating volunteering of the type described in the row/column headers. **In this table and all subsequent regression output tables**: All models include control variables for a wide range of determinants of wellbeing as set out in Fujiwara and Campbell (2011). Stars indicate statistical significance levels: *** < 1 per cent; ** < 5 per cent; * < 10 per cent significance. Heteroscedasticity-robust standard errors used.
[+] Understanding Society life satisfaction is on a 1 to 7 scale (a linear mapping to a 0 to 10 scale is provided in parentheses).

Table 2 Volunteering and wellbeing in Understanding Society + BHPS: OLS vs. panel data regression

Dataset / Wellbeing variable	Pooled OLS	Fixed effects	First differences
Life satisfaction (1 to 7)	0.057***	0.041***	0.034***
General health (1 to 5)	0.110***	0.039***	0.029**
Mental health problems - GHQ index, 0(best) to 36(worst)	-0.316***	-0.306***	-0.220***

Table 3 Volunteering and wellbeing in Taking Part: OLS vs. panel data regression

Dataset / Wellbeing variable	Pooled OLS	Fixed effects	First differences
Happiness (0 to 10)	0.075***	0.077***	0.125***
General health (1 to 5)	0.080***	0.081***	0.121***

What is the optimum 'dose' of volunteering - how often, how long and what type of volunteering?

Formal volunteering, as well as more frequent volunteering, is better. The Happy Days Report also utilizes the extent of the information on volunteering available in the nationally representative surveys in order to investigate whether certain kinds or frequencies of volunteering are better than others.

The Community Life survey collects data on both formal volunteering (as part of a group or organisation) and informal volunteering (helping other individuals that are not relatives on one's own, without being engaged with an organised group of volunteers). These findings reveal that a positive and statistical increase in life satisfaction is only associated with formal volunteering (but other outcomes, such as the sense of a worthwhile life and self-reported general health, are positively associated with any kind of volunteering in the Community Life data). This conclusion is supported by the regression coefficients in

the table below, where we can also see that the positive association is higher for higher frequency volunteering (once a month):

Table 4 Life satisfaction and different types of volunteering in Community Life

Type of volunteering	In the last 12 months	At least once a month
Any type of volunteering	-0.011	0.028
Formal volunteering	0.063***	0.120***
Informal volunteering	-0.025	-0.004
Employer-sponsored volunteering	0.060	0.102

The Understanding Society data collects more information on the frequency with which one volunteers. In the table below we can see that volunteering more frequently is associated with higher increases in life satisfaction, as well as (self-reported) physical and mental health. Volunteering at least once a week has the highest positive correlations, whereas low-frequency volunteering (once a year or less) is not associated with any significant improvements except for general health. Note that the use of Understanding Society data means that the results below are provided by robust panel data models.

Table 5 Volunteering frequency and wellbeing in Understanding Society + BHPS (fixed effects)

Volunteering frequency / Wellbeing variable	Life satisfaction (1 to 7)	General health (1 to 5)	Mental health problems - GHQ index, 0(best) to 36(worst)
At least once a week	0.095***	0.126***	-0.498***
At least once a month	0.078***	0.129***	-0.411***
Several times a year	0.038***	0.098***	-0.071
Once a year or less	-0.042***	0.057***	-0.061
Never/almost never		reference group	

Finally, the Taking Part data reveals that volunteering in arts and culture has an insignificant association with life satisfaction but volunteering in sports is positively and statistically significantly associated with wellbeing.

Table 6 Life satisfaction and volunteering in different sectors in Taking Part (OLS)

Type of volunteering	Coefficient
Any type of volunteering	0.080***
Volunteering in arts/culture	0.017
Volunteering in sport	0.068**

SDG 11 – Sustainable cities and communities

What other wellbeing-related outcomes are positively impacted by volunteering?

Here, we augment the Happy Days analysis by considering further indicators of individual development and social/community development. In the table below we can see how volunteering in the last 12 months correlates with indicators of confidence, resilience, social mixing (diversity), social capital, trust, and community cohesion, using Understanding Society data. Volunteering is positively and significantly associated with measures of mixing with people from diverse backgrounds, trust and neighbourhood cohesion, as well as social capital (number and quality of friendships). There is no significant association between volunteering and confidence/resilience indicators in USoc.

