Employment Programs

Overview

This paper outlines our approach to measuring the impact of employment programs in the Canadian context. In particular, we have explored research related to the effectiveness of employment programs in helping people become employed, and the short- and long-term benefits to individuals and society of employment. Appendix III provides a partial bibliography of the studies that we used to inform our model[1]. Studies were selected based on their relevancy to different aspects of our model and availability of quantitative results. Results were weighted according to things like recency, geography, research design, and overall strength. These studies represent a fraction of the existing research literature on employment programs and the benefits of employment, a comprehensive review of which would exceed the limits of our resources. We acknowledge this limitation and have done our best to provide as thorough a survey of the research as possible with the studies we have selected.

The Social Return on Investment (SROI) to Employment Programs

Outcome Categories

Our research finds multiple categories of outcomes connected to employment – see Table I. This is not intended as an exhaustive list of all possible outcomes connected to employment.

Table I – Employment Programs Outcome Categories

Outcome Category	Description	Client Group
Income	Income earned through being employed.	Adults and Youth
Quality of Life	Improved quality of life due to employment.	Adults
Mortality	Lesser risk of mortality due to employment.	Adults

Social Return on Investment Model

We use a Social Return on Investment methodology to measure the impact of charitable activities. The SROI is an estimate of the total dollar value of social benefits that are realized as a result of a charity's programs divided by the charity's costs. Costs include program, administration, and fundraising costs, as well as the cost of goods in kind used in charitable activities and amortization on assets. Data informing the costs side of the SROI equation come from a charity itself and generally are readily accessible. As such, we focus our research and this paper on the data informing the benefits side of the SROI equation.

The total dollar value of social benefits is the sum of the dollar values of often dozens of individual outcomes (or changes) brought about by a charity's programs. The calculation of the dollar value of a particular outcome requires knowledge of several pieces of information. We summarize these in Table II, providing examples in the context of employment programs.

[1] We focus on studies that were chosen as relating specifically to employment programs, and exclude more general sources of data that inform multiple program models.

Table II – Basic Components of Social Benefits Model

Model Component	Description	Example
Number of Clients	The total unique number of clients provided a service or involved in a program (i.e., the total number of clients where each client is counted only once).	The number of clients involved in an employment program (e.g., 100).
Baseline Distribution	The percentage of clients in one of potentially multiple, mutually exclusive groups which differ in some important way, leading to different outcomes.	In the context of employment income, the percentage of clients employed full- versus part-time (e.g., 40 versus 60 percent).
Marginal Success Rate	The percentage of clients who achieve an outcome, net of the percentage of clients who would have achieved the outcome anyway, even without the program.	The percentage of clients who become employed, net of the percentage who would have become employed anyway (e.g., 5 percentage points).
(Annual) Outcome Value	The annual, per person dollar value of a particular change that has happened due to a program or service.	The annual value per person of improved quality of life due to employment (e.g., $1,300).
Start and End Years	The number of years that must pass after completion of a program, 1) before the annual outcome value begins to take effect (start year), and 2) after which the annual outcome value is no longer considered (end year).	1) the average number of years until the beginning of employment, and 2) the start year plus the duration of employment (e.g., 0 and 5).
(Annual) Drop-Off	The percentage of clients who initially achieve an outcome but lose it over time.	The annual percentage of newly employed people who lose employment (e.g., 10 percent).
Baseline Attribution	The amount of credit a charity gets for a particular outcome, typically based on its contribution to the total cost of a service or program.	The share of the total cost of an employment program borne by a focal charity (e.g., 100 percent).
In addition to the above, we consider various elements of outcome value depreciation over time. In this context, *attribution decay* accounts for the fact that, over time, other factors besides the initial intervention will contribute to a client's success, such that the original (baseline) attribution percentage should fall incrementally (we have chosen a rate of 10 percent per year). Similarly, *time discounting* is a standard adjustment in the field of economics to value outcomes that are achieved earlier in time more highly than those achieved later in time (we have chosen a discount rate of 3 percent per year). These adjustments apply to all programs.		

