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Wellbeing cost effectiveness in the charity sector

An example of an employment intervention

PRO BONO ECONOMICS

what works wellbeing

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1. Introduction

This report illustrates an approach for assessing wellbeing cost effectiveness (WCE) using a practical worked example based on a real-life employment intervention that Pro Bono Economics (PBE) has previously assessed using a more traditional economic evaluation approach.

1.1 Background

Wellbeing, put simply, is about 'how we are doing' as individuals, communities and as a nation and how sustainable this is for the future. Wellbeing measurement offers an exciting opportunity to organisations working in the charitable sector. The evidence on how to measure wellbeing and how to use it to support decision making has evolved rapidly over the last decade, meaning that it now offers a simple, consistent approach to robustly quantifying a wide range of impacts often associated with the charitable sector that are often only partially reflected in traditional economic cost-benefit analysis. [1] As a result, it offers an alternative way to measure and value the life-changing benefits that organisations in the charitable sector provide for our society.

The What Works Centre for Wellbeing (WWCW) has played a vital role in establishing wellbeing as a robust, relevant and accessible tool to support important decisions in our society. They support the case for making wellbeing the ultimate objective of policy and community action by demonstrating the feasibility of using wellbeing metrics to drive decision making. [2]

When looking specifically at personal wellbeing, the What Works Centre for Wellbeing supports and encourages the use of the ONS definition and measures. The ONS define Personal Wellbeing as:

> *"how satisfied we are with our lives, our sense that what we do in life is worthwhile, our day to day emotional experiences (happiness and anxiety) and wider mental wellbeing"*

Four questions have been identified to capture different aspects of individual wellbeing which constitute the national measures for subjective wellbeing in the UK. The 4 questions measure life satisfaction, happiness, one's sense of worthwhileness and anxiety. In this paper, we specifically look at life satisfaction only, following authors such as Layard R (2016) and other academics, who recommend the use of a single wellbeing metric and suggest life satisfaction as the preferred one.

Directly measuring the wellbeing impact of interventions using the ONS measure of Life Satisfaction is a pragmatic, practical approach to assessing a charity's impact. The What Works Centre for Wellbeing have published guidance for how to assess wellbeing cost effectiveness where this is possible and encourage charities, policy makers and private businesses to gather and monitor wellbeing data using the four ONS wellbeing measures .[3] However, in practice, many charities are only just starting to gather data using the ONS wellbeing measures and it will take time for the evidence base to build-up. As such there is often a need to estimate the wellbeing impacts of an intervention based on data about other outcomes.

We are delighted to be working alongside WWCW to produce a joint "*Guide to wellbeing cost-effectiveness evaluations in the charity sector*". This report supports this work by providing a practical, worked example to illustrate an approach to assessing the wellbeing cost effectiveness of charity interventions where they have not already gathered direct measures of wellbeing.

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[1] See, for example, "Measuring National Wellbeing Programme" undertaken by the Office for National Statistics (ONS) and recent changes in Treasury's policy appraisal guidance: HM Treasury (2018): *The green book; central government guidance on appraisal and evaluation,* HM Treasury

[2] Layard R (2016): *Measuring wellbeing and cost-effectiveness analysis using subjective wellbeing,* What Works Centre for Wellbeing, Discussion Paper 1

[3] What Works Centre for Wellbeing (2020): How cost effective is a workplace wellbeing activity? What Works Centre for Wellbeing: https://whatworkswellbeing.org/wp-content/uploads/2020/06/cea-how-to-June2020.pdf

1.2 Objectives and scope of the analysis

This paper is targeted at economists and other evaluation professionals working in the charity sector and aims to demonstrate the practical applicability of WCE approaches to charity interventions, even where they have not directly gathered data on wellbeing outcomes.

To achieve this, we set out an approach to estimate the wellbeing cost effectiveness of an employment intervention run by the charity Walking With The Wounded (WWTW). The intervention in question used employment advisors embedded in supported accommodation for the homeless and NHS Mental Health services to help unemployed and homeless veterans find work.

Although WWTW have now started to gather data using the ONS measure of Life Satisfaction, they have previously focused on the measurement of employment outcomes. As such, PBE conducted a traditional Cost Benefit Analysis (CBA) of the programme in 2018. This estimated the economic value of the net additional jobs and costs resulting from the intervention, relative to the costs and expected employment outcomes that would have occurred if individuals had used the Work Programme – the Government's main employment programme at the time.[4] The report showed that beneficiaries were three times more likely to access sustained employment than "harder to help" participants on the Work Programme and that for every £1 of additional expenditure on the Employment Programme it generated £3 in social benefits.