Table 7 Volunteering and other outcomes in USoc (OLS)

Outcome variable and answer scale	Coefficient of volunteering
I can usually solve my own problems - 1 (strongly disagree) to 4 (strongly agree)	0.005
Losing confidence in oneself - 1 (not at all) to 4 (much more than usual)	0.009
Respondent has best friends of different ethnicities - 0 (No) / 1 (Yes)	0.031***
Proportion of friends with similar age - 1 (all) to 4 (less than half)	0.091***
Proportion of friends with same race - 1 (all) to 4 (less than half)	0.093***
Proportion of friends with similar level of education - 1 (all) to 4 (less than half)	0.096***
Proportion of friends who have a similar job - 1 (all) to 4 (less than half)	0.097***
Proportion of friends with similar income - 1 (all) to 4 (less than half)	0.110***
Proportion of friends living in local area - 1 (all) to 5 (none)	-0.005
Proportion of friends who are also family members - 1 (all) to 5 (none)	0.070***
Respondent has any friends - 0 (No) / 1 (Yes)	0.014***
I can rely upon my friends - 1 (not at all) to 4 (a lot)	0.047***
Number of close friends of respondent	0.887***
I trust people in this neighbourhood - 1 (strongly disagree) to 5 (strongly agree)	0.036***
I talk regularly to neighbors - 1 (strongly disagree) to 5 (strongly agree)	0.108***
I feel like I belong to this neighbourhood - 1 (strongly disagree) to 5 (strongly agree)	0.077***
The friendships in my neighbourhood mean a lot to me - 1 (str. disag.) to 5 (str. agree)	0.112***

All in all, this means that volunteering helps build stronger communities by improving what in UK policy terms is known as 'social cohesion' - the sense that you belong to your community and trust other people. The OECD countries have a standardized measure of 'generalized trust'[11] (*Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?*), which is also found to be positively correlated with volunteering.

In all of the State of Life team's evidence to date, volunteering is shown to have a positive impact on trust in all demographics and particularly those who start with a trust deficit (in the UK this is lower socio-economic groups - 'A Bit Rich' 2019).[12] Mixing with people from different backgrounds is important and the 2019 'A Bit Rich' study found that volunteering has a positive role to play on trust and social diversity/mixing:

- Volunteers have around two-thirds higher odds of reporting trust in people living in the

neighbourhood, compared to non-volunteers.

- 44 per cent of all volunteers reported having mixed with people from different ethnic backgrounds or religions in the past 12 months, compared to only 31 per cent of the general population

SDG 10 (Reduced inequalities) and SDG 5 (gender equality)

Are volunteers significantly more likely to come from a particular demographic subgroup?

This is perhaps the easiest question to answer, as it requires the least sophisticated modelling, limited to presenting standard descriptive statistics - means and proportions of the various demographic variables available in the national household surveys, split between volunteers and non-volunteers. Below are the statistics from the dataset with the highest sample - the Understanding Society + BHPS panel containing 10 waves of data on volunteering:

Table 8 Wellbeing and socioeconomic characteristics of volunteers and non-volunteers, in the Understanding Society + BHPS panel dataset

Variable	Full sample	Volunteered in the last 12 months	Didn't volunteer in the last 12 months
Sample size	224238	43658	180580
Life satisfaction (1 to 7)	5.20	5.35	5.16
General health (1 to 5)	3.57	3.74	3.53
Mental health problems - GHQ index, 0(best) to 36(worst)	11.13	10.69	11.24
Household income (monthly), BGP	3,225	3,577	3,140
Age	46.94	47.42	46.82
Female	55.2%	57.4%	54.7%
Married	52.4%	56.6%	51.4%
No children	72.1%	73.5%	71.7%
Higher education degree	25.4%	37.2%	22.6%
Employed (full or part-time)	48.2%	44.8%	49.0%
Urban area	75.1%	70.2%	76.2%
Religious	56.8%	64.8%	54.7%
White	89.4%	90.9%	88.9%

Notes: The statistics calculated above exclude those respondents for whom the variable of interest is unknown.

There are several patterns that can be distinguished from these results. Volunteers in the UK are more likely to have higher education (37 per cent vs. 23 per cent), be religious (65 per cent vs. 55 per cent), come from rural areas (30 per cent vs. 24 per cent), and slightly more likely to be female and married than non-volunteers. They also have almost 15 per cent higher mean household income.

Extensive wellbeing regression analysis conducted by State of Life as part of its previous work revealed that nearly all these factors are associated with higher levels of life satisfaction (as can be seen in the table above). The resulting question is then whether higher levels of wellbeing observed for volunteers are simply because they are initially from happier or whether groups in society or this has actually been triggered by their experience as volunteers.

