STATE OF VOLUNTEERING REPORT 2014: THE ECONOMIC, SOCIAL AND CULTURAL VALUE OF VOLUNTEERING

volunteering tasmania
do what you love

A Message from the Premier

I welcome the third State of Volunteering Report produced by Volunteering Tasmania.

Volunteers are the backbone of our society, with volunteering essential to connecting people with opportunities for meaningful participation. Volunteering contributes to our sense of belonging, builds social networks and binds communities.

Tasmanians are particularly well known for volunteering their time, with past research showing that we lead Australia in rates of participation. This embodies the generous and compassionate nature of Tasmanians and our ongoing desire to help out our neighbours and our communities.

The ways in which Tasmanians volunteer their time is varied. Volunteers can be working at our arts and music festivals; in our school canteens and on our sports fields. They are also providing assistance to the elderly and vulnerable, and in times of disaster volunteers are often the first on the scene to help out. Truly, our society would be a lot poorer were it not for the contribution of volunteers.

We know how volunteers contribute their time, thanks to the research provided in Volunteering Tasmania's biennial State of Volunteering Reports. Each year the State of Volunteering Report conveys new and exciting information on the volunteering sector in Tasmania. It is the only piece of research that offers this insight into Tasmania's volunteering sector.

In past years Volunteering Tasmania has explored the level of volunteer-involving organisations and the impact of Tasmania's ageing population on volunteerism. The 2014 report however, marks a departure from previous research. It provides a unique insight into the contribution of volunteering - treating volunteering as a significant industry in its own right.

The 2014 State of Volunteering Report also shows us, for the first time, just how significant volunteering is to Tasmania and how much the fabric of our society hinges on these generous donations of time. It does so through quantifying the social and economic contribution of volunteering in the community. This is a first in volunteering research, for Tasmania and across the nation. It highlights Volunteering Tasmania's ability to deliver

robust social and economic information that provides a strong evidence base for future strategic decision making.

I encourage you to look to the findings of this report. The data and research gathered provides a unique understanding of Tasmanian volunteers and is startling in revealing just how generous Tasmanians are with their time, and how much volunteers contribute in economic terms to our society.

The 2014 State of Volunteering report reminds us that volunteers are a significant part of Tasmania's society, and sets an agenda for future investment in this field. I look forward to working to ensure that volunteering continues to be encouraged, supported and recognised across Tasmania.

Hon. Will Hodgman MP, Premier of Tasmania

Foreword

The value of volunteering is something we have long reflected on at Volunteering Tasmania. It is one of the hardest questions to answer. Because the more valuable an activity or item is the more difficult it is to value.

Volunteering Tasmania has collaborated with the Institute of Project Management to present a comprehensive analysis of the social, economic and cultural value of volunteering in Tasmania.

It is the first time a full cost benefit analysis of volunteering has occurred in a defined region; and the first time that an accurate reflection of the social, cultural and economic value of volunteering has been achieved

Volunteering is not just essential to the welfare and wellbeing of Tasmanians, it is also a key driver of economic growth. Our research places volunteering front and centre as Tasmania's largest industry - contributing nearly 5 billion dollars in benefits to the community.

Whilst this number is immense, our research shows that full potential of volunteering is yet to be realised. This number is just the tip of the iceberg.

The State of Volunteering Report 2014 shows us that volunteering influences economic activity across a range of sectors. It doesn't just benefit the individual or the organisations that they may belong to. Volunteering can be a significant driver of growth.

Our research shows that volunteering offers a significant return of investment: for every $1 invested in volunteering, over $4 in benefits are returned. If these returns are already achieved, we can only imagine what Tasmania would look like if we invested seriously in volunteering, the way that we do with other key Tasmanian industries.

By treating and growing volunteering as a sector in its own right, the resources and benefits would be there to share amongst all Tasmanians. If we worked together to achieve this, Tasmania as a whole would feel an enormous impact.

We welcome the findings from the State of Volunteering Report 2014 and consider it a must read for volunteers, managers of volunteers, and volunteer involving organisations.

This report is a significant piece of evidence that should receive attention from other sectors, as it highlights some astounding findings. These findings show not just what volunteering currently contributes to Tasmania, but the potential for us to do more.

Adrienne Picone

CEO Volunteering Tasmania

Michelle Ewington

Chair Volunteering Tasmania Board

The Economic, Social and Cultural Value of Volunteering to Tasmania, 2014

This report was commissioned by Volunteering Tasmania to quantify the economic, social and cultural value of volunteering to Tasmania.

The original contribution of this study is to apply the Institute of Project Management's (IPM) Model of Value Creation to locate the discrete values of volunteering activity and, for the first time, illustrate the dynamic ways in which they interact.

The model depicts how individuals, businesses and governments use their time and money to enable volunteering in Tasmania, which alter the individual and community states of physical, human, social, and symbolic capital. This is then converted by users into a set of economically valuable outputs that impact upon the welfare of society.

In its application, the IPM Model of Value Creation adopts the best-practice principles of cost and benefit analysis to estimate the value of the unique cluster of activities that comprise volunteering. As the first known valuation of volunteering as an economic and cultural ecosystem within a defined region, this study is as much exploratory as it is conclusive. Further research into a number of areas is encouraged.

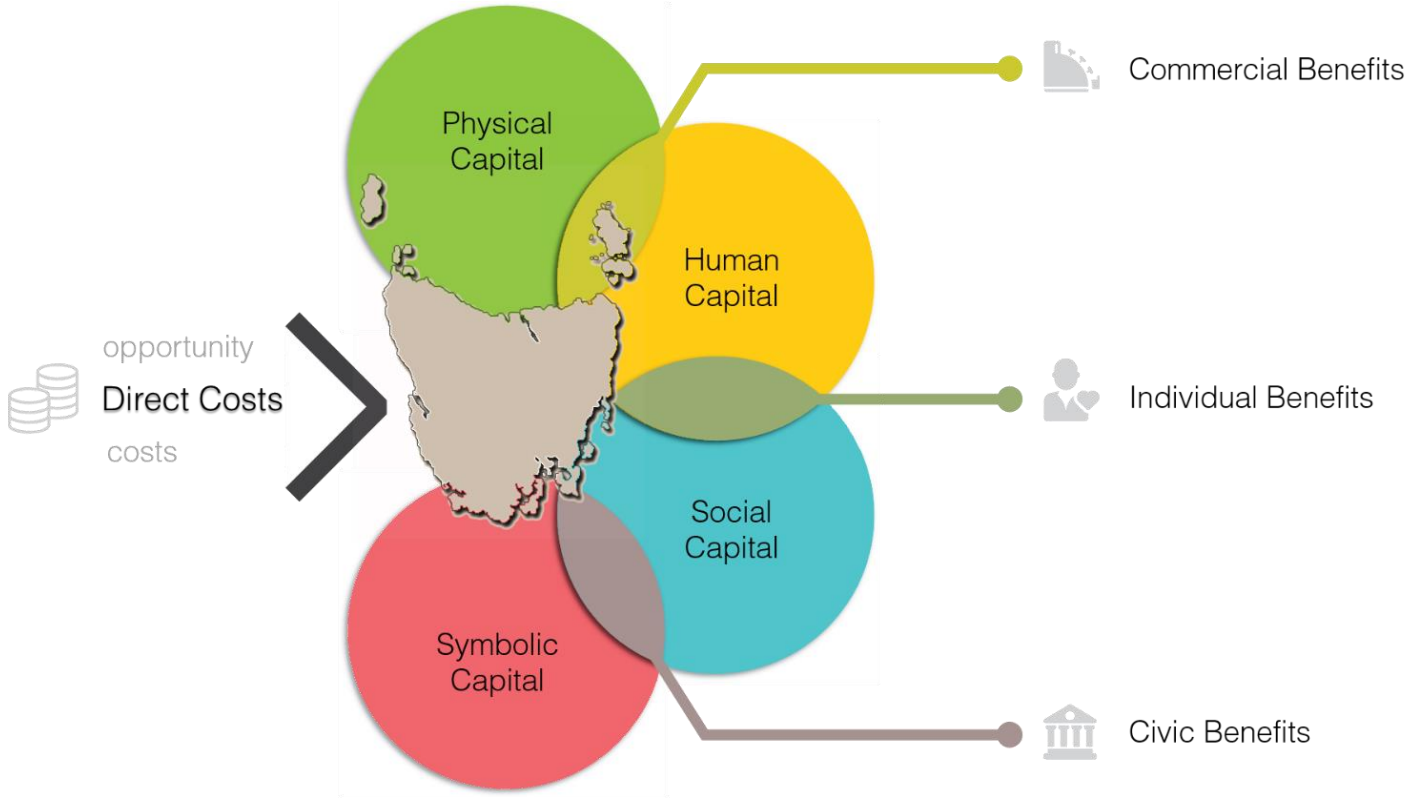
The socio-economic and cultural value of volunteering to Tasmania in 2014 is conservatively estimated to be **$4.9 billion**. This figure is much greater than previous estimates based on price or economic impact alone, yet is likely to be a significant underestimate given the limitations of the available data and forensic techniques.

Other findings of note include:

- **four out of five** Tasmanians volunteered in 2014, donating a total of **7.1 million hours**
- people between 65 and 74 years of age volunteer, on average, **22.8 hours per month**—the rest participate at the average rate of 12.5 hours per month
- there are approximately **2,000 volunteer involving organisations** (VIOs) in Tasmania across the not-for-profit, government and private sectors
- individuals significantly self-finance their volunteering activity, out-spending VIOs at a rate of **2:1**
- only **10.1 per cent** of volunteers are reimbursed for their out-of-pocket expenses
- treated as a sector in its own right, volunteering is **Tasmania's largest industry** by employment
- Tasmanian employers enjoy a net productivity premium of **$1.2 billion** as a result of their employees' volunteering
- in the last 12 months, over **4,000 tourists** visited Tasmania for the purpose of volunteering. Their average stay of 13.9 nights was significantly higher than the average tourist stay of 8.9 nights
- the people of Tasmania identified a personal well-being benefit of **$651.4 million** from volunteering in 2014
- for *every dollar* invested in volunteering, at least **$4 in benefits** are returned to the community, and
- increasing the rate of volunteering in the community by as little as **one per cent per year** through marginal increases in government investment will yield exponential community benefits.