In this report, we take our previous estimates of additional employment and model the resulting wellbeing impact, drawing on the approach proposed by Frijters P & Krekel C (2019). We adopt a measure of wellbeing based on the life satisfaction question used in the ONS's Measuring National Wellbeing Framework which asks participants to respond to the question "Overall, how satisfied are you with your life nowadays?" on a scale of 0-10. This is a validated measure, included in the Annual Population Survey since 2011, and is recommended for use as a common currency for quantifying wellbeing impacts. [5]

The direct and indirect impacts of employment on wellbeing are taken from existing academic studies that use effective approaches to isolate the impacts of interest whilst controlling for other factors that can influence wellbeing. However, as we explain below, there remains significant uncertainty around both the existence and magnitude of some of these impacts, as well as the extent to which these impacts can be applied to the intervention in question.

1.3 Structure of the report

The report is structured as follows:

- Section 2 gives an overview of a 7-step process to apply WCE analysis, and goes through each step in detail in relation to WWTW's Employment Programme
- Section 3 sets out the key results of this analysis.
- Section 4 provides a brief summary and discusses the implications of our work.

[4] PBE (2018): Economic evaluation of WWTW's Employment Programme

[5] Layard R (2016): *Measuring wellbeing and cost-effectiveness analysis using subjective wellbeing,* What Works Centre for Wellbeing, Discussion Paper 1

2. Analytical approach

This section of the paper provides a description of our approach to assessing the WCE of WWTW's employment programme. Section 2.1 provides an overview of the approach, followed by a detailed run-through of how we applied each step to WWTW's employment programme in section 2.2.

2.1 Overview of approach

We follow a 7-step approach to assessing the WCE of charitable interventions:

Step 1	Develop a logic model of key wellbeing pathways for the intervention
Step 2	Estimate net additional outcomes
Step 3	Assess direct wellbeing impacts
Step 4	Assess indirect wellbeing impacts
Step 5	Assess direct costs of the intervention
Step 6	Estimate indirect fiscal cost savings
Step 7	Calculate the wellbeing cost-effectiveness measures

Each of these steps is reviewed in more detail in Section 2.2.

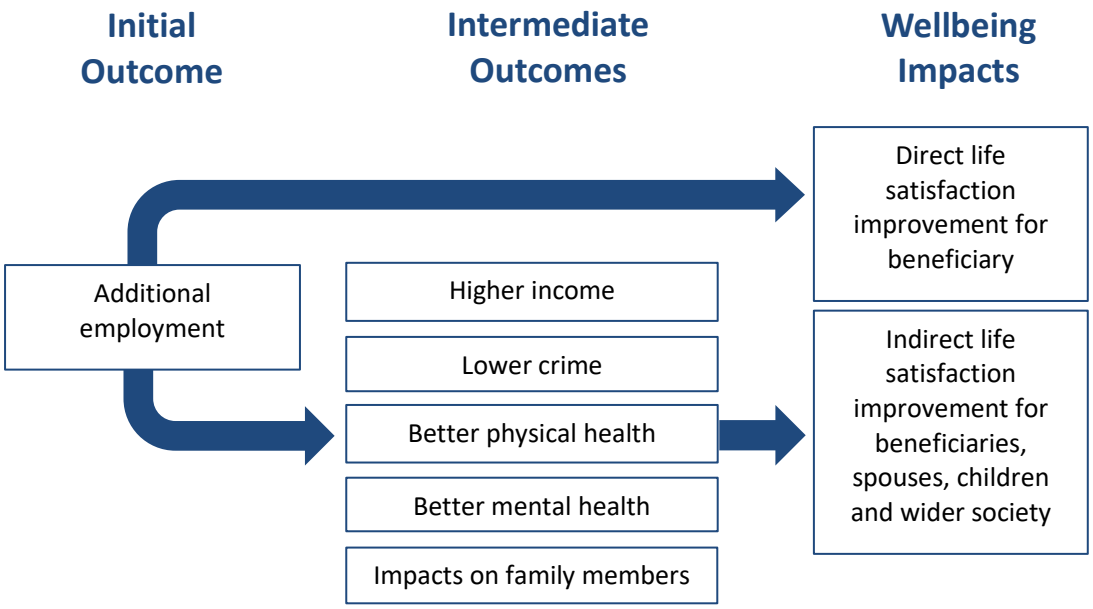
2.2 Step-by-step approach

This section reviews the approach taken for each of the seven steps in more detail.