This is precisely why in the 'Happy Days' study we used not only multivariate regression analysis but also panel data estimation techniques - so that we can isolate to the best extent possible the relationship between wellbeing and volunteering from the wellbeing changes associated with higher income, higher education, living in a rural area, and numerous other demographic factors as well as unobservable individual characteristics such as personality or motivation. The results of the regression remain positive for the link between volunteering and wellbeing and have already been presented earlier in analysis of wellbeing and SDG 3.

Who benefits the most from volunteering?

The Happy Days study also looks at how the association between volunteering and health and wellbeing differs across the population by age, gender, and income. The analysis is conducted using robust panel data regression models with interaction terms between volunteering and the demographic variable of interest in the BHPS + USoc data and presented in the table below.

Table 9 Volunteering and wellbeing by age, gender and income

Demographic category / data set	USoc + BHPS (FE)	USoc + BHPS (FD)
Total	0.041***	0.034***
Gender = Female	0.043***	0.050**
Gender = Male	0.039***	0.020
Age = 16-34	0.037**	0.051*
Age = 35-54	0.006	0.004
Age = 55-74	0.095***	0.060**
Age = 75+	0.058*	0.099
Low income[1]	0.064***	0.073**
Lower middle income[1]	0.039***	0.021
Upper middle income[1]	0.025*	0.019
High income[1]	0.043**	0.051*

Notes: The reference category are all non-volunteers in the sample. Brackets for monthly household income (below 1,5K / 1,5-3K / 3-5K / 5K+).

We can see that there is evidence (in the first differences model) that **volunteering has a stronger impact for UK women than for men**, thus being a potential useful instrument in fighting gender inequality pursuant to SDG 5. The report also highlights higher wellbeing increases associated with volunteering at the extremes of the income distribution, but particularly for the lowest income category - suggesting that 'volunteering can be promoted as part of a policy intervention aimed at improving the quality of life of

vulnerable groups in society.' Regarding age, we can observe the most positive correlations at ages 55 and above, whereas for middle-aged respondents (35-54) there is no statistically significant relationship.

SDG 16 (Peace, justice and strong institutions) and SDG 17 (Partnerships for the goals)

What are some of the key drivers of volunteering? How can we maximise these and their impact?

Answers follow in the bullet list below. This research question implies a similar approach using multivariate regression analysis, with the key change that volunteering is now no longer an explanatory variable, but rather the outcome variable of the regression, which the model tries to explain as a linear function of the numerous demographic variables available.

This type of analysis was included in the 2016 GIVERS[13] report as well as other works by State of Life. The main conclusions based on USoc and BHPS data are summarized below (besides the relationship between volunteering and religious variables, which is discussed in the next subsection). Note that the volunteering variable in USoc and BHPS corresponds to **formal volunteering** by virtue of the question text.

- Higher income is associated with more volunteering, but with mild intensity - about a 1 percentage point (pp) increase in volunteering associated with the doubling of one's household income.
- There is an inverse U-shaped relationship between volunteering and age, with a peak around age 55; older people are more motivated by seeing the impact of their work.
- Males are 1.9 pp less likely to volunteer than females, all other things equal. Men are more likely to volunteer in sport (60 per cent male) whereas women are more likely to volunteer outside of sport (60 per cent female).
- Of all marital statuses, single people are the most likely to volunteer - about 1.7 pp more so than married respondents, 5.4 pp more than the cohabiting but unmarried, 3 pp more than the widowed and 1.9 pp more than the divorced.
- Education is very strongly correlated with volunteering - those with a higher education degree are 20 pp more likely to volunteer than those without any degree, while respondents with A levels or GCSE are over 9 pp more likely.
- Being employed is negatively associated with volunteering (-6.5 pp versus the unemployed). Other groups with low likelihoods of volunteering are those on maternity leave (-14.4 pp) and the long-term sick or disabled (-2.8 pp vs. the unemployed). Some categories with higher propensities are, unsurprisingly, students (+10.8 pp), 'doing something else' (+10.8 pp), unpaid workers in family businesses (+4.2 pp) and the retired (+1.9 pp).
- Young people are, unsurprisingly, more motivated to volunteer in order to develop new skills and get on in their career and this is also true of lower socio-economic groups.
- Health is an important factor for volunteering: those with very good or excellent health have more than 8 pp more volunteers among them compared to those with poor health. Those with good health have 6 pp more and respondents with fair health, - 4 pp more.
- Having 3 or more children is associated with more than a 2 pp higher likelihood of volunteering as opposed to not having any children

- Renting one's accommodation or having it bought on mortgage is correlated with lower propensities to volunteer (-3.7 pp and -2.4 pp respectively compared to owning outright).
- Asian, Black and Other UK ethnicities exhibit lower likelihoods of volunteering compared to White British (-7.8 pp, -3.7 pp and -2.6 pp, respectively) but where these groups do volunteer, they are twice as likely to be motivated by religion.
- Membership of a sport group, club or organisation is associated with a 4.3 pp higher likelihood of volunteering.