The principal finding is that although the current levels of investment in volunteering yield a strong return, a more economically efficient outcome can be achieved by increasing the regular rate of volunteering in the community. For example, exploiting the self-identified under-utilisation of volunteering capacity in Tasmania would yield an additional **$706.1 million** in benefits over ten years.

The IPM Model of Value Creation proposed by this report is therefore a useful tool for enabling and explaining the costs and benefits of volunteering in a defined economy, and for evaluating policy alternatives in support of this aim.



Acknowledgements

This is an independent report commissioned by Volunteering Tasmania, with the in-kind support of Department of Premier and Cabinet, Tasmania.

The analysis and opinion within should not be taken to represent the position—official or otherwise—of anyone other than the authors of the report. Nevertheless, nothing here would have been possible without the contributions of the following parties:

- Adrienne Picone and the team at Volunteering Tasmania
- Brian Correy and the team at Myriad Research
- Mellissa Gray, Department of Premier and Cabinet

The original contribution of Dr Alexis Wadsley to the IPM Model of Value Creation is also gratefully acknowledged.

A number of people further gave generously of their time to consult with the authors, either directly or via the surveys that were conducted. Mindful of respecting their confidentiality, we do not identify them here.

Paul Muller
John Harvey
Dr Dave Arthur
Anne Fisher
Dr Courtney Webber
Ian McMahon

December, 2014

Contents

Tables

Figures

1. Introduction

The volunteering sector has long been an enabler and driver of equitable growth in Australia, and as such has made a significant contribution to the welfare of the community. Beyond the specific altruistic purpose of each volunteering act, volunteering as a whole has been a vibrant source of knowledge, cultural and recreation exchange, enriching the lives of countless Australians. The extent of this contribution cannot be fully captured in financial statements.

The economic assessment of volunteering has therefore typically focused on quantifying the market replacement cost of volunteers. Professor Duncan Ironmonger of the Households Research Unit at the University of Melbourne has been at the forefront of research in Australia to address this issue. His reports on the economic value of volunteering in Queensland (Ironmonger, 2006, 2008), Western Australia (Ironmonger, 2009), South Australia (Ironmonger, 2011) and Victoria (Ironmonger, 2012; Ironmonger & Soupourmas, 2002) have used ABS data from 1992 to the most recent Census of 2011 to arrive at dollar-quantified estimates of the replacement cost and other impacts of volunteering in those States over time.

Yet at the heart of any public investment decision is this basic question—**does the planned activity lead to a net increase in social welfare**?

Although replacement cost analysis is a necessary step towards resolving the social welfare question, it does not distinguish costs from benefits. Similarly, such studies cannot be used to show the economy-wide impact of volunteering-induced expenditure; nor can they show the effects of volunteering on less tangible community outcomes such as productivity, civics, and individual well-being. It is for this reason that stand-alone replacement cost and economic impact analyses alone usually fail to influence mature policy decisions (Department of Treasury and Finance, 2005).

Cost-benefit analysis (CBA) is now the government-preferred approach to evaluating policy choices (Office of Best Practice Regulation, 2005). A cost-benefit approach is required to identify the opportunity cost associated with the expenditure, as well as the costs and benefits that may accrue to society and/or the environment.

The cost-benefit approach also demands particular attention to identification of the recipients of benefits and the bearers of costs. In developing and applying a framework for a complete economic assessment of the value of an activity, it is therefore necessary to quantify the costs and benefits to:

- government at all levels
- producers
- users
- the community, and
- the environment.

To locate and, perhaps more importantly, communicate the full suite of costs and benefits that might attach to an activity, the team at the Centre for Project and Policy Research at the Institute of Project Management (IPM) have developed an intuitive framework to describe the process by which ecologies of activity create value across a diverse range of sectors and services.

Iterations of the model have been successfully applied to economy-wide valuations of public/private goods such as sport and physical recreation, live music, the Arts, and major events, and have been published internationally to wide acclaim.

The intention of this process is to divert attention from market economics to social economics. Whereas social economists have methodologies—the most accepted of which is contingent valuation—what practitioners have hereto lacked is a theoretical paradigm to consistently locate and describe the costs and benefits of any given activity (or ecology thereof).

This application of the **IPM Model of Value Creation** thus has potential to significantly influence the strategic direction of not only the volunteering sector in Tasmania, but its direct, indirect and potential stakeholders.

Its application here is intended to assist Volunteering Tasmania and its partners by:

- quantifying the social and economic contribution that volunteering makes to Tasmanian residents, tax payers and the broader community

- providing robust social and economic information and advice to assist stakeholders in making strategic decisions about future resource allocation
- commencing to benchmark the outcomes of volunteering in Tasmania to measure future performance and the impact of any strategic changes
- providing a basis to make representations to State, Federal and other community stakeholders for funding partnerships, and
- providing evidence-based data for future marketing and public relations.

I think everybody in Australia probably is a volunteer in some way. Through sport and other activities. It is so rewarding. I enjoy doing as much as I can and always have.

It has a ripple effect and not only makes you feel good but also has a flow on affect to other people.

We would be lost without them - many situations and jobs wouldn't get done otherwise.

2. Scope

Before we commence our enquiry into the value of volunteering to Tasmania, it is necessary to clearly define what we mean when we talk about volunteers and voluntary work. The discussion that follows is not meant to replace or even be presented as an alternative to definitions of volunteering advanced elsewhere; rather, it sets out the scope of this work and the rationale for the same.

In recent years, research into the nature, characteristics and value of volunteering has been reported across a range of disciplines, including sociology, economics, psychology, law, philosophy and the health sciences, to name but a few. Yet despite this, there is no single, generally accepted definition of what is meant by a '*volunteer*'. Both within and across disciplines, a range of definitions of '*volunteer*', '*volunteering*' and '*voluntary work*' can be seen. In fact, several researchers have noted that many reports of research into volunteers do not define the term for the reader at all (Cnaan, Handy, & Wadsworth, 1996; Petriwskyj & Warburton, 2007b).

It is not our intention to suggest that there can or should be a single, one-size-fits-all definition of volunteering to be used for all research. Nevertheless, where a definition is provided, its effect is to delineate the subset of people and activities that are both **included** and **excluded** from the scope of that particular study. This guarantees (to the extent that it is possible to do so) that the researcher and their reader understand precisely what is being measured.

After all, differing definitions are not just a matter of academic nit-picking. As noted by Professor John Mohan of the UK's Third Sector Research Centre: "Methodology is destiny in this area—in other words, how you define your topic will constrain the answers you get" (Mohan, 2011). To illustrate this, Salamon, Sokolowski, and Haddock (2011) cite a striking range of studies of volunteering in the UK which reported the rate of volunteering to be, respectively, 74 per cent in 1997, 31 per cent in 2007, 10 per cent in 2009, and 52 per cent in 2010. They argue that, "While it is possible that British citizens underwent this dizzying array of gyrations in their attachments to volunteering, a more plausible explanation is that the gyrations occurred in the methodologies and definitions applied by different researchers."

The characteristics of volunteering

Consider then, the definitions of volunteering currently espoused by the National and Tasmanian peak bodies working to advance volunteering in the community.

Volunteering Australia (VA) only elect to define **formal** volunteering, referring to it as:

> "…an activity which takes place through not-for-profit organisations or projects and is undertaken:
>
> - to be of benefit to the community and the volunteer,
> - of the volunteer's own free will and without coercion,
> - for no financial payment, and
> - in designated volunteer positions only" (Volunteering Australia, 2013).

Presumably, this is the scope of their interest, and other forms of formal volunteering—such as government or private enterprise involved volunteering—are not relevant to them.

In July 2012, VA member organisation, Volunteering Tasmania (VT), promoted a broader definition of volunteering. The VT *Characteristics of Volunteering* policy document states:

> "Volunteering is an activity **that can occur in any setting** and has the following characteristics:
>
> - It has a direct benefit to the community and the volunteer (whether the benefit is tangible or intangible)
> - It is undertaken by choice, and
> - It is unpaid. ***However, the volunteer may receive reasonable or appropriate reimbursement for expenses incurred that are associated with the role, and / or may receive a monetary or other incentive / reward***"[1] (Volunteering Tasmania, 2012).

The commonalities between the two definitions are obvious. Both identify volunteering as an act that benefits the community as well as the volunteer. Both also stipulate that the activity is undertaken by choice and (to at least some extent) unpaid. However, it can also be seen that the VT definition would accept a range of formal and informal 'helping'

activities that might be excluded from the national definition, as well as limited forms of compensation.

The differences between these two definitions alone highlight some of the key areas of definitional variation seen across the national and international literature. Cnaan *et al*. (1996) identify four key dimensions that are observable in most widely used definitions of volunteering. These can be paraphrased as:

- remuneration
- free choice
- structure, and
- intended beneficiaries.

Within each of these dimensions, definitions may be more or less inclusive in their assessment of who is or is not a volunteer. Each is considered separately here, together with an emerging aspect of volunteering interest: its relationship to *time*.

Remuneration

The most obvious distinction between volunteers and employees is that the former are not paid for their work. This may, at first glance, appear to be a fairly simple, clear-cut and easily applicable criterion, but closer examination reveals the complexities lurking beneath the surface.

Volunteers, even the most altruistically motivated, clearly receive some reward for their work, even if this is limited to the satisfaction of having done the 'right' thing. Both the VA and VT definitions include benefit to the volunteer as one of the defining characteristics of volunteering. They conflict, however, in the extent to which these benefits may include direct, tangible payments (in-cash or -kind) to volunteers.

An important distinction here is between financial ***payment*** and financial ***reward***. Payments that merely cover a volunteer's out-of-pocket expenses are not generally considered remuneration in this context. For example, while the VA definition states that volunteering is undertaken, "…for no financial payment", for the most part, reimbursement of volunteers' out-of-pocket expenses incurred in the course of their volunteering are considered non-exclusionary on the basis that these payments are not a substitute for a wage (Maher, 2005).