2.2.1 Step 1: Develop a logic model of key wellbeing pathways

Based on the key drivers of wellbeing and a brief literature review, the diagram below gives an overview of the main pathways via which the WWTW's employment programme could increase societal wellbeing.

Figure 1. **Logic model for pathways through which additional employment increases societal wellbeing**



The distinction between direct and indirect impacts is an important feature of wellbeing analysis. In this case, gaining employment directly leads to an increase in wellbeing as a result of a greater sense of purpose and autonomy, and greater social interaction. This direct improvement in wellbeing has been analysed in isolation from the impact on wellbeing of increased income that typically occurs when someone gets a job – this is identified separately as an indirect effect. In addition, there is evidence that gaining employment also leads to a lower probability of committing certain types of crime[6], better physical and mental health for the individual[7] as well as improved mental health and employment prospects for spouses[8] and children[9]. These can all lead to indirect wellbeing impacts for the individual, spouses, children and wider society.

The model in Figure 1 also helps to highlight some requirements that need to be satisfied to estimate the indirect impacts and combine these with the direct impact:

- In order sum the direct and indirect impacts together, the estimates of wellbeing effects taken from existing research must properly isolate the particular impact pathway in question. For example, in this report our estimate of the impact of employment on wellbeing comes from sufficiently rich panel data collected in Britain that allows the impact of gaining employment to be identified, holding indirect impacts such as income constant.[10]
- There must be quantitative estimates linking the intervention outcome (additional employment, in this case), to the indirect impact (e.g. physical health), plus quantitative estimates of the relationship between this indirect outcome and life satisfaction.
- These estimates must be reported in metrics that allow them to be pieced together without having to make significant assumptions.

For the purposes of this report, we have explored the evidence base for the indirect links between employment, crime, increased income and wellbeing. For these intermediate outcomes we have been able to identify sources of evidence

[6] See footnote 17
[7] For example, Marmot et al (2010), Fair Society, Healthy Lives – Strategic Review of Health Inequalities in England post 2010
[8] What Works Centre for Wellbeing (2017), Unemployment, (re)employment and wellbeing
[9] See table 3.5 in Clark, A., Fleche, S., Layard, R., Powdthave, N., Ward, G., (2018): The Origins of Happiness, The Science of Wellbeing over the Life Course
[10] To be able to Whether the estimate of one impact pathway is properly isolated from others can be difficult to assess, and if in doubt we recommend taking a conservative approach and not summing estimates together.

that enable us to isolate their separate effects and avoid double counting. However, it is possible that a more comprehensive literature review could support the inclusion of other indirect effects in future.

2.2.2 Step 2: estimate the net additional outcomes for the intervention

As with CBA, WCE requires estimates of the net additional outcomes resulting from an intervention – i.e. those that occurred as a direct consequence of the intervention. As mentioned above, PBE's 2018 CBA report on WWTW's Employment Programme estimated the additionality of outcomes with reference to would have been expected to occur had beneficiaries participated in the Work Programme, the Government's main employment support scheme at the time.

Using this approach PBE estimated that, of the 291 individuals who secured a job following support from WWTW advisors, 196 of these would not have occurred in the absence of WWTW. Table 1 shows the duration of this additional employment based on the charity's internal data collection; WWTW systematically gathers data up to 12 months after an employment outcome but may informally gather data beyond this point for a small group of cases where there is ongoing contact with employment advisors. For this latter group PBE's report took the conservative approach of assuming that any job where there was some evidence of it being maintained beyond 12 months lasted for a total of 15 months.

Table 1 **Duration of additional employment arising from WWTW Employment Programme**

	3 months	6 months	9 months	12 months	15 months
Additional jobs	**69**	**45**	**30**	**28**	**24**

Source: PBE (2018)

2.2.3 Step 3: Assess direct wellbeing impact of the intervention

There is strong evidence that moving between unemployment and employment has a significant impact on wellbeing. Clark et al (2018) report evidence from Understanding Society and British Household Panel Survey (BHPS) estimating that moving from unemployment to employment increases life satisfaction by 0.46 life satisfaction points on average (with a 95% Confidence Interval of 0.38 – 0.54). [11] In addition, the study found that individuals do not adapt to unemployment: the reduction in wellbeing that occurs is sustained for the duration of unemployment.

We estimate the direct impact of WWTW on life satisfaction as follows:

$$\sum_{i=1}^{5}(N_i \times 0.46 \times \frac{D_i}{12}) = 55.3 \text{ WELLBYs}^{12}$$

Where N_i = the number of jobs in each of the 5 duration categories in Table 1 and D_i = the duration of the 5 duration categories in months.