The evidence from the 2019 work on diversity of income and ethnicity in volunteering (A Bit Rich and ABC of BAME)[14] also shows that the **wellbeing and health benefits of volunteering are considerably higher for marginalized groups compared to other groups**.

However, the UK data shows that lower SEG groups are less likely to be involved in formal volunteering groups (including sport) - meaning they are missing out on the very type of volunteering that is associated with greater health and wellbeing benefits.

This may be due to the need, in their communities, to help and support friends and neighbours with everyday challenges of life rather than volunteering for broader political, societal issues.

This work also highlights the different motivations to volunteer, with lower socio-economic groups citing a motivation to use volunteering as a way to learn new skills and progress their career ambitions.

What is the impact of religious belief and church attendance on volunteering?

Continuing based on the approach presented above in UK open data, being religious is associated with an up to 6.7 pp higher likelihood to volunteer. Even stronger than that is the association with church attendance, and it increases with higher frequencies of attendance. Thus, compared to those who never or almost never attend church, we observe 8.7 pp higher volunteering rates for those who attend at least once a year, 13 pp more volunteering for those who attend at least once a month, and **23 pp higher volunteering for those who attend once a week or more.** Those who only attend church at weddings or funerals did not display a positive association with volunteering.

This evidence is likely to suggest that the higher rates of volunteering for religious people are mainly driven by regular church attendance, especially since the coefficient of religious belief becomes insignificant in the models which also include church attendance in the equation. Our hypothesis on the causal chain would be that regular church attendance indicates a strength of faith that makes one likely to get involved in the life and problems of the parish community and encouraged to take part in the activities organised by the Church, which overwhelmingly rely on volunteer work.

State of Life's ongoing work on evaluating the economic and social value of churches contains further information about the scale of volunteering in churches across the UK. According to a survey carried out by the National Churches Trust in 2020, the number of volunteer hours provided to a church is 214 per month in 2020, up from 114 in 2010. Volunteering and social action in churches is experiencing a significant upward trend in the last decade on the background of austerity measures enforced after the 2008-09 recession. Church volunteers are often providing important social good and community care

through food banks for the poor, mental health services, drug and alcohol support centres and youth and childcare.

While the role for the Church in the UK is increasingly secular in meeting community needs relative to health and poverty reduction, we are aware that the role of the Church in the rest of the world can be very different and less neutral in terms of how it responds to and meets the needs of everyone (gender, sexuality and faith) in the wider community.
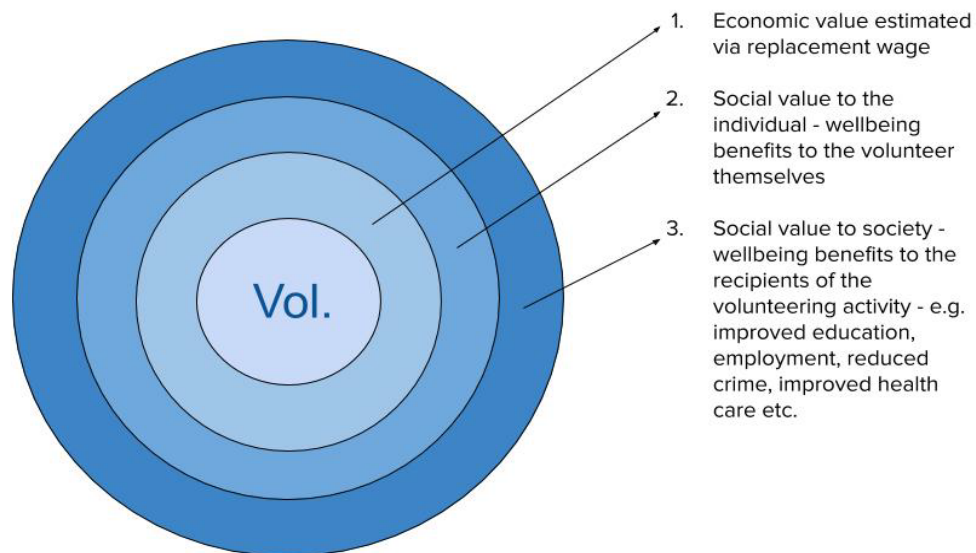
Research Question 2 – Modelling the economic and social value of volunteering