An Example SROI

The total dollar value of social benefits of an employment program will change based on several factors. We identify in Table III the variables affecting the employment programs social benefits model.

Table III – Employment Programs Social Benefits Model Variables

Variable	Description	Example
Number of Clients	The number of clients served.	100
Geography	The province or territory wherein clients are served, or Canada as a whole.	Canada
Age Group	The age group of clients (adults or youth).	Adults

Gender	The gender of clients (female or male[2]).	Male
Attribution	The portion of program costs borne by the focal charity.	100 percent
Type of Employment Program	The type of employment program (employment assistance or skills training[3]).	Skills Training
Employment Income	The average annual value of employment income per person who becomes employed.	$32,000
Type of Employment	The percentage of newly employed individuals who achieve full- versus part-time employment.	40 and 60 percent
Marginal Success Rate, Employment	The percentage of clients who achieve employment minus the percentage of clients expected to have achieved employment even without the program.	4.9 percentage points
Duration of Employment	Among clients who achieve employment, the number of years of employment.	5 years
Drop-Off	Among clients who achieve employment, the percentage each year who lose employment.	10 percent

It is beyond the scope of this paper to identify all of the data that go into the impact model for an employment program, as each outcome category involves several specific values for each of the components of our model, described in Table II. As such, a full account of each outcome would overwhelm this paper. Instead, based on the information in Table III, we present final estimates of social benefits of an employment program. In Appendix II we identify the types of data that inform the various components of our model. Some of these data are from program-specific research (e.g., annual employment income among individuals employed full- and part-time), while others are common to multiple program models (e.g., the cost of a full year lost life).

As part of our process, we identify certain 'final' outcomes downstream from the outcome categories identified in earlier sections of this paper. We estimate the total social benefits of a program by summing the values of final outcomes. In cases where the same final outcomes are connected with multiple outcome categories, those with the greatest absolute values are included in the sum. This is to simplify the presentation of our findings and to account for potential double-counting in our model (e.g., overlapping values connected to different education outcomes, in the context of other models). We present in Table IV the total social benefits of our example employment program. In Appendix I, we present our formula for bringing together all of the various components of our approach to valuing a particular final outcome – for example, in the context of employment programs, improved quality of life related to mental health.

Table IV – Total Social Benefits, Example Employment Program

Outcome Category	Final Outcome	Total Social Benefits ($)
Income	Cash on Hand, Income (Employment Income)	390,084
	Public Systems, Income Tax	129,670
Quality of Life	Quality of Life, Mental Health	20,968
Mortality	Mortality, All Causes	2,275

[2] Note that the binarization of this variable is for technical reasons, as we do not yet have research specific to non-binary individuals.

[3] Employment assistance services (EAS) are mainly intended to aid with the job search process (navigating job boards, finding postings or advertisements, writing cover letters or resumes, etc.). Skills development (or training) involves learning specific employment skills, for particular types of jobs. Skills training typically is more intensive than employment assistance.

	542,997

As can be seen in Table IV, the total social benefits of our example employment program is about $540,000, or $5,400 in short- and long-term benefits per client. The SROI to this example program would then be calculated by dividing the total social benefits by the total cost of the program. Thus, if the program costs $5,400 per client, the SROI would be 1.0. If it costs $1,080, the SROI would be 5.0. That is, $5 of social value created for every $1 of costs.

These estimates are based on a particular set of circumstances, and there is a wide range of possible results for employment programs. As identified in Table III, our employment programs model involves several variables, differences in any one of which will affect the estimate of total social benefits. Depending on the unique circumstances of and data available from a charity, estimates of the impact of a program could vary considerably. In particular, the onus is on charities to present evidence showing that the effectiveness of their program matches or exceeds what we have found through our research. When charity data are not available, we make conservative assumptions about things like the effectiveness of a program, such that specific estimates of total social benefits may be smaller than those in this paper.