2.2.4 Step 4: Assess indirect impacts

This section reviews the indirect impacts that moving an individual into employment can have on wellbeing due to an increase in income and a reduction in crime.

Indirect impact of increased income

Additional income allows greater consumption for individuals and can alleviate financial worries, especially for lower income households. However, the extent to which additional income increases wellbeing, both for the individual, and for society as a whole, is contested.

[11] Chapter 4 of Clark, A., Fleche, S., Layard, R., Powdthave, N., Ward, G., (2018): The Origins of Happiness, The Science of Wellbeing over the Life Course

[12] One WELLBY = an increase of one life satisfaction point on the 0-10 scale for one year

Frijters & Krekel (2019)[13] recommend using the estimate that a 10% increase in income leads to an increase in life satisfaction **for the individual** of 0.04 points for each year of additional income (with a 95% confidence interval of 0.01-0.06).[14] This impact is larger than previous studies have suggested.

However, research also suggests that there is a social comparison effect, whereby our wellbeing is influenced by how our income compares to those around us. Therefore, increasing the income of one person leads to reduced wellbeing for others. To account for this effect, Frijters & Krekel recommend applying an "Easterlin Discount" of 75%.[15]

We therefore estimate the change in wellbeing resulting from the increase in income as:

$$\sum_{i=1}^{5}(N_i \times \frac{D_i}{12} \times \frac{\Delta I}{I_0} \times 0.4 \times (1 - 0.75))$$

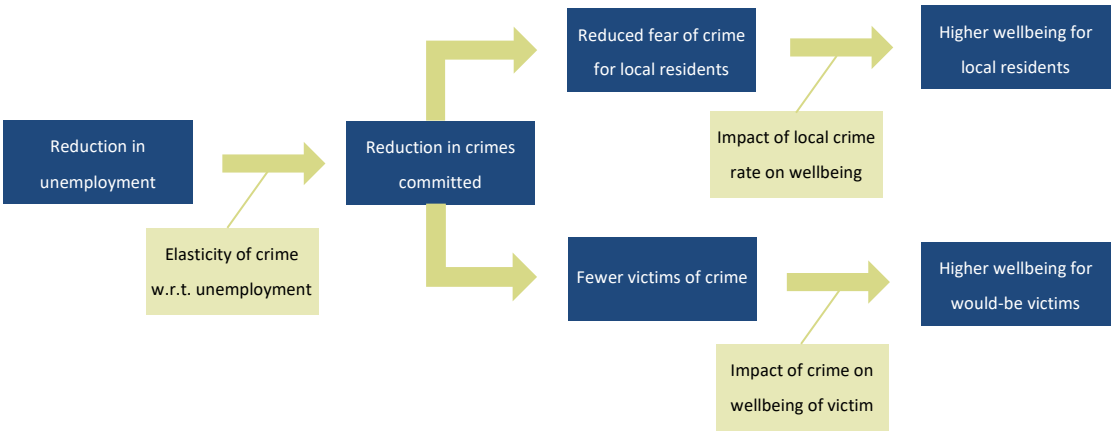
Where N_i = the number of individuals in each of the 5 job duration bands in Table 1, D_i = the length of each duration band in months, ΔI = change in post-tax income after benefit changes, and I_0 = starting income (including benefit receipts), 0.4 is the change in wellbeing that would occur from a 100% increase in income, and the final term applies the Easterlin Discount.

Data from New Economy Manchester on income and benefit changes for those in receipt of Job Seekers Allowance moving in to employment gives an estimated increase in post-tax income, net of benefit changes, of 72%.[16] Using the formula above, and combining with the data in Table 1 implies a societal increase of 5.2 WELBYs as a result of increased income arising from employment.

Indirect impact on crime

Evidence suggests that an individual who moves from unemployment to employment is less likely to commit certain types of crimes. If this is the case, there could be an increase in wellbeing for both would-be victims of crime, and residents in the local area where the reduction in crime occurs. Figure 2 provides an overview of the methodology we use to estimate the impact of WWWTW of wellbeing as a result of a reduced impact of crime.