Given the undisputable benefits of volunteering to individual and social welfare that we showed in RQ1, it is a natural consequence that this information be taken into account by national governments across the world to influence their decision-making process so as to promote volunteering. This can be best achieved by adopting a methodology that can incorporate the benefits of volunteering into government policy appraisal and evaluation. The most popular policy appraisal method is cost-benefit analysis. Incorporating the benefits of volunteering, which are non-financial, into cost-benefit analysis is not straightforward, but below we propose a model that achieves this objective by estimating a comprehensive monetary equivalent value of volunteering. Thus, it can also be conveniently incorporated into other quantitative appraisal and evaluation techniques, such as cost-effectiveness analysis or social return on investment (SROI).

The model includes a number of layers or concentric circles of value, each of which represents a different aspect of the benefits of volunteering. Figure 5.10 depicts this model as a 'Halo'[15] of value that stretches out from the volunteer. This presents a step by step approach to valuing volunteering.

Figure 1 Halo model of volunteering

Concentric circles of value radiating out from the volunteer - a 'Halo' of value generated by the giving of their time to their community.

1. Economic value estimated via replacement wage

2. Social value to the individual - wellbeing benefits to the volunteer themselves

3. Social value to society - wellbeing benefits to the recipients of the volunteering activity - e.g. improved education, employment, reduced crime, improved health care etc.

We provide more details on the method and meaning of each circle below.

1. Economic value via wage replacement

This circle is the closest to the traditional economic measures and the one with a longer history of inclusion into economic appraisals and evaluations of volunteering policy. The benefits of volunteering are monetized by estimating the amount of money that would need to be paid for the work provided by the volunteers if they were replaced by paid staff (hence the name 'wage replacement'). The fact that this work is instead provided for free represents a saving to the organizer of the programme (which can be an NGO, a private institution, or a public institution, in which case it would represent savings to the public budget).

Wage replacement value is normally also the most straightforward to estimate because it only requires two input factors. One is the number of volunteer hours provided as part of the programme, which is normally kept track of by the organizing institution. The second one is an estimate of the wage rate that would have been paid for the work (if it hadn't been provided by volunteers). A lower-bound estimate would be to apply the regional or national minimum wage in the region/state/country where the activity is held, but a more accurate estimate would involve a wage rate that takes into account the skill level of the volunteers and the type of work they do, as volunteers are often performing skilled work.

2. Social value to the individual - benefits to the volunteers themselves

A more comprehensive assessment of the policy moves beyond purely financial values and also considers other outcomes that are not measured in terms of money but are clearly desirable for individuals and society - happiness, good physical and mental health, motivation, confidence, good social relationships etc. All these are the determinants of greater wellbeing, which some theories say is the only thing with inherent value that people strive to achieve, whereas financial outcomes are merely instruments to achieve greater wellbeing. We pursue a middle ground between this new frame of thought and more traditional cost-benefit analysis and consider both economic value (via wage replacement above) and the value of increased wellbeing.

A multi-dimensional evaluation approach would acknowledge all of the outcomes mentioned in the previous paragraph to paint a picture of the broader benefits of volunteering. However, cost-benefit analysis is kept manageable if all wellbeing improvements are accounted for and monetized via a single measure - life satisfaction.

There are several approaches to estimate the monetary value of increased life satisfaction, some of the most prominent being:

- The Frijters and Krekel (2020) WELLBY (Wellbeing Adjusted Life Year) valuation via social costs of production - costs incurred by the NHS (National Health Service of the UK) to produce one Quality Adjusted Life Year (QALY), estimated by NICE (National Institute for Health and Care Excellence) at GBP 15,000. 1 QALY is an extra year of life spent in perfect health. Stated preference studies have led to the conclusion that an extra year of life in perfect health (1 QALY) is equivalent to 6 WELLBY. This method therefore assigns a linearly scalable value of GBP 2,500 per person per year to an increase of 1 in life satisfaction on a scale of 0-10.
- Another estimate of the value of a QALY widely used by the UK government, coming from a study on individual willingness to pay for preventing road accidents, equal to GBP 60,000 per

QALY. This can be coupled with the same QALY-WELLBY equivalence as above to yield a monetary estimate of GBP 10,000 per WELLBY. The individual willingness to pay is understandably higher than the government cost of production.