The International Labour Organisation (ILO)'s criteria recognise intangible benefits to volunteers including, "…skills development, social connections, job contacts, social standing and a feeling of self-worth" (ILO, 2011). They also consider a variety of more tangible benefits acceptable. These range from the simple reimbursement of expenses, provision of services such as meals and transportation, small gifts or tokens of appreciation, up to and including stipends to cover living expenses. Two key standards are used to qualify recipients of such benefits as volunteers: that the payments or services received, "…do not equal or surpass the value of local market wages… (*and*) are not contingent on the local market value, quality or quantity of the work, or on its outcome (if any)" (ILO, 2011).

The definition of volunteers used by the Australian Bureau of Statistics (ABS) also excludes those who receive in-kind rewards that are related to the market value of the work performed:

> "The reimbursement of expenses in full or part (eg token payments) or small gifts (eg sports club T-shirts or caps) was not regarded as payment of salary, and people who received these were still included as voluntary workers. However, people who received payment in kind for the work they did (eg receiving farm produce as payment for work done on a farm, rather than cash) were not included as volunteers" (ABS, 2011).

Within remuneration, another grey area is where 'volunteers' are paid a full salary—not by the organisation for whom they provide the services, but by their usual employer. There are two main areas where this may occur: corporate and emergency services volunteering.

A 2006 survey of Australian companies with corporate volunteering programs showed that, "40 per cent of respondents allow their staff one day of work time to contribute to volunteering, and a further 21 per cent allow two to three days per year. 6.3 per cent of respondents allowed up to one week, and 2 per cent more than one week" (Volunteering Australia, 2006). So if a participant in such a program is receiving their normal pay during the activity, is this volunteering, or should it more properly be seen as an in-kind donation from the sponsoring employer?

Similarly, Australia's fire and emergency services volunteers must be granted leave from their usual employment in disaster situations (Fair Work Act, 2009). For most volunteers working in the non-government sector, this leave is unpaid; however, paid Community Service leave is available for many government employees (Baxter-Tomkins & Wallace, 2009). In recent years we have seen contingents of volunteer firefighters assisting in large-scale fire disasters in other states.

In these circumstances, volunteers may be away from their home and their usual employment for a period of days or weeks. Their absence from work may be covered by unpaid leave, by using up paid annual leave entitlements, or in the case of the lucky few, by specified Community Services leave. Can we still consider this latter group volunteers?

The Tasmanian *Civil Liability Act 2002* certainly would consider them volunteers. It limits a volunteer's liability for, "…anything that the volunteer has done in good faith when doing community work" (Civil Liability Act (Tas), 2002).

Section 45 of the Act, titled *Meaning of 'volunteer'*, states:

> "(2) For the purpose of subsection (1), a person does community work on a voluntary basis if the person—
>
> a) receives no remuneration for doing that work other than—
>
> i) **remuneration that the person would receive whether or not the person did that work**; or
>
> ii) the reimbursement of reasonable expenses incurred by the person in doing that work; or
>
> *b)* receives remuneration that is not greater than the amount, if any, prescribed by the regulations"[2] (Civil Liability Act (Tas), 2002).

The *Commonwealth Volunteers Protection Act 2003* contains similar provisions, but more explicitly adds:

> "(3) An individual also does work for the Commonwealth or a Commonwealth authority on a voluntary basis if:
>
> a) the individual continues to receive remuneration from the individual's usual employer while doing the work but receives no other remuneration for doing the work other than:
>
> i) reimbursement of reasonable expenses incurred by the individual in doing the work; or
>
> ii) remuneration less than the amount, if any, prescribed or determined in accordance with the regulations" (Commonwealth Volunteers Protection Act, 2003).

Thus it would appear that, at least for the purposes of civil liability, payment of full wages is no impediment to volunteer status, provided that the payment comes from the usual employer, rather than the organisation for which the voluntary work is performed.

Perhaps the ultimate arbiter of the legal status of whether a remunerated individual is a volunteer or not is the Australian Tax Office (ATO). Although the convenience of a definitive statutory statement on volunteering does not exist, the ATO's determinations in this regard (which have the weight of regulation) point to a number of payments that are either explicitly or implicitly exempt from taxation on the basis that they are made to volunteers; to wit:

> "A payment that is not assessable to a volunteer will have **many** of the following characteristics.
>
> - The payment is to meet incurred or anticipated expenses.
> - The payment has no connection to the recipient's income-producing activities or services.
> - The payment is not received as remuneration or as a consequence of employment.
> - The payment is not relied upon or expected by the recipient for day-to-day living.
> - The payment is not legally required or expected.
> - There is no obligation on the part of the payer to make the payment.
> - The payment is a token amount compared to the services provided or expenses incurred by the recipient. Whether the payment is token depends on the full facts surrounding the payment and recipient's circumstances"[3] (ATO, 2014).

Some categories of remuneration are also specifically named as being tax-exempt on the basis that they are volunteering. These include defence reserves and foster care payments. A notable exception to this is jury duty, which - despite being an act of community service— may not be a perfect exercise of free choice.

Free Choice

Volunteers volunteer; that is, they provide their service and skills willingly. Although this may appear to be an entirely circular and unnecessary truism, once again we can see that there are degrees of freedom of choice that may be included or excluded from any definition of volunteering.

At the furthest extreme, there are a number of circumstances in which unpaid labour would not be considered volunteering under most definitions. Examples include work experience undertaken as a requirement of a degree or other study (for example, student teachers) or work done under a Community Service Order imposed as a result of a criminal conviction. Beyond this, the degree of freedom (or conversely, coercion) that is advanced to define the boundary of volunteerism varies between definitions.

The United Nations' view is that volunteer action is:

> "…undertaken according to an individual's own free will, and not as an obligation stipulated by law, contract or academic requirement. The decision to volunteer may be **influenced** by peer pressure, personal values or cultural or social obligations, but the individual **must be able to choose** whether or not to act"[4] (United Nations Volunteers (UNV), 2011).

Snyder and Omoto (2008) permit a much narrower definition of the free choice requirement by broadening the types of unacceptable 'obligation'. In their view, volunteers' actions must be, "…performed on the basis of the actor's free will **without** bonds of obligation or coercion." [1]

They go on to explicitly exclude any activity where there is a pre-existing relationship between the volunteer and the beneficiary, on the basis that in this case the work, "…may not be truly voluntary, but instead may be performed out of a sense of obligation flowing from familial or marital bonds, and possibly in response to the pressures of those relationships and their attendant expectations" (Snyder & Omoto, 2008).

Perhaps more subtly, in the paper in which four of the dimensions under discussion were proposed, Cnaan *et al*. (1996) identified three levels of 'free choice':

[1] Emphasis added.

1. free will (the ability to voluntarily choose)
2. relatively un-coerced, and
3. obligation to volunteer.

Even so, the authors do not specify the types of coercion or obligation that might be definitively permissible, and do not resolve the tension between the UNV and Snyder and Omoto definitions.

Yet this distinction between external or legal obligations and the more personal familial or cultural obligations is not trivial, especially in multi-cultural societies like Australia. According to a 2001 report by the Social Policy Research Group of the University of South Australia, "…a voluntaristic frame of social analysis (where individuals may choose the type and level of neighbourhood and community connections and voluntary involvements) was not applicable to either the Indigenous or many NESB people in this study" (Kerr, Savelsberg, Sparrow, & Tedmanson, 2001).

For even where there is some degree of external obligation or coercion, there is often an extant level of choice. This continues into the legal domain. For example, recipients of certain Australian income support payments are required to negotiate and abide by Employment Pathway Plans (EPPs) (Department of Social Services, 2014). These plans may include "work experience" activities. Some, though not all of these, entail unpaid work (even if certain expenses may be reimbursable), including:

- *Work for the Dole* activities
- *Green Corps* environmental activities
- unpaid work experience placement activities
- voluntary work activities in the community sector
- unpaid or paid work in a social enterprise, or
- *Drought Force* activities (Department of Social Services, 2014).

So, is unpaid work (including program participation) undertaken in these circumstances voluntary? Prior to 2006, the ABS definition of a volunteer was someone who, "…willingly gave unpaid help, in the form of time, service or skills, to or through an organisation or group" (ABS, 2006b). From 2006, the "willingness" component was refined to exclude some

named types of unpaid work, including that undertaken through, "…the Work for the Dole Program or Community Work under Mutual Obligation" (ABS, 2011).[2]

In reality, the situation is rather less black or white. There appear to be three stages of coercion/choice here. In most cases, job seekers are not required to participate in any of these work experience activities unless and until they have been in receipt of benefits for 12 months or more, even though they can (freely) choose to participate earlier. This first stage would appear to be genuinely voluntary under almost any definition of volunteering. It may in fact include people who were involved in voluntary work before they began to receive benefits and simply record their continuing involvement as part of their EPP.

At the 12 month point, participation in some form of 'work experience activity' is usually required, even if an element of choice remains. According to the Australian Government/JSA Work Experience Fact Sheet, if participation is required: "You will meet with your Job Services Australia provider to discuss the various activity options available in your area. You will have up to six weeks from this meeting to choose a Work Experience Activity, or combination of activities" (Department of Social Services, 2014).

This option is more coerced; the job seeker is required to choose one or more activities, one of which might be volunteering. Therefore, participation would certainly seem to fall into the Volunteering Tasmania definition (undertaken by choice, where choice is defined as an act of selecting or making a decision when faced with two or more possibilities).

In stage three, job seekers who do not choose an activity have one selected for them by their Job Search Agency (JSA). The activity chosen for them might—in every other circumstance—meet the standard definition of volunteering. However, as the choice not to participate in the activity assigned by the JSA would lead to the loss of welfare benefits, this explicit sanction would (for many) otherwise exclude it as a 'voluntary' act.

[2] *Green Corps* activities are not specifically excluded from the ABS definition. This is surprising, since *Work for the Dole* and *Green Corps* are the two default activities listed that will be chosen for jobseekers who fail to make their own choice of activity.