Figure 2. **Modelling the indirect impact of employment on wellbeing via crime**



[13] See footnote **Error! Bookmark not defined.**
[14] This finding was based on a study of Swedish lottery winners: Lindqvist, E., Ostling, R., & Cesarini, D. (2018); Long-run Effects of Lottery Wealth on Psychological Wellbeing. National Bureau of Economic Research.
[15] Named after Robert Easterlin, who published work in the 1970s questioning the extent to which increased GDP led to increased wellbeing.
[16] New Economy Manchester Unit Cost Database, v2, cost E&E1.0. In particular, the original benefit payments amount to £7,476. We take the value of £17,420 economic benefit from gaining employment – this includes total increase in wages minus additional costs from childcare and travel – and subtract the £4,596 in tax and national insurance receipts to give a post tax income of £12,824. A post-tax income of £12,824 is a 72% increase in income over the original benefit payment of £7,476.

We discuss the research on each of the three key parameters contained in the green arrows below.

Elasticity of crime with respect to unemployment

A number of papers reviewed found that higher unemployment in an area increases the crime rate in that area, particularly the rate of property crime.[17] Most studies find no impact of unemployment on violent crime.

The magnitude of the impact of the unemployment rate on crime varies. A 2001 study on 33 European Countries, including the UK, suggests a 1pp increase in the unemployment rate increases property crime by 2%.[18] However Levitt (2004), in a review of US studies, suggests a 1pp increase in the unemployment rate increases property crime by 1%.[19]

We take the midpoint of these two estimates – that a 1pp increase in the unemployment rate increases property crime by 1.5% - as our central estimate of the elasticity of crime wrt employment, and calculate the reduction in crimes as follows:

$$\sum_{i=1}^{5} Z \times R_i \times \frac{C}{P} \times \delta$$

Where Z = total number of beneficiaries of WWTW employment programme, R_i= the additional pp employment rate of the group of beneficiaries over the 5 quarters, i, that additional employment is assumed to persist, C/P = the national annual crime rate per person, and δ = the elasticity of crime with respect to unemployment of a 1.5. This calculation results in an estimate of WWTW's employment programme leading to 12.1 fewer crimes.

Impact of local crime rate on wellbeing

Dustmann & Fasani (2014)[20] suggest that being exposed to a higher crime rate can reduce wellbeing of local residents in three ways:

- Increased anxiety of becoming a victim
- Reduced sense of freedom
- More time, effort and money spent on deterrent strategies

The authors combine life satisfaction data from the BHPS with crime rate data and find that property crime reduces the mental health of local residents in England and Wales, at Police Force Area (PFA) level. Specifically they found that increasing log property crime rate by 1 unit improves mental health by 0.54 points on the 36-point GHQ scale[21], and that the effect of a change in the crime rate on mental health last for 6 months.

Based on a methodology in Clark et al (2018)[22], this implies that, when summed across local residents, each crime reduces wellbeing of residents by 0.8 WELLBYs.[23] Because Dustmann & Fasani model wellbeing as a function of the annual crime rate, then the length of time over which the reduction in crimes occurs must also be taken in to account as follows:

$$\Delta C \times -0.8 \times \frac{1}{Y} = 12.1 \text{ X } (-0.8) \text{ X } 1/1.25 = 8.2$$

[17] For example, see footnotes 18 & 19, and Carmichael & Ward (2001): Male unemployment and Crime in England and Wales; and Edmark (2005): Unemployment and crime: is there a connection?
[18] Altindag (2011) Crime and Unemployment: Evidence from Europe
[19] Levitt et al (2004) Understanding why crime fell in the 1990s: four factors that explain the decline and six that do not
[20] Dustmann, C. & Fasani, F. (2014) The Effect of Local Area Crime on Mental Health
[21] The paper actually references a 0.015 improvement when GHQ has been normalised to a 0 to 1 scale.
[22] Chapter 7 of Clark, A., Fleche, S., Layard, R., Powdthave, N., Ward, G., (2018): The Origins of Happiness, The Science of Wellbeing over the Life Course
[23] This requires a translation from GHQ to Life Satisfaction based on an assumption that a 1 unit change in GHQ equates to a 0.21 unit change in life satisfaction.

Where ΔC = the change in the number of crimes, and Y = the number of years over which the change in crimes takes place. We have cautiously assumed that Y equates to the maximum 15-month period over which the additional employment lasted[24], this suggests that the intervention led to an additional 8.2 WELLBYs among local residents as a result of reduced fear of crime.