- The Fujiwara (2013) three-stage valuation approach, which estimates the equivalent amount of income that a person would require to give them the same uplift in life satisfaction. This is done via a robust quasi-causal estimate of income on wellbeing estimated in a separate previous study using lottery wins as an instrumental variable.

The Fujiwara (2013) approach is used in the Happy Days report and generates a wellbeing value for volunteering of **GBP 911 per person per year** based on the first differences regression coefficient (**up to GBP 1,095** for the fixed effects coefficient). This method was also acknowledged in the main government guidance to policy appraisal and evaluation of the UK government – the HMT Green Book (2018). The Frijters and Krekel (2020) method using the social costs of production provides a more conservative value - **GBP 142 (for FD) to GBP 171 (for FE) per person per year,** whereas using values based on the UK government estimates for road accidents it would amount to **GBP 568 (FD) or GBP 684 (FE)**. The latter has the significant advantage of being benchmarked to a widely accepted and credible measure of the QALY (Quality-Adjusted Life Year), which has a unit cost approved by the UK Treasury and widely used in public policy appraisal and evaluation.

The value should then be multiplied by the number of volunteers involved and by the duration of the volunteering programme to arrive at the total wellbeing value of the programme to the individuals who volunteer.

It should be noted that wellbeing benefits to the individual who volunteers are very likely to also have spillover effects on their family and friends, who may also become slightly happier from the fact that their family member / friend is now better off. We currently do not have the data which captures this, but it is feasible to design studies in the future that can estimate this effect.

3. Social value (wellbeing benefits) to the recipients of volunteering activities

Here we consider the other side of volunteering - in circle 2 we looked at those who give unpaid help, whereas now we look at those who receive the help. The benefits to the recipients of volunteering will be programme-specific. A programme to encourage children to enrol and stay in school will improve education and reduce crime. A career services workshop for people not in employment will improve employment, motivation, and job-seeking skills. A midwife programme will prevent deaths at birth and improve the health of newborn children and their mothers.

All these outcomes will improve the wellbeing of the people who attend the respective programmes. There are several ways to measure this improvement. One is to directly ask the people benefitting from the programme about their levels of wellbeing. Another one is to monitor their improvement in intermediate outcomes (such as the number of people finding a job, the number of school dropouts prevented, the number of deaths at birth prevented etc.) and then apply the improvements in wellbeing associated with these outcomes that have been derived in other studies. Asking about wellbeing directly facilitates calculations and requires fewer assumptions, but depending on the nature of the programme, the indirect method may sometimes prove more feasible.
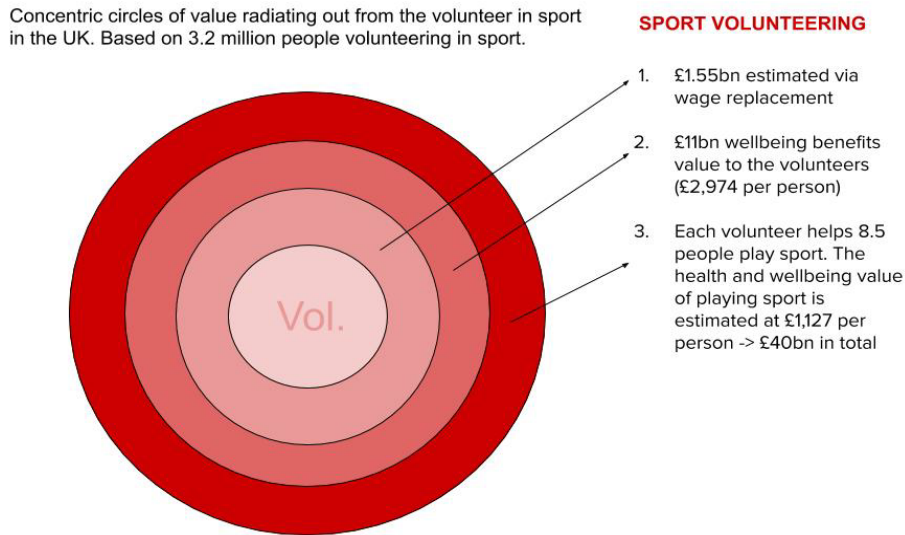
It is important to note that all the more robust methods involve bespoke data collection to prove that the programme was effective. The outcomes of programme beneficiaries must be compared to an adequate counterfactual, for example by including a control group in the data, which consists of people with the same characteristics/background as those targeted by the programme. Where appropriate, the data should be collected both before and after the intervention, and for programmes with longer-term impacts (e.g. those targeting education or employment), it is ideal to collect data again in the future to see how long the positive changes are maintained. One should be wary of evaluations that assign social value to programmes without adequately addressing causality.