Appendix I – Charity Intelligence Outcome Valuation Formula

As it relates to the total social benefits of a charity program, we calculate the total dollar value of a particular outcome, for all clients who are candidate for it, using the following formula.

$$TV = \frac{\left(ba \times c \times bd \times msr \times ov \times \left((1-do)\times(1-ad)\right)^{-ys} \times \left(\left((1-do)\times(1-ad)\times(1-td)\right)^{ys} - \left((1-do)\times(1-ad)\times(1-td)\right)^{ye}\right)\right)}{1-\left((1-do)\times(1-ad)\times(1-td)\right)}$$

where:
TV is the total value of a particular outcome, for all clients
ba is baseline attribution
c is the total number of clients candidate for a particular outcome
bd is baseline distribution percentage
msr is the marginal success rate
ov is the annual per person value of an outcome
do is drop-off
ys is year start
ye is year end
ad is attribution decay
td is time discounting

Based on our example employment program, we estimate the total dollar value of improved quality of life related to mental health due to employment. Below, we identify the data informing the components of our model for valuing an outcome. Our intention here is not to explain the derivation of these data, but just to illustrate how the formula for valuing a given outcome works.

Model Component	Value
Number of Clients	100
Baseline Distribution	100.0 percent
Marginal Success Rate	4.9 percentage points
(Annual) Outcome Value	$1,305
Start Year	0.0
End Year	5.0
Drop-Off	10.0 percent
Baseline Attribution	100.0 percent
Attribution Decay	10.0 percent
Time Discounting	3.0 percent

Inputting these data into the formula, we get:

$$= \frac{\left(100.0\% \times 100 \times 100.0\% \times 4.9\% \times \$1{,}305 \times \left((1-10.0\%)\times(1-10.0\%)\right)^{-0.0} \times \left(\left((1-10.0\%)\times(1-10.0\%)\times(1-3.0\%)\right)^{0.0} - \left((1-10.0\%)\times(1-10.0\%)\times(1-3.0\%)\right)^{5.0}\right)\right)}{1-\left((1-10.0\%)\times(1-10.0\%)\times(1-3.0\%)\right)}$$

$$= \$20{,}968^{4}$$

[4] The difference between this figure and what you would get by the formula is due to rounding in the provided data.

Appendix II – Types of Data Informing Social Benefits Model Components

Income	
Number of Clients	• The number of clients provided an employment service.
Baseline Distribution	• The distribution of employed individuals based on the type of employment – full- or part-time.
Marginal Success Rate	• The difference in the percentage of individuals who do and do not participate in an employment program who become employed.
(Annual) Outcome Value	• The annual value per person of income earned through full- or part-time employment.
Start and End Years	• The number of years that must elapse before employment begins. • The number of years of employment.
(Annual) Drop-Off	• The annual percentage of individuals who have achieved employment who lose employment.
Baseline Attribution	• The charity's costs relative to the total cost of the program.
Quality of Life	
Number of Clients	• The number of clients provided an employment service.
Baseline Distribution	• The distribution of employed individuals based on the type of employment – full- or part-time.
Marginal Success Rate	• The difference in the percentage of individuals who do and do not participate in an employment program who become employed.
(Annual) Outcome Value	• The annual value per person of improved quality of life due to employment.
Start and End Years	• The number of years that must elapse before employment begins. • The number of years of employment.
(Annual) Drop-Off	• The annual percentage of individuals who have achieved employment who lose employment.
Baseline Attribution	• The charity's costs relative to the total cost of the program.
Mortality	
Number of Clients	• The number of clients provided an employment service.
Baseline Distribution	• The distribution of employed individuals based on the type of employment – full- or part-time.
Marginal Success Rate	• The difference in the percentage of individuals who do and do not participate in an employment program who become employed. • The annual difference in mortality rate between individuals who are and are not employed.
(Annual) Outcome Value	• The cost per person of a full year of lost life.
Start and End Years	• The number of years that must elapse before employment begins. • The number of years of employment.
(Annual) Drop-Off	• The annual percentage of individuals who have achieved employment who lose employment.
Baseline Attribution	• The charity's costs relative to the total cost of the program.

Appendix III – Bibliography of Studies Used to Inform Employment Programs Model

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