Impact of crime rate on wellbeing of victim

Staubli et al (2014)[25] estimate that victims of property crime experience a 0.1 reduction in life satisfaction, and that the effects last for around a year. Applying this to the estimated reduction in crimes of 12.1, and making a conservative assumption that there is one separate victim associated with each property crime, results in an increase of 1.2WELBYs for would-be victims of avoided crimes.[26]

2.2.5 Step 5: estimate direct additional costs due to the intervention

WWTW were able to provide a full cost for delivering the programme, including overheads, of £1.4m for the period covered in the evaluation. However, as when assessing the net additional outcomes in step 2, we need to consider direct costs that would have been occurred in the counterfactual. If beneficiaries had taken part in the Work Programme then PBE analysis suggests that this would have cost around £0.8m for a similar number of participants. This figure is deducted from the direct costs incurred by WWTW to provide a net additional cost for the intervention of £0.6m.

2.2.6 Step 6: estimate indirect fiscal savings

Here we estimate fiscal savings from resulting directly from the change in employment status and increase in income – i.e. those from reduced welfare payments and increased employment taxes. These are likely to account for the vast majority of fiscal savings, although fiscal savings would also be expected to arise in other areas such as the healthcare and criminal justice systems.

Specifically, we calculate fiscal savings as:

$$\sum_{i=1}^{5}(N_i \times \frac{D_i}{12} \times \Delta B)$$

Where N_i = the number of individuals in each of the 5 job duration bands in Table 1, D_i = the length of each duration band in months, and ΔB is the sum of estimated increased tax receipts and reduced benefit payments per individual per year.

Data from New Economy Manchester Database, converted to 2017/18 prices, estimates a fiscal saving of £10,576 per individual entering employment, per year.[27] Using the formula above results in a fiscal saving of just under £1.2m.

2.2.7 Step 7: calculate wellbeing cost-effectiveness measure

We draw together the estimates outlined above and present them in terms of the £ cost per unit of life satisfaction years gained as a result of WWTW's employment programme.

In general the formula for wellbeing cost effectiveness is as follows:

$$Cost\ Effectiveness = \frac{Net\ additional\ costs}{Net\ additional\ wellbeing} = \frac{\sum_t\ (1-\rho^c)^t \sum_i\ \left(C_{it}^{Policy} - C_{it}^0\right)}{\sum_t\ (1-\rho^W)^t \sum_i\ \left(W_{it}^{Policy} - W_{it}^0\right)}$$

[24] In reality some of the employment outcomes lasted a shorter period than 15 months. However, using an average length of employment would increase our estimated wellbeing effects so believe this is a cautious approach.
[25] Staubli, S., Killias, M. & Frey, B., (2014) Happiness and Victimization: An empirical study for Switzerland
[26] Often there would be more than one victim per property crime, for example in the case of household burglaries with multiple residents.
[27] See footnote 16

Where:
W_{it} = wellbeing for individual i at time t (measured using life satisfaction points)
C_{it} = cost for individual I at time t
p^W = wellbeing discount rate
p^C = monetary flow discount rate

However, as the costs and benefits of the programme occurs over a period of just over one year, for the purposes of simplicity we do not discount wellbeing or costs, so the WCE calculation becomes:

$$\frac{\Delta W_{Direct} + \Delta W_{C1} + \Delta W_{C2} + \Delta W_I}{C_{Direct} + FS}$$

Where:

ΔW_{Direct} = Change in wellbeing caused directly by intervention
ΔW_{C1} = Change in wellbeing of local residents from reduced crime
ΔW_{C2} = Change in wellbeing from would-be victims of avoided crime
ΔW_I = Change in wellbeing from the increase in income associated with employment
C_{Direct} = Fiscal cost of intervention
FS = Fiscal savings from indirect employment effect

2.3 Key assumptions and limitations

There are several important assumptions and limitations to our analysis to be considered:

- Our direct employment wellbeing impact comes from a survey that is representative of the population of Britain whilst WWTW works with a very specific group of individuals; unemployed and homeless veterans. Given that the actual wellbeing impact will vary depending on wide range of factors related to, for example, the individual and nature of employment gained, this may represent an over- or under-estimate or the actual impact.
- Whilst research has consistently found a correlation between being a victim of property crime and wellbeing, the causality and magnitude of the impact is debated. For example, Cornaglia et al (2014) found no impact of being a victim of property crime on wellbeing, once individual fixed effects were applied to the panel data set. We include the impact of property crime on victims' wellbeing, but note it accounts for a very small proportion of the overall impact.
- The fiscal savings analysis comes from DWP analysis of fiscal payments made by and paid to individuals coming off Job Seekers Allowance (JSA) and entering employment. In this report, we have followed the assumption made in our 2018 study of WWTW's employment intervention, that all those who found employment were initially claiming JSA, and that their earnings and benefits claimed are the same as the sample of individuals analysed by DWP.