After measuring the wellbeing benefit to the programme beneficiaries as described in the previous two paragraphs, this benefit can be converted into a monetary value for cost-benefit analysis in the same way as the wellbeing benefit to volunteers described in circle 2.

Example of the Halo Effect model in action: economic value of sport volunteering

This work is a legacy of the London 2012 Olympics and the Volunteering charity set up to capitalize on that moment, 'Join In'. The work was presented in 2014 by Lord Gus O'Donnell[16]. The report estimates sport volunteering to be worth GBP 50bn and matched both the methodology and final figures of Andy Haldane, the Chief Economist at the Bank of England[17]. Sport is the largest sector of volunteering in the UK and is approximately 15-25 per cent of all volunteering in the UK.

Figure 2 Halo effect model and sport volunteering

Concentric circles of value radiating out from the volunteer in sport in the UK. Based on 3.2 million people volunteering in sport.

SPORT VOLUNTEERING

1. £1.55bn estimated via wage replacement

2. £11bn wellbeing benefits value to the volunteers (£2,974 per person)

3. Each volunteer helps 8.5 people play sport. The health and wellbeing value of playing sport is estimated at £1,127 per person -> £40bn in total

Research Question 3 - Towards a global framework for measuring and valuing volunteering

To quantify the economic and social value of volunteering, information on the number of volunteers, frequency of volunteering, and number of hours volunteered is required at different points in the analysis – along with what type of help and service volunteers are providing.

As mentioned above, the UK has large nationally representative surveys that track volunteering (frequency, duration, longevity), health and wellbeing alongside other variables such as trust in others, sense of belonging, social mixing (mixing with people of different backgrounds).

In building these data sets, the UK has (working with and learning from other nations) evolved a set of workable definitions of volunteering that aligns with the guidance from the ILO resolution in 2013 and the subsequent 2019 critical review in terms of measuring the different types, frequency of volunteering, as mentioned earlier.

The 2019 critical ILO review discussed the merits of broad methods of collecting data and the more targeted, detailed versions used by the likes of the UK. The review also recognizes that there may exist or evolve different language that is more relevant e.g. what the ILO terms 'direct' volunteering is termed 'informal' volunteering in the UK.

In the UK, the Community Life survey has the highest level of detail on volunteering (for example, it incorporates the distinction between formal and informal volunteering). We recommend a standard template for questions to measure volunteering globally, based on the Community Life questions, but we understand that UNV and other members of the Community of Practice can contribute with first-hand experience of life and culture in the Global South to help test and refine these questions.

Table 10 Standard set of questions to measure volunteering globally

Volunteering identifier	**In the last 12 months**, that is, since [DATE ONE YEAR AGO], have you given unpaid help to any groups, clubs or organisations in any way? (formal volunteering) In the last 12 months, that is, since [DATE ONE YEAR AGO], have you given any unpaid help for someone who was not a relative? (informal volunteering) Answer options: 1. No; 2. Yes
Volunteering frequency	And **over the last 12 months, how often** have you done something to help [this/these] group(s), club(s) or organisation(s)? And **over the last 12 months, how often** have you given unpaid help to someone who is not a relative? Answer options: **1. at least once a week, 2. less than once a week but at least once a month, 3. or less often?**
Volunteering duration	Now just thinking about the **last 4 weeks.** Approximately **how many hours** have you spent helping this/these group(s), club(s) or organisation(s) in the last 4 weeks? Approximately **how many hours** have you spent helping someone who is not a relative in the last 4 weeks? Answer options: free form number
Volunteering longevity	How many years have you been helping out as part of a group, club or organisation? How many years have you been helping someone who is not a relative? Answer options: free form number

Beyond the above, one can also include a set of questions, featured in the UK data set Community Life, on the motivations and barriers to volunteering. The questions cover why people volunteer, why they do not and how this varies for demographics of age, gender and race.

The questions as to why people volunteer and how we can recruit, manage and reward volunteers effectively is just as important as who volunteers and how much. Especially as the information helps us to build, develop and grow the massive human resource of volunteering.