Structure

As either a defining or classifying characteristic, many definitions of volunteering consider the context in which the activity is performed, whether through an organised group (generally, but not exclusively, not-for-profit) or on an individual basis (direct helping). A number of definitions—such as VA's—only allow for those volunteers who provide their time or service through an organised group. For the purposes of this study, such groups are called *volunteer involving organisations* (VIOs). Broader definitions may also include direct helping, but nonetheless divide volunteers into **formal** (through an organisation) and **informal** (direct help) classes.

As previously highlighted, the ABS definition of a volunteer is someone who "…willingly gave unpaid help, in the form of time, service or skills, **to or through an organisation or group"** (ABS, 2011)**.**[3] The only definition of volunteering advanced by VA comes with a like caveat. This is consistent with the majority of government approaches to definition reviewed in this study; although, many at least also acknowledge the separate presence of informal volunteers or direct helpers (if only to specifically exclude them).

For example, official USA measures of volunteering stipulate, "The count of volunteers only includes persons who volunteered through or for an organization; the figures do not include persons who volunteered in a more informal manner" (Bureau of Labour Statistics, 2014).

Canada likewise recognises both formal and informal volunteers (termed *direct helpers*), even if only formal volunteers are included in calculation of the volunteering rate. In their view, volunteers are:

> "…people who volunteered, that is, who performed a service without pay, on behalf of a charitable or other non-profit organization, at least once in the 12-month reference period preceding the survey. This includes any unpaid help provided to schools, religious organizations, sports or community associations"(Statistics Canada, 2009).

Direct helpers are:

> "…people who reported having helped people on their own, that is, not through a group or organization, in the 12-month reference period preceding the survey. This includes help given directly to friends, neighbours and relatives, but excludes help given to anyone living in their household" (Statistics Canada, 2009).

[3] Emphasis added.

Several researchers note that a disproportionate amount of volunteering research is focussed on formal volunteering.[4] Admittedly, this constraint is probably as much a methodological convenience as it is a concerted effort to define volunteering as an exclusively organisational construct. In other words, limiting studies of volunteering to volunteer involved organisations—and not-for-profit organisations in particular—not only sidesteps much of the uncertainty in definition we highlight here, but allows for much more consistent and accessible (i.e. cheaper) data sourcing. Yet because these studies inevitably inform public policy on volunteering, under-representing the true extent of the activity can only constrain decision-making in this regard.

This is not to suggest that governments are wilfully ignorant of this challenge. The UK measures both formal and informal volunteering, and reports separate participation rates. Formal volunteering is defined as, "Giving unpaid help through groups, clubs or organisations to benefit other people or the environment," and informal volunteering as, "Giving unpaid help as an individual to people who are not relatives" (Department for Communities and Local Government, 2011).

Similarly, New Zealand distinguishes, "Voluntary work: measures whether the respondent has undertaken voluntary activities for a group or an organisation in the previous four weeks;" from, "Unpaid work: is whether the respondent has provided help to people outside their household without payment in the previous four weeks" (Statistics New Zealand, 2013).

This is important, because as the ILO notes, "…direct volunteering is at least as important as organization-based volunteering in many countries, particularly in countries or regions where there are fewer non-profit organizations through which persons might volunteer" (ILO, 2011).

Even so, when considering both formal and informal (direct) volunteering important, the same body goes on to caution that, "Their separation in the data is important for classification and reporting purposes. For example, only organization-based volunteer work for non-profit institutions can be counted towards the satellite account of non-profit institutions" (ILO, 2011).

Perhaps this is why the United Nations' definition of volunteer activity relies on three broadly stated criteria: "…free will, non-pecuniary motivation, and benefit to others"

[4] For example, see Kerr *et al*. (2001), Petriwskyj and Warburton (2007b), Thomson (2002), and United Nations Volunteers (UNV) (2011).

(United Nations Volunteers (UNV), 2011). It explicitly rejects any criteria limiting volunteering to collective constructs:

> "Most empirical studies are concerned with volunteering undertaken in the context of formal organizations. However, focusing only on this aspect of volunteerism overlooks a large amount of volunteer action. Our definition is broader. It includes many acts of volunteerism that take place outside of a formal context" (United Nations Volunteers (UNV), 2011).

Best practice would therefore suggest that volunteering is not organisationally constrained, even if its measurement is not always amenable to this definition.

Intended beneficiaries

As we have seen, all definitions of volunteering include an aspect of service; there must be an intended benefit to someone or something other than the volunteer. The activity may be intended to benefit the wider community (locally or internationally), particular groups of people, or even specific individuals. Activities may also be intended to help people directly, or—through causes such as the environment—effecting social or political change, or animal welfare.

Yet the subjective notion of benefit may itself be problematic. While few would argue that feeding the hungry or housing the homeless is not beneficial, many activities that meet even the narrowest of volunteering definitions may be more controversial. Volunteers for opposing candidates in a political campaign have dichotomous aims, yet both sides would argue that their actions are to advance the public good. Similarly, activists for or against social changes such as gay marriage, or on environmental issues such as the long-running Tasmanian forestry dispute, each believe they are on the side of 'right'. Indeed, the Ku Klux Klan, Australian League of Rights, and Islamic State (IS) are all organisations that significantly depend upon volunteers—volunteers who clearly anticipate personal benefit from their acts.

The standard definitional response to this is to somewhat lazily rely on beneficial ***intent***, without attempting to judge whether or not the actual outcome is in fact, by objective measures, of net individual, organisational or community benefit. This is ironic given that definitional consideration of intended benefit usually finds its semantic nuance in who is intended to benefit from the activity.

As in the previous dimensions discussed, there is a continuum of opinion as to how far-removed from self-interest an activity must be in order to be considered volunteering. At the narrowest extreme lie definitions that require the intended beneficiaries to be strangers—see, for example, the earlier discussion of Snyder and Omoto (2008). The broadest definitions implicitly accept as the threshold any act of helping.

This debate usually centres on help given to family members. The UN definition mentioned earlier includes "…benefit to others" as one of the core characteristics of volunteering, but specifies that the help "…directly or indirectly benefit people **outside** the family or household, or else benefit a cause" (United Nations Volunteers (UNV), 2011). In the same spirit, the UK's *Compact Code of Good Practice on Volunteering* specifies activities that aim "…to benefit the environment or individuals or groups other than (or in addition to) close relatives" (Zimmeck, 2009).

Most Anglo-Saxon Australians would accept this distinction between someone who provides unpaid household help to a stranger or neighbour, and one who provides the same services for an elderly parent. This intuitive rationale perhaps explains why many of the Western definitions cited above have non-controversially excluded help provided to family members from their definitions of volunteering.

These same definitions also accommodate (usually via silence) activities where potential beneficiaries *include* family members, as long as others benefit as well. After all, many forms of volunteering, including formal volunteering, may have their origins in a desire to help people close to the volunteer. Examples would include parents who volunteer at their child's school, or coach a sporting team of which their child is a member. A person who works tirelessly to fundraise for the Kids Cancer Project or the Multiple Sclerosis Society would not be considered any less of a volunteer if they or a family member is or has been affected by the condition.

So rather than relying on family (whether close or extended) as the threshold of acceptable beneficiaries, some definitions focus on the unit of the 'household'. In part, this is a response to the difficulty of precisely defining family in a cross-cultural context. For example, a study of Maori perspectives on volunteering and cultural obligations reported that "…in contrast to mainstream definitions of volunteering as being 'for community benefit' but 'not for one's own family', it was impossible for many research participants to distinguish between *whānau*[5] and community benefit" (P. Oliver & Love, 2007).

[5] In Maori culture, whānau is defined as "extended family, family group, a familiar term of address to a number of people".

A comparable study of volunteer activity among Indigenous and non-English speaking background communities also noted that for many cultures, "…social and community frameworks did not neatly dissect familial (private sphere), community and social (public sphere) boundaries" (Kerr *et al*., 2001).

Thus, the ILO definition is, "Unpaid non-compulsory work; that is, time individuals give without pay to activities performed either through an organization or directly for others outside their own household." While acknowledging that services performed exclusively for family members (whether or not they are co-resident) is usually excluded from volunteer definitions, they note that "…a problem arises in using 'family' as the unit of observation, because the definition of 'family', and even 'immediate family', is imprecise and differs widely among different countries and cultures" (ILO, 2011).

Setting the threshold of 'helping' at the household level therefore solves some problems, but introduces others. For example, the incidence of multi-generational extended family households in certain cultural groups would mean that there simply aren't that many family members to be helped who aren't in the same household. As the ILO also notes, the household boundary also raises a particular problem in consideration of foster-parenting, where a child is within the household but may well not be considered a family member. Considerations such as the duration of the placement, and the likelihood of its leading to adoption would need to be considered in assessing whether or not a foster parent is a 'volunteer' or just a specific sort of parent (ILO, 2011).

Gifts of time

For many, to be considered a true volunteer implies a certain level of commitment over time. Snyder and Omoto (2008) consider that a part of the measure of the volunteer's choice is that the decision to volunteer is taken with some degree of planning and deliberation. Thus, they distinguish the 'spontaneous' or 'bystander' helping undertaken in response to emergencies or disasters from "…the planned helping of volunteerism," and consider that "…volunteering usually requires help on a recurring basis, and often occurs over extended periods of time."

Despite this, increasing recognition is being given to the reality that the classical model of a volunteer as an unpaid 'employee' working regular shifts is giving way to other paradigms. Rochester (2006) identifies from a diverse range of literature a taxonomy of volunteering that includes:

- "Long-term volunteers (who) tend to shape their own job, adapting their time and energies to whatever is needed to make the cause succeed

- Short-term volunteers (who) are looking for a well-defined job of limited duration
- Temporary, episodic volunteers (who) offer a few hours or at most a day of time on a one-off basis (often for a particular event)
- Interim (or occasional episodic) (volunteers who) provide service at regular intervals for short periods of time (eg volunteering every year for a school fete), and
- Transitional volunteers (who) use volunteering as an activity to forge a path back into the community." (Rochester, 2006)

This begs the question: how short is too short for an activity to no longer be considered volunteering? The UK *Help From Home* website offers a range of 'quickie' volunteering options that range from only a few seconds (e.g. signing online petitions, allowing non-profit organisations to tweet messages to your followers) to under 30 minutes (e.g. recording bird/nest sightings, knitting caps for premature babies) of effort (Help From Home, 2014). Deloitte Australia also invites non-profits to submit 'challenges' for their staff, defined as "…a small project or question with a clear deliverable that can be solved online in bite size chunks of time" (Deloitte Australia, 2014).