Overall these limitations add significant uncertainty to the scale of our estimated wellbeing impacts. However, we believe it provides an instructive, applied example of the applying a WCE approach to a charitable intervention.

3. Results

3.1 Key findings

Overall, we estimate that the WWTW's employment programme increased wellbeing by more than 70 WELBYs, with the majority of the impact coming via the direct increase to people's wellbeing from gaining employment. Table 2 summarises our key results.

We report WCE results in two ways. The first, taking only the direct wellbeing impacts into account, results in a WCE of £10,800; that is, each one-point increase in life satisfaction for one year costs £10,800. The second method, which includes indirect impact and more importantly the fiscal saving figure of £1.2m, results in a negative WCE figure of -£8,200. That is, when all quantified impacts are included, our analysis suggests that WWTW's employment programme leads to public finance savings whilst also improving wellbeing.

Table 2 **Summary of key results**

Source	WELBYs	Costs
Direct impact on wellbeing	55.3	
Direct programme costs		£0.6m
Direct wellbeing cost effectiveness	**£10,800**	
Indirect crime benefits to residents	*8.2*	
Indirect crime benefits to victims	*1.2*	
Indirect income benefit	*5.2*	
Total indirect wellbeing benefits	14.6	
Fiscal savings		£1.2m
Total wellbeing impact (direct + indirect)	**69.9**	
Total cost (including fiscal savings)		-£0.6m
Overall wellbeing cost effectiveness	**£-8,300**	

Frijters & Krekel (2019) suggest a useful benchmark for WCE of interventions comes from NHS spending, because of the scale of healthcare spending and the rigorous research around its impacts. They calculate that it costs the NHS between £2,500 and £6,000 to generate 1 WELLBY.

On this basis, if only the direct impacts are included then WWTW's Employment Intervention appears relatively poor value for money compared to this benchmark of NHS spending. However, once the indirect impacts on wellbeing and government finances are incorporated then it appears to provide extremely good value for money. This points to the pivotal role that fiscal savings can play in WCE, particularly for employment programmes.

3.2 Sensitivity Analysis

Our findings demonstrate the importance of two key inputs to our analysis: the scale of direct wellbeing benefits from increased employment, and; the value of fiscal savings from an improvement in employment outcomes.

Therefore, we explore how sensitive our key conclusions are to two alternative scenarios:

- **Sensitivity 1 - Lower wellbeing benefit per employment outcome:** we assume that an individual entering employment benefits from a 0.38 Life Satisfaction point improvement in wellbeing rather than a 0.46

improvement. This is in line with the low end of the 95% confidence interval around the original estimate for the average wellbeing impact of moving into employment.[28]

- **Sensitivity 2 – Reduced fiscal benefit per employment outcome:** we assume that the indirect fiscal savings are in line with the standard allowance for Universal Credit (£4,900 per year) rather than savings for Job Seekers Allowance.

Sensitivity 1 – Lower wellbeing benefit per employment outcome

Using a lower impact of employment on life satisfaction reduces the direct impact of the WWTW Employment Programme on wellbeing from 55 WELBYs to 46 WELBYs. This increases the direct wellbeing cost effectiveness of the intervention – meaning it is more expensive to generate a life satisfaction improvement. However, the broad picture that the programme looks extremely cost-effective once the indirect fiscal savings are included is consistent with the core scenarios.

Table 3 **Sensitivity 1 – summary of findings**

Source	WELBYs	Costs
Direct impact on wellbeing	45.7	
Direct programme costs		£0.6m
Direct wellbeing cost effectiveness	**£10,800**	
Indirect crime benefits to residents	*8.2*	
Indirect crime benefits to victims	*1.2*	
Indirect income benefit	*5.2*	
Total indirect wellbeing benefits	14.6	
Fiscal savings		£1.2m
Total wellbeing impact (direct + indirect)	**60.3**	
Total cost (including fiscal savings)		-£0.6m
Overall wellbeing cost effectiveness	**£-9,660**	

Sensitivity 2 – Reduced fiscal benefit per employment outcome

The impact of reducing the fiscal benefit of an individual moving into employment to the level of a basic Universal Credit award is summarised in Table 4. The direct cost effectiveness is unaffected by this alternative assumption but the wellbeing cost effectiveness including indirect effects changes from a saving of £8,000 per life satisfaction point to a cost of £100 per life satisfaction point. This is a significant change however, even at this level, the WWTW Employment Programme remains excellent value for money as a way of generating additional wellbeing in society.