Measuring wellbeing alongside volunteering

In 2010 the UK Office of National Statistics (ONS) launched the standard '4 ONS Wellbeing questions' after detailed consultations with global experts in wellbeing and statistics. The questions were first introduced in the Annual Population Survey and then numerous other nationally representative surveys as well (a list can be found [here](#)). People are asked to respond to the questions **on a scale from 0 to 10** where 0 is "not at all" and 10 is "completely". The questions are:

1. **"Overall, how satisfied are you with your life nowadays?"** (life satisfaction)
2. **"Overall, to what extent do you feel the things you do in your life are worthwhile?"** (worthwhile)
3. **"Overall, how happy did you feel yesterday?"** (happiness)
4. **"Overall, how anxious did you feel yesterday?"** (anxiety)

The answers to these questions (and in particular question 1) provide the necessary inputs to estimate a monetary equivalent of the positive effects of volunteering on society.

The State of Life template for measuring volunteering

The State of Life team have, in the UK, developed a simple open data model and survey tool that asks the same UK data set questions to volunteers in particular organisations or sectors to understand how they differ from the national average volunteers.

In the State of Life volunteer impact survey, the questions on volunteering and wellbeing described above are complemented by standard demographic questions that help isolate the positive impact of volunteering on wellbeing from other factors.

After capturing information on volunteering, wellbeing, and demographics using this survey instrument, a monetary value for the social impact of volunteering can be estimated using the methodology presented earlier in this chapter (the Halo Effect model). This monetary value can then provide crucial information for well-informed policy analysis and evaluation in the field of volunteering.

State of Life's work to date is to democratize access to these UK open data sets on volunteering, wellbeing and other aspects of social value. And there is potential, in collaboration with the UNV Community of Practice, to build on and develop these insights into global frameworks and open data assets that are applicable worldwide.

Discussion and conclusion

There is extensive evidence in the studies mentioned above of the contribution of volunteering to several key Sustainable Development Goals of the UN. The positive relationship between volunteering and life satisfaction, physical health and mental health using a robust quasi-causal estimation setup is a solid argument in favour of the contribution of volunteering to SDG 3 (good health and well-being).

Stronger wellbeing uplifts for volunteers that are female or in the low-income bracket highlight the potential of volunteering to reduce socio-economic inequalities and contribute to gender equality, and thus help achieve SDGs 5 (gender equality) and 10 (reduced inequality).

The positive association between volunteering and community cohesion (feeling of belonging to the neighbourhood), trust in people (including trust in neighbours), and social capital (number of close friends, relying on friends) implies that volunteering is also a suitable instrument for achieving SDG 11 (sustainable cities and communities).

Finally, the fact that formal volunteering (volunteering as part of a group) is associated with higher benefits, as well as the strong positive links between volunteering and church attendance or sport club membership, highlight how different groups and organisations can work together to magnify the wellbeing improvements they can bring to individuals and society, contributing to SDGs 16 (peace, justice and strong institutions) and 17 (partnerships for the goals).

This approach has worked well in the UK and is promising in terms of portability to countries in the Global South. The Halo Effect model can be the basis used to design data collection instruments (surveys) to measure and quantify the social and economic value of volunteering in any country in the world. Furthermore, the use of a standardized set of questions (such as the State of Life Volunteer Impact Survey) will allow for straightforward and good quality cross-country comparisons of the scale and benefits of volunteering alongside understanding of the motivations and barriers to volunteering in different countries and cultures.

We hope that these conclusions provide good evidence of the vitality, potential and importance of volunteering globally. While the UK is quite advanced in terms of the volunteering data, the conclusions of this study should hopefully stimulate efforts to collect more data on volunteering and wellbeing in other countries across the world.

NOTES

[1] Haldane (2014).
[2] Join In (2014).
[3] Fujiwara, Lawton and Watt (2018).
[4] Lawton and Watt (2018).
[5] UK Government (2016).
[6] UK Government (2018).
[7] ISER (2012).
[8] Gramatki, Lawton and Watt (2019).
[9] Gramatki, Lawton and Watt (2019).
[10] Gramatki, Lawton and Watt (2019).
[11] OECD (2018).
[12] Lawton and Watt (2018).
[13] Fujiwara, Lawton and Watt (2018).
[14] Lawton and Watt (2018).
[15] Inspired by Partners for Sacred Places (2016).
[16] Join In (2014).
[17] Haldane (2014).

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