Indeed, there is growing interest in the phenomenon of **micro-volunteering**, defined by Browne and Paylor (2013) as "…bite-size volunteering with no commitment to repeat and with minimum formality, involving short and specific actions that are quick to start and complete." As the authors noted, many of the actions encompassed in this description may challenge our perceptions of volunteering.

Is 'liking' a Facebook page, retweeting a message or signing a petition really volunteering or simply 'micro-supporting'? While the individual effort involved may be small, the positive potential for organisations to "…build cause driven communities and further incite the behaviour of friend-to-friend or peer-to-peer fundraising" (Kanter & Fine, 2009) and to reach new networks (Quinton & Fennemore, 2013) is undoubtedly valuable.

Even the United Nations' latest report on the *State of World Volunteering* notes the rapidly growing potential for information and communications technology to enable new forms of volunteering. It mentions the use of SMS messaging for health volunteers and election monitoring organisations as examples. It also cites the new temporal dynamic, referencing a study in which over 70 per cent of online volunteers chose assignments requiring one to

five hours a week and nearly half chose assignments lasting 12 weeks or less (United Nations Volunteers (UNV), 2011).

Our approach

Conventionally, a definition is of two parts: the *genus* (or family) of thing to which the term belongs, and the *differentia*, or the thing that distinguishes it from others (Nersterov, 2010). Therefore, it is both inclusive, in that no relevant species is overlooked, and exclusive, so that none is erroneously adopted.

In setting out the essential attributes of the thing defined, connotative definition is preferred to extensional articulation. By that it is meant that the necessary and sufficient conditions for membership are described with clarity, and that the listing of enumerative examples—while illustrative—is an inferior methodology.

To that end, a contemporary, connotative definition of volunteering is, as Volunteering Tasmania proposes:

> "…an activity that can occur in any setting and has the following characteristics:
>
> - It has a direct benefit to the community and the volunteer (whether the benefit is tangible or intangible)
> - It is undertaken by choice, and
> - It is unpaid. However, the volunteer may receive reasonable or appropriate reimbursement for expenses incurred that are associated with the role, and/or may receive a monetary or other incentive/reward" (Volunteering Tasmania, 2012).

Enumerative examples include feeding the homeless, planting trees in a public park, refereeing a football game, and tweeting a political message. Unfortunately, an enumerative example that meets even the strictest connotative criteria of the definitions cited thus far is the fairly familiar activity of playing sport. For in a significant number of circumstances, a person playing sport is donating their time without remuneration, doing so of their own volition, enabled by a not-for-profit organisational structure (their amateur club), and helping or benefitting strangers (their opposition, if not their team-mates). Yet the act of playing sport is implicitly inconsistent with what we understand volunteering to be.

It is for this reason that (Wittgenstein, 1953, 2001) has argued for the fallacy of the presumption that all definitions can and must be precisely stated. In his opinion, terms such as 'game', 'number' and 'family' have no fixed boundary; rather, items are clustered for their resemblance and one simply comes to understand the use of the term as it evolves.

After all, the word 'volunteer' has seen its meaning significantly diverge from its etymological origins. Its Middle French antecedent, *voluntaire*, was one who offered themselves for military service (Harper, 2014). Popular use has shed the term of such precision, and to presume that the meaning of the term volunteer is now settled is a further arrogance not permitted by the ongoing forces of social and technological change.

Rhetoric aside, nearly all lexicons—both popular and academic—continue to distinguish volunteering by the attributes identified above:

1. remuneration
2. free choice
3. structure
4. intended beneficiaries, and
5. time.

The dilemma has long been to separate volunteering from other, related activities that do not fit with popular notions of the activity. The consequences of this include difficulties in generalising, replicating or comparing results over time, or between regions or countries. Widely differing results arising from unclear, or clear but different, definitions may lead to a loss of credibility for research in the area.

For the current study, the value of volunteering to Tasmania arrived at will vary greatly depending on the definitional boundaries adopted. Too narrow a definition will exclude many value-producing activities and therefore undervalue volunteers' contributions.

Conversely, too broad a definition that includes activities that the reader will not accept as 'genuine' volunteering will produce a higher value, but at the expense of the legitimacy of the report. For although it might be desirable to reduce definitions of volunteering to a memorable slogan, the unfortunate reality is that nearly all such examples—including those cited here—can easily be rebutted.

Our approach acknowledges there is no gold standard or best-practice definition of volunteering, and therefore attempts to resolve the normative conundrum by limiting our definition to the practical scope of this study. As you will recall from our **Error! Reference source not found.**, we are ultimately responding to the question: does volunteering in Tasmania lead to a net increase in social welfare?

Therefore—and cognizant of the vast body of work that precedes (and is likely to follow) ours—we constrain our definition of volunteering in this report to that extent that **all** of the following conditions must be met:

- A volunteer gives their time towards an activity.
    - General philanthropy and exclusive donations of goods and/or money are outside the scope of this study.
    - There is no minimum time threshold that a volunteer must meet; however, the time spent exclusively donating goods and/or money—including, for example, passive attendance at a charity event—is excluded.
- A volunteer can be an individual or an organisation.
    - Organisations can volunteer the time of their employees / members at their own expense.
- The sum of any pecuniary benefits a volunteer receives must be either significantly under the market cost of equivalent time, or exempt from taxation in Australian law.
    - Examples of tax-exempt income that are relevant to here include foster carer allowances, reserve armed forces pay, and hobby exemptions to the Goods and Services Tax.
- Volunteering can occur in any setting. This includes:
    - Government and private enterprise involved volunteering
    - Spontaneous volunteering (e.g. providing first aid to a stranger)
    - Individual and/or family initiative, and
    - Actively participating in a self-help group.
- Volunteering may be conducted in person or online.
- A volunteer cannot be significantly socially or financially penalised by opting out of their volunteering activity, or electing not to participate.

- Beneficiaries of acts of volunteering must be intended, and not accidental.
    - All acts have unintended beneficiaries—for example, by purchasing shoes, I contribute to the education of the cobbler's children. In this study, there must be a direct, conscious and observable link between the actor (volunteer) and the beneficiary.
- Beneficiaries of acts of volunteering must be more than family, and outside the household.
    - Family is self-defined by respondents to allow for cultural and individual nuances.
    - Foster and surrogate carers may also self-define their relationship with their charges as either an act of volunteering or filial duty, in recognition of the complexity of these relationships.
    - Helping non-familial housemates (e.g. with common chores) is excluded from the scope of this study.

A number of methodological constraints also operate to limit the scope of the study, and these are largely revealed in context throughout the report. It is worth noting here though, that some socio-economic outcomes of volunteering—such as innovation—have eluded our best efforts at quantification and are only qualitatively referred to.

Furthermore, access to data (or the lack thereof) has, in some instances, frustrated our purpose. For example, distinguishing volunteers from coerced work for the dole participants is not possible from the public record, nor is it possible to reliably extrapolate from our limited primary source sample sizes. In the interests of conservatism, we therefore reluctantly exclude this category of volunteers from the scope of our research.

Nonetheless, although this is far from an elegant blend of the connotative and enumerative, it is a transparent, robust and defensible scope for this study. To the extent that it is possible to do so within the time and space allowed, we make every effort to distinguish some of the differential elements of volunteering, which can be seen in our analysis of findings and primary data collection instruments (appended).

3. Methodology

Economic value

This report defines value economically, as opposed to financially or philosophically. Value is typically measured in terms of trade-offs and is relative; in this instance, money is used as the unit of account. To determine volunteering's value to the community, individual valuations are aggregated.

Economic value refers to statements of value, which are made in monetary terms. Although this may appear to be a lame sort of truism, it has a series of important implications that must be kept in mind throughout the analysis.

The first is to understand the conditions under which valuation claims are made. When this study uses money to makes claims of value, this is not intended to imply that value can be simplistically reduced to money. Putting forward monetary expressions of value, however, allows us to better understand the trade-offs a person or group is willing to make. Reducing the costs and benefits of volunteering to dollars and cents merely recognises the universality of money as an instrument of exchange.

Secondly, by arguing the relevance of economic value, this study is not interested in disqualifying or rivalling other forms of valuation—qualitative or quantitative. This statement is neither a sop to sentimentality nor a cop-out on the issue of absolute forms of valuation; rather, it is pragmatic recognition of the fact that decision-making in policy is inevitably fiscally constrained. Given the governing assumption that volunteering is by and large a public good, monetary comparisons are entirely relevant given the complexity of acts and diversity of stakeholders under examination.

Alternative approaches to economic valuation

Economists are often derided as those who "know the price of everything and the value of nothing" (Wilde, 1891). The truth buried within this uncomplimentary view is that economics recognises that prices are not the same as values; that the former are concrete and observable, but the latter are more elusive, more complex and can be considered in a range of different ways.

Economics began with the study of the growth and distribution of wealth as determined by the operation of markets where goods and services (including labour) are bought and sold. As such, it was fundamentally concerned with financial transactions and with the relationship between market price and value (as variously defined in different schools of economic thought). However, as the subject of this report amply demonstrates, not all transactions are financial, and not everything of value has a price. Over time, the field of

economics has expanded to encompass a range of activities, transactions and values that are not primarily financial in nature, and theories of value have been adapted and expanded to encompass this.

Approaches to the economic valuation of volunteers in the literature vary as widely as the definitions of just what volunteering is. In many cases, valuations of volunteer labour are conducted as a sub-activity of another endeavour. Since volunteers are involved in so many types of activity across so many sectors of society, valuing their contribution may form an important part of assessing both values and costs to the community in many domains. To cite just a few examples:

- Contributions of the Not-For-Profit Sector to National Accounts (ABS, 2009; Statistics Canada, 2007; Statistics New Zealand, 2004)
- Contributions of industry sectors/activities:
    - Arts (Muller & al, 2013)
    - Heritage (Bollo, 2013) and
    - Sport and Recreation (ABS, 2013; Muller, Wadsley, Adams, Arthur, & Felmingham, 2010; Vos, 2012)
- Value of Informal Care (Access Economics, 2010), and
- Costs of disabilities and health conditions (Access Economics, 2006; Productivity Commission, 2011).