[28] This captures some of the uncertainty around wellbeing impacts of unemployment on average, although this may not capture variations in the impact on wellbeing for different demographic groups.

Table 4 **Sensitivity 2 – summary of findings**

Source	WELBYs	Costs
Direct impact on wellbeing	55.3	
Direct programme costs		£0.6m
Direct wellbeing cost effectiveness	**£10,800**	
Indirect crime benefits to residents	*8.2*	
Indirect crime benefits to victims	*1.2*	
Indirect income benefit	*5.2*	
Total indirect wellbeing benefits	14.6	
Fiscal savings		£1.2m
Total wellbeing impact (direct + indirect)	**69.9**	
Total cost (including fiscal savings)		-£0.006m
Overall wellbeing cost effectiveness	**£100**	

Sensitivity conclusions

We have explored the impacts of changing two of the key inputs that drive the results for our core scenario. These alternative scenarios demonstrate that, whilst the exact findings alter in response to these key inputs, the high-level finding that the programme looks highly cost-effective once indirect fiscal savings are incorporated remains valid.

4. Summary and implications

4.1 Summary of findings

This study has sought to assess the feasibility of estimating the wellbeing cost-effectiveness of a real-life third sector intervention: an employment programme aimed at veterans run by Walking with the Wounded. We have followed a seven step approach:

- Step 1: we establish a logical model that maps the direct and indirect impacts of a move into employment on wellbeing;
- Step 2: taking estimates of additional outcomes resulting from the intervention;
- Step 3: drawing on evidence to estimate the direct effects of helping individuals in to employment;
- Step 4: identifying literature to estimate the indirect effects that gaining employment has on the wellbeing of the individual and wider society.
- Step 5: assessing the additional costs directly incurred in delivering the intervention
- Step 6: assessing indirect fiscal impacts
- Step 7: calculating the wellbeing cost-effectiveness measures

We conclude that:

- Overall, the 196 additional individuals helped in to work led to more than 70 additional life satisfaction point-years, or WELBYs for society.
- The direct effects of gaining employment account for almost 80% of the overall wellbeing impact.
- Fiscal savings resulting from this additional employment were double the programme costs of £0.6m
- This means that the intervention led to public cost savings of £8,200 per life satisfaction point year gained – this makes it an extremely cost-effective intervention for improving wellbeing when compared to benchmarks proposed by Frijters and Krekel.

4.2 Implications

Our analysis demonstrates that, whilst it is generally preferable for charities to directly measure their wellbeing impact using the ONS measure of Life Satisfaction, the rapidly evolving wellbeing evidence base may be ready to support the development of wellbeing cost-effectiveness estimates even where this is not the case.

This offers an exciting opportunity for the third sector as wellbeing can provide a more holistic, yet analytically rigorous, approach to measuring the kinds of impacts that charities and wider civil society are able to deliver. The difference in which outcomes are emphasised can be material - the value of increased private income accounts for just 7% of the overall impact to society in our wellbeing cost-effectiveness analysis whereas it accounted for more than 90% of the benefits in the original Cost Benefit Analysis of the WWTW Employment programme.

However, there remain some challenges that need to be overcome to further support the wider adoption of this approach:

- Firstly, there are still some significant areas of uncertainty in the literature that will affect the level of confidence we can have in wellbeing assessments. This uncertainty is not unique to WCE, but it will take time for conventions to evolve that deal with these issues.
- At present, it is largely down to analysts to perform their own literature reviews, using their discretion to piece together various estimates to come up with wellbeing impacts. This takes time and is also likely to lead to different methodologies and sources of evidence being used to analyse similar interventions. Again, over time we expect consensus over appropriate methodologies and sources to evolve.
- The importance of fiscal savings in WCE means it is important to be able to robustly estimate fiscal savings occurring as a result of an intervention.
- The evidence base on what constitutes a “good” level of wellbeing cost-effectiveness is still evolving. The Frijters & Krekel (2019) NHS spending benchmark is helpful but needs to be supplemented with further

examples that help to explore this issue and additional consideration of whether the same benchmarks are appropriate in government as the charity sector.

- The standard WCE framework compares the fiscal costs of a programme to any fiscal savings. However, some non-government funders for the charity sector may be less interested in these. The general approach will need to be adapted to suit the needs of particular charities and funders.

However, despite these limitations we believe there is great potential for using wellbeing assessments as a key driver of charity and funder decisions as well as for broader policy analysis in the UK. We hope that this study adds to the debate on this important issue and provides useful insight into the practical application of wellbeing cost assessments, supporting the development of a richer evidence base over time.