Studies that focus directly on the value of volunteer work do so from a variety of perspectives, and the value imputed depends not only on the methodology chosen but on the point of view from which it is assessed. Volunteering has impacts on volunteers themselves, on the people that they (directly or indirectly) help, on the organisations through which at least some of the activity is organised, and on the quality of life more generally in their communities.

Thus, in considering the efforts of even a single volunteer, “the volunteer, an organization, its beneficiaries, or society as a whole may each ascribe a different value”(Bowman, 2009).

Financial analysis

In many spheres of economic activity there are straightforward measures of scale for particular types of activity in the form of actual sales of goods and services to government, business or households. These values can be compared to the costs of inputs to evaluate the efficiency of the operation and the value added to the economy. Total sales can be compared between sectors to establish the relative contributions of varying industries.

We estimate from our research, for example, that VIOs in Tasmania spent some $138.9 million enabling volunteering in 2014. This is roughly equal to the Tasmanian State Government's investment in its Department of Primary Industries, Parks, Water and Environment (Department of Treasury and Finance, 2014).

Meaningful comparisons on the basis of finances alone, however, are problematic for a number of reasons. For example, in 2011-12, Tasmanian households spent 75 per cent as much on cigarettes and tobacco as they did on education services[6]. Does this mean that cigarette and tobacco sales contribute three quarters as much value to Tasmanians as education? Market prices for a particular industry can only tell us a part of the story; the aggregated ***price*** of sales of an industry's product ***in*** Tasmania is not the same as the ***value*** of that industry ***to*** Tasmania.

To capture the true value or contribution of a sector or activity, "measures should include all economic, social, cultural and environmental costs and benefits accruing at the individual, group or broader community level. These should include the costs and benefits associated with broader, including unintended, consequences, as well as for those directly involved in the activity" (Productivity Commission, 2010).

In the sphere of volunteering, we do not even have the luxury of market prices to serve as a starting point for our analysis. Even within formal volunteering, it is not only volunteers' time that is unpaid; many of the organisations may use other non-monetary inputs in the form of in-kind donations.

Similarly, many activities of both formal and informal volunteers produce outputs that are provided free or at below market prices (for example, providing food vouchers or free counselling), or that have no market price (for example, building a sense of community or protecting the environment). Beyond this, just as there is no generally agreed definition of volunteering, there is little available data about the scope of volunteering: the hours spent, the activities undertaken and the benefits and costs accrued thereby.

[6] Calculation based on (ABS, 2014c).

Any attempt to meet the Productivity Commission's standard for measuring economic contribution as outlined above therefore requires a coherent, systematic way of combining all of the costs of benefits of volunteering as they affect all Tasmanians, not merely those who volunteer or who benefit from the services of volunteers.

Therefore, although understanding financial scale is a necessary precondition to quantifying value, it is an insufficient measure and benchmark in its own right.

Economic impact analysis

Input-output modelling is a more comprehensive method of valuation that combines price and scale to estimate cash flows between sectors, businesses, organisations and consumers through the use of multipliers. As the allocation of public funds to any activity often requires a demonstrable economic benefit to a *region* (G. Weisbrod & Weisbrod, 1997), the attraction of **economic impact analysis** lies in its ability to produce a monetary measure of the impact of an activity beyond the immediate parties to a transaction.

Economic impact studies apply a common methodology, although there are differences in its application depending on the flows and agents under analysis. Inevitably though, such studies traditionally measure three levels of impact:

- *direct impacts* that arise from within the activity, such as the expenditure and income of the performing organisation
- *indirect impacts* that arise from outside, such as the increase in local business turnover as a result of the activity, and
- *induced impacts* that are spread out or expanded by the rest of the economic system (Heaney & Heaney, 2003).

There is much to be said for using the variables quantified by input-output studies to assess the market impact of volunteering activity. These include:

- insight into the financial structure of the sector
- trend identification
- indications of the likely financial effect of demand and supply shocks and other structural changes (such as policy changes) on the activities and institutions measured, and

- the provision of a basis for comparing the financial effects of vastly different projects (Madden, 2001).

Despite this, we can find no examples of the use of economic impact analysis specific to volunteering. A possible explanation for this is that the market transactions that occur in the volunteering sector are perceived to be so trivial as to not be worth quantifying—the biggest 'costs' are in fact un-priced. On that basis then, it would be difficult to justify persistent public expenditure on volunteer enablement by using traditional measures of economic impact alone.

This is because economic impact studies inevitably place sectors into direct competition with each other, creating an irresistible temptation for governments to make funding choices based on the areas or issues that have the "most" economic impact. After all, economic impact studies encourage comparisons to be made between an art gallery, a casino and the weapons trade, without distinguishing between the intrinsic, functional aspects of such diverse options (Madden, 2001) and the potentially negative externalities (Guetzkow, 2002).

Indeed, many of the benefits we associate with volunteering, like increased community connectedness or feelings of well-being, are 'intangible' and therefore difficult to measure. Even the most accurate economic impact study of a public good (or a good with both public and private characteristics) will not account for its full value because such a study cannot give a monetary value to the positive externalities which such goods provide (Madden & Bloom, 2004; Snowball & Antrobus, 2002).

Yet as it will be demonstrated, modelling the economic impact of volunteering is not without merit, and relevant observations can be made from the data. Indeed, if the assumption that volunteering-motivated transactions in the market are trivial is real, we conclusively demonstrate its error. Nonetheless, exclusively relying on input-output analysis as a basis for quantifying the benefits of volunteering inevitably underappreciates its value.

Volunteers are a demonstration of the cultural and social strength of the Tasmanian community.

Volunteer Investment and Value Analysis (VIVA)

Perhaps in response to these shortcomings, the Volunteer Investment and Value Audit (VIVA) is a UK return-on-investment (ROI) approach to estimating the value organisations receive from their investment in volunteers.

The 'value' of volunteers to the organisation is based on estimating the total number of hours donated by volunteers and multiplying it by notional value per hour (usually based on replacement cost). This economic value is then divided by the total cost to the organisation of supporting volunteers (including salaries for volunteer managers, training, expenses, *et cetera*). The VIVA ratio thus calculated is seen as the notional ROI—the value returned on each dollar invested in volunteers (Gaskin, 2011).

Teasdale , for one, is quite critical of this method. He argues that the VIVA model does not examine the effectiveness of either the volunteer or the volunteer management effort. For example, training of volunteers is one of the costs included in the organisational cost. Therefore, if an organisation stops training their volunteers, their VIVA ratio will go up; under this model, untrained volunteers are more valuable than trained ones. He suggests that the absurd end-logic is that the highest possible value (essentially infinite) would be achieved by spending nothing on volunteer management.

Unfortunately, that critique assumes that the only value that training—or volunteer management services in general—delivers is its replacement cost (or less), whereas, it is well understood in economics that we train people for an exponential return. We would therefore argue that VIVA measures the *efficiency* of volunteer management effort, and encourages operators to look to improve the people and processes for optimal returns.

This misplaced criticism is illustrative of a broader malaise in the volunteering literature, even that produced by national statistical agencies. This governing assumption—that every input and outcome of volunteering is (in)valuable—highlights the most obvious limitation of this body of research: its often subtle but occasionally overt evangelism. Indeed, there is almost no acknowledgement, let alone critical consideration, of the otherwise reasonable benefits of volunteering in light of the financial and social costs of production.

VIVA thus makes a genuine step forward in this regard; its limitation for our purposes is that, like the other methods discussed thus far, it stops short of quantifying the value of any events that occur outside the four walls of the performing organisation, including those potentially enjoyed by the volunteers themselves.

Revealed preferences

The revealed preference method more completely describes the value consumers place on their purchases. Transaction prices, for example, reveal a preference when the consumer chooses between purchasing and not purchasing. If a good or service is purchased at a particular price, it is revealed that the consumer values its benefit at least at the price paid.

Transaction prices are only one way in which consumers reveal their preferences. Consideration of other costs associated with the transaction can uncover hidden layers of value. The **travel cost method**, for example, uses information on how much consumers spend commuting to an activity in order to construct a demand curve, including travel costs and access fees (Yamazaki, Rust, Jennings, Lyle, & Frijlink, 2011). In other words, the 'price' of an act of consumption—even one which is nominally free—can be enlarged to include the cost of relevant travel and incidental but relevant purchases.

Additionally, **replacement costs** can be used as a proxy for the value of non-market goods and services where no market for them exists. In such cases, "…valuation of nonmarket outputs should, where possible, follow the principle of treating nonmarket goods and services as if they were produced and consumed in markets. Under this approach, the prices of nonmarket goods and services are imputed from a market counterpart" (Abraham & Mackie, 2005).

Examples of the application of the replacement cost method in the volunteering literature are numerous, and include valuations of:

- the replacement cost of labour (Egerton & Mullan, 2008; International Federation of Red Cross and Red Crescent Societies, 2011; Ironmonger, 2008)
- personal growth and development, through Community College postgraduate course costs (Mook, 2009), and
- skills acquisition—the value of private training courses (Mook & Quarter, 2006).

An **opportunity cost**, on the other hand, is the value lost (or forgone) as a result of making a decision between mutually exclusive choices. In the case of volunteering, a volunteer who chooses to spend an hour doing volunteer work rather than in their usual paid employment has forgone one hour's income. This too reveals by proxy the extent to which an individual values their preference. As a largely intangible cost, however, it is more often than not overlooked by research into the volunteering sector.

Combining these revealed preferences allows us to mosaic at least some of the value placed on non-market goods and services provided by volunteers. In other words, we can reliably assume that volunteers' donations of time and money are at least equivalent to the value they place on the activity. Organisations, too, benefit from volunteering through donations of unpaid labour. In the absence of this labour, they would need to pay a market rate to replace these services, which is also a reasonable starting point for valuation.

What is not revealed, however, is how much **more** value the volunteer, beneficiary, sponsoring organisation, or even the community at large may assign to it. Ultimately then, because financial descriptions of scale and applications of the revealed preference methodology fail to recognise the utility that people might receive or perceive beyond the point of transaction, they have the potential to significantly underestimate the complete value of a purchase or act of consumption. Other, more comprehensive approaches to valuation are thus required.

Stated preferences

Despite a theoretical recognition that volunteering *should* turn to alternative micro-economic methods of valuation (Bowman, 2009; Cordery, Proctor-Thomson, & Smith, 2013; Sajardo & Serra, 2011), few seem to have taken up the challenge.

That is not to say that qualitative discourses of the value of volunteering have lost their relevance—see Ellis (2005), Studer and Schnurbein (2013), and Rodell (2013) for examples of comprehensive reviews of the literature in this regard. Indeed, the volunteering literature generally prefers qualitative analyses to the language of economics, claiming the latter is inadequate in describing the value of their sector; terms such as "intangible" and "invaluable" are frequently used in its stead.

Stated preferences to some extent bridge this gap, as they are used when the value to a consumer is not directly observable or reducible to an act in the market. In this case, a survey or some other method is used to elicit a consumer's willingness to pay by compelling the respondent to state it directly (Bateman *et al.*, 2002). The two prevailing methods for eliciting stated preferences are *choice experiments* and *contingent valuation*.

Choice experiments

Choice experiments present a respondent with a series of often pair-wise decisions between different versions of the same good (Hanley, Wright, & Adamowicz, 1998). This is a survey-based technique, but instead of overtly stating their willingness to pay, respondents choose between alternate states of the world which each have a set of attributes and a price. Since

respondents choose a bundle of goods, researchers can derive marginal willingness to pay for specific attributes. Therefore choice experiments are best utilised in circumstances when the options under consideration have multiple levels of different attributes (Carlsson, Frykblom, & Liljenstolpe, 2003).

Yet for all these benefits, it is argued here that choice experiments are not appropriate for application in volunteering, as volunteering is usually a subjective experience, whereby 'goods' are experiential or demand is so disaggregated as to be beyond clustering. In other words, as every act of volunteering essentially has a unique level of consumption, it is relatively impossible to rate and group attributes for choice as there is no objective method for distinction between them.

Contingent valuation method (CVM)

In this study, the contingent valuation method (CVM) is preferred to quantify the hidden surpluses that are attributable to volunteering.

CVM is a survey-based technique used to calculate the perceived value of goods and services through stated preferences. It fundamentally asks consumers how much they would be *willing to pay* (WTP) for a good, service or experience above and beyond the market price, and uses the stated value as a proxy for their satisfaction with it. An alternate approach might ask consumers what they are *willing to accept* (WTA) to forgo the good; however, as this technique remains controversial (Arrow *et al.*, 1993; Diamond, Hausman, Leonard, & Denning, 1993), this study reluctantly (Ahlheim & Buchholz, 2000; G. W. Harrison, 2002) accepts the conservative approach and does not use it here.

Despite the risks associated with its conduct —and in the absence of a more objective alternative —CVM has long been a "widely accepted method for valuing both recreation and other non-marketed benefits" (Loomis, 1987).

In studies relevant to volunteering, WTP has been used to assess:

- the value that volunteers place on the "intangible" benefits they receive from their participation (Handy & Srinivasan, 2004)
- the value of an hour of informal care (from the perspectives of both the carer and the care recipient) (Van den Berg, Bleichrodt, & Eeckhoudt, 2005), and
- the *non-use value* the community places on the existence of charitable organisations (Foster & Mourato, 1999).

Non-use values

To this point, the methods described have exclusively considered the value that participants or users of volunteering might ascribe to their use. It is also recognised, however, that *non-users* might value volunteering, even if they do not use or otherwise engage with it.

The concept of **non-use value** is often used in economics as means of locating the benefits of largely unutilised environmental resources which are difficult to quantify through the market (Hanemann, 1993). In terms of this project, the non-use value of volunteering comes from individuals who do not directly benefit from it, but who recognise its benefits against possible alternatives (such as financing the replacement of volunteering acts through increased taxes.)

Why then might someone place a value on something they never use? There are four alternative responses to this conundrum recognised in the academic literature:

1. *Option value*—reservation of the right to use the resource at some time in the future (Brookshire, Eubanks, & Randall, 1983; B. Weisbrod, 1964)
2. *Bequest value*—maintenance of a resource for future generations (McConnell, 1983; Walsh, Loomis, & Gillman, 1984)
3. *Existence value*—the satisfaction people receive from knowing that something exists (Edwards, 1992; Larson, 1993), and
4. *Altruistic value*—appreciation of the right of others to use the resource (McConnell, 1997; Milgrom, 1993).

To this, a *fifth category* of non-use value can be added that is an intuitive extension of how people assign value to public goods. This is the value placed on individual willingness to pay for maintaining an asset or resource that is used exclusively by others to create a benefit that is enjoyed by the whole community. In this study it is designated as **shared value**.

To illustrate shared value: I may be willing to pay to enable *Clean Up Australia Day* in communities other than my own—even though I have no intention of participating, or will receive no direct benefit from it—because I know it will benefit those who do volunteer, promote social inclusion, and beautify neighbouring streetscapes.

My motivations can be distinguished from option value, as I may have no intention of ever participating, and bequest value, as the activity may only be a one-off event. Existence and altruistic value may also be motivating my willingness to pay; however, both imply no benefit to the donor. Shared value, on the other hand, recognises the internalising of a real (albeit indirect) welfare return.

CVM is increasingly being extended into the quantification of non-use values, and this study introduces another novel application of the method.

Our approach

The volunteering literature is replete with examples of approaches to valuation that each consider a different aspect of the problem of the true worth of volunteering. The challenge is integrating them into a coherent framework that is equally logical to both economists and laypeople. **Cost-benefit analysis** comes closest to satisfying that criterion.

> *Cost-benefit analysis is employed most frequently when the signals normally provided by market prices are either absent or inadequately reflect the opportunity cost of the resources involved* (Commonwealth of Australia, 2006).

Similar to, but significantly pre-dating, the VIVA model, cost-benefit analysis (CBA) grew out of financial evaluations techniques employed by the private sector to assess not only whether a particular proposal's advantages (benefits) outweigh its disadvantages (costs), but to choose between alternative proposals intended to achieve the same goal. Such an analysis comprised quantification of all the costs of a proposal in comparison to the value of the benefits it will provide.

For example, a mining company might undertake a simple financial comparison of the upfront cost of investing in new equipment against the present value of the additional profit it is expected to provide in the future. Consequences of the decision that affect others outside the company are not considered. In economic terms they are considered *externalities*. For example, the fact that the manufacture of that equipment provides jobs, or that the use of the equipment may cause environmental harm would not ordinarily constrain the choice.

CBA differs from financial evaluation in that it considers costs and benefits to the community as a whole, as well as non-cash costs and benefits. Thus, the consumer savings from the new equipment cited above are no longer an externality; they are one of the outcomes of the project and as such would be considered one of its benefits.

A cost-benefit approach is thus required to identify the real and opportunity costs associated with expenditure, as well as the benefits that flow, including economic impacts, preferences and avoided costs. Within the cost-benefit approach, avoided cost theory, as it is applied here, assumes that any positive change in public welfare enabled by volunteering is a benefit that would otherwise need to be met by the community in order to maintain the status quo.

The cost-benefit approach also demands particular attention to the identification and distinction of the recipients of benefits and/or the bearers of costs. This is particularly important in consideration of costs and benefits that are not traded at market prices. A central example in the context of this report is in the valuation of volunteer labour. One hour spent volunteering incurs a **cost** to the volunteer (however quantified). The same hour of work represents a **benefit** to the organisation for whom they volunteer (and/or the individual whom they directly assist). This does not, however, mean that the value of that hour is the same in both contexts as differing valuation methods may be appropriate in each case.

In this study, the actors (as beneficiaries and/or bearers of costs) are divided into three categories:

1. individuals, including:
    a. volunteers
    b. users of volunteer services, and
    c. others in the community,
2. businesses, and
3. government.

Cost benefit analysis is not, however, a static valuation technique. It is a comprehensive means of comparing one alternative to another, and therein lays its limitations for the purpose of stand-alone valuation.

Foremost, this study is concerned with estimating the **value** of volunteering **to** Tasmania. This value is defined here to be *the sum of benefits enabled over a fixed period*—in this case, one year. Net value (benefits less costs) is only relevant to the extent that it allows demonstration of the process of how value is created, and to make observations about allocative efficiency.

As a result, the *substitutability* of the costs and benefits is less material than it would be in traditional cost-benefit analysis. This is because this study is not overtly comparing volunteering with anything, even if the use of the value arrived at as a basis for future comparison is not precluded. In valuing volunteering, this study is only measuring the gross contribution to the community. The hypothetical presumption that other events might fill the void left by no volunteering in Tasmania should not alter our understanding of its value at the point in time in which it is measured. After all, valuation is not a zero sum game.

This does not, however, give licence to be casual with estimates—if anything it imposes a higher standard of rigour, especially in regard to the risk of *over-estimation*. A conservative position is therefore adopted by tending, where necessary, to overestimate costs and underestimate benefits.

The other refinement made here to the cost-benefit approach is the offer of a more complete illustration of the value creation process. This is because the notion of value is relational, in that the meaning and activity of creating value emerges from a complex set of interconnected social relations (Ollman, 1976). Any study of value should therefore focus on the process by which value is created and ascribed (B. K. Johnson, Mondello, & Whitehead, 2007). To that end a model is introduced that can not only map the process by which value is created, but—perhaps more importantly—connect the technically precise if occasionally obtuse language of economics to the often nuanced and emotive language of volunteering advocacy.

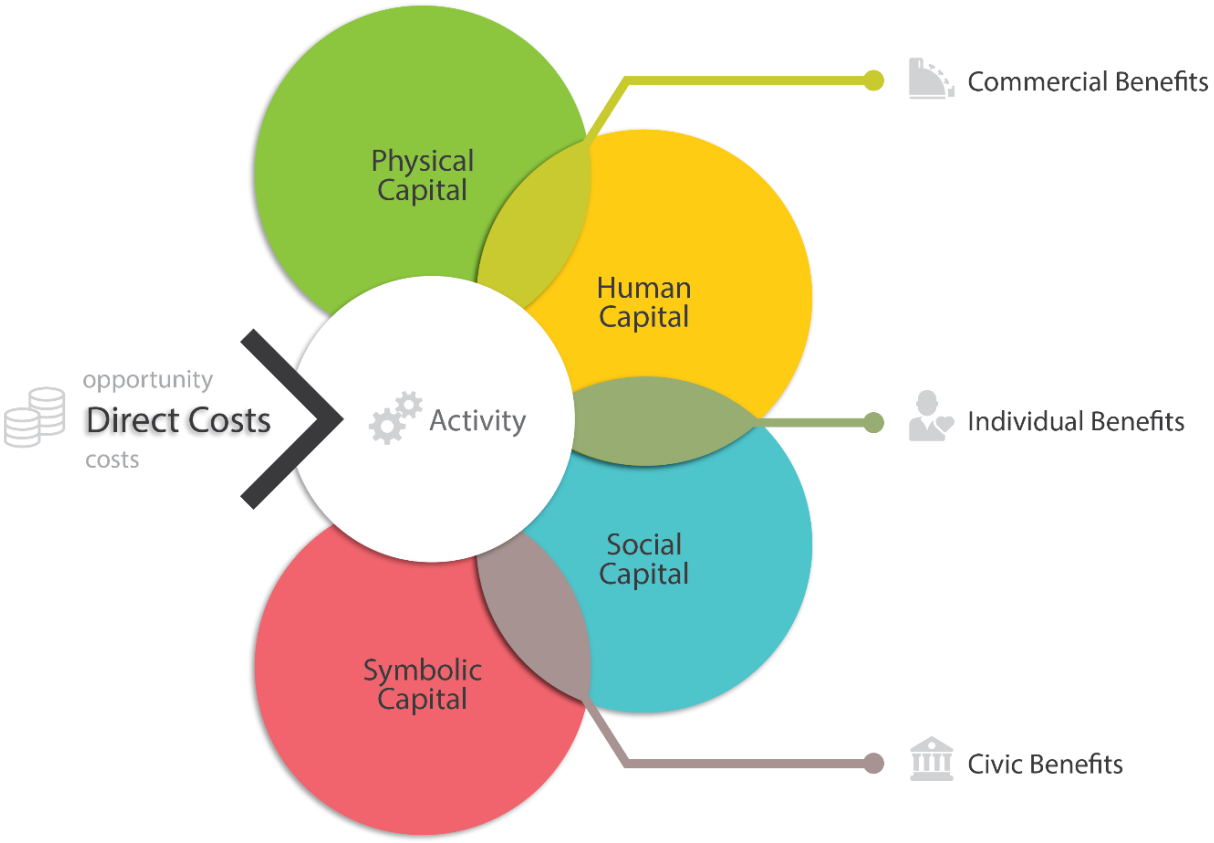
The IPM Model of Value Creation

Every activity has its inputs, which come at a cost. These include the direct costs of the goods and services which enable it, and the costs of consumption that might otherwise have been spent on alternative activities (for example, the cost of the time an individual spends performing the activity, or the otherwise fallow infrastructure they demand for its performance).

From the investment of these current and opportunity costs, we create the activity; in this instance, the volunteering ecosystem. This in turn may alter (for better or worse) one or all of the four states of human capital in the individuals and society participating in it.

Physical capital refers here to the saleable assets created by the activity. *Human capital* refers to, among other things, a person's health, psychological well-being, knowledge and skills, whereas *social capital* is an individual's extant levels of happiness, trust, and engagement with others. *Symbolic capital* recognises the extent to which the activity and its artefacts inspire an individual, or give them something to aspire to.

Figure 1: The IPM Model of Value Creation



Capital of any kind, however, is a latent attribute. As such, it does not so much defeat measurement; it is just that its measurement is highly arbitrary and, for economic purposes, somewhat pointless. It is only when the potential of capital is **expressed** that it has utility, or *value*. Tangible and measurable expressions of capital include changes to an individual's health, productivity and well-being, and changes to commercial and civic net worth (through enlarged (or diminished) profits and/or avoided (or added) costs).

Ultimately, none of the valuation methods previously used in the literature on volunteering are rejected; rather they are integrated into a cohesive, holistic framework that allows for convenient, relatable analysis.

This report therefore uses:

- financial analysis to scope the activity and estimate, among other things, total turnover
- revealed preference and travel cost methodologies to arrive at estimates of direct and opportunity costs
- input / output analysis to estimate productivity and commercial outcomes
- qualitative analysis to:
    - describe the 'capital' outcomes of volunteering activity and their relationship to inputs and outputs, and
    - locate those economic impacts which are likely (but beyond) contingent valuation, to describe the perceived use and non-use values of the ecology of activities, and
- econometric analysis to systematically quantify the costs avoided by the community through volunteering, and
- contingent valuation to describe the perceived use and non-use values of the collective enterprises.

Volunteers are without question a priceless resource without volunteers many organisations would cease to exist.

4. Volunteering in Tasmania

To properly explain the economic, social and cultural value of volunteering, it is first necessary to quantify the way in which Tasmanians volunteer.

Individuals

Myriad Research conducted a survey of 700 residents of Tasmania aged 15 years and over. Interviews were conducted by telephone over the period of 12–25 July, 2014 by fully trained and personally briefed interviewers.

Respondents for the telephone sample were selected via a random sample process which included:

- a quota being set for each age cohort listed in Table 1, below
- a random selection of household telephone numbers within quota defined regions, and
- a random selection of an individual in each household by a 'youngest qualifying resident' screening question.

To ensure the sample included those people who tend to spend a lot of time away from home, a system of call backs and appointments was incorporated.

To reflect the population distribution, results were post-weighted to Australian Bureau of Statistics data on Tasmanian age and gender distribution, as per the following scale:

Table 1: Survey sample weightings by age and gender

Males		Females	
Age	**Weight**	**Age**	**Weight**
15 to 24	1.30	15 to 24	1.04
25 to 34	1.15	25 to 34	0.93
35 to 44	1.19	35 to 44	0.95
45 to 54	1.33	45 to 54	1.07
55 to 64	1.28	55 to 64	1.03
65 to 74	0.94	65 to 74	0.75
Over 75	0.69	Over 75	0.55

Without weighting, the p value of the Chi-squared test on gender distribution heterogeneity was 0.002 ($p < 0.05$); similarly, the p value of age distribution was less than 0.05. Applying the post-stratification weights, the p values of age and gender distributions were greater than 0.1, indicating the weighted distributions are not significantly different to the actual population distribution.

The survey instrument (see Appendix 1) was developed with reference to the scope of work defined earlier in this report, as well as the following sources: ABS (2006b), ABS (2010b), Cabinet Office (UK) (2013), Bureau of the Census (US) (2013), N. Adams and Picone (2009), Paull (2009), Petriwskyj and Warburton (2007a), Rochester (2006).

Analysis of the responses revealed the following characteristics of volunteering in Tasmania in the period under analysis.[7]

Four out of every five *Tasmanians volunteer, donating a total of* ***7.1 million hours*** *in 2014.*

Figure 2: Distribution of volunteering in Tasmania by context, 2014

Whereas 16.7 per cent of Tasmanians only volunteered in informal settings (for example, looking after children, property or pets; providing home or personal assistance; or giving someone a lift or advice), the significant majority gave at least some of their volunteering time to a facilitating organisation.

This figure of 63.1 per cent is much greater than previous ABS estimates of the volume of volunteering in Tasmania, which were most recently: 36.0 per cent (ABS, 2006a) and 41.0 per cent (ABS, 2010a). This difference can be explained by subtle, albeit important, differences in methodology.

The General Social Survey, under which the ABS collects its data on volunteering, asks respondents whether or not they performed "**unpaid work**" in the survey period, and

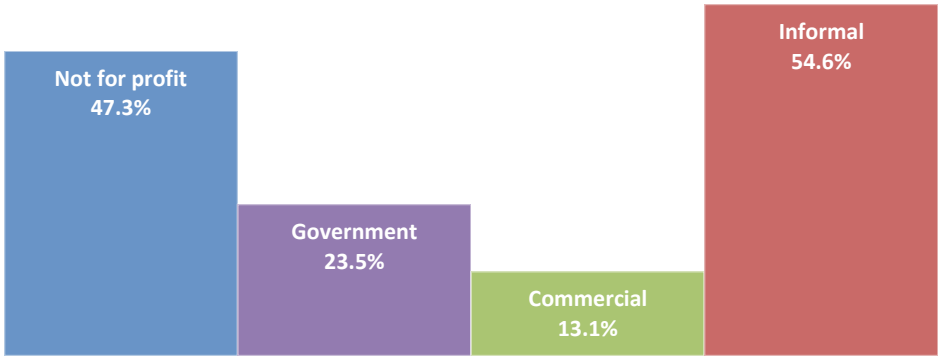
[7] Respondents were asked about their behaviour over 12 months prior to the survey. We assume that this is unlikely to significantly change immediately post-survey, and adopt the narrative convenience of referring to all findings as being relevant to the calendar year 2014.

probes this via an exhaustive list of industrial categories. These questions sit within a much larger survey instrument running to over one hundred questions, meaning that there is very limited time for people to mentally unpack the question and reflect on their behaviour.

Our instrument, which can be reviewed at Appendix 1, more fully articulates what is meant by volunteering using a mix of connotative and enumerative definitional cues. We also ask people about "**giving time**" (as opposed to unpaid work) in an instrument unencumbered by complexity.

In fact, we found that 39.1 per cent of people volunteered for *more* than eight hours per month for organisations (or two hours per week), versus 23.1 per cent who volunteered for *less*. It is thus hypothesised that eight hours per month is the point at which people go as far as to consider their donations of time to become unpaid work, and that our method better recalls the true nature of volunteering in the community.

Figure 3: Population-wide volunteering by setting in Tasmania, 2014



It was also found that individuals volunteered in a range of organisational settings (Figure 3). Measures that exclude, for example, volunteering in commercial settings (such as aged care facilities and festivals) and/or informal volunteering, are also likely to under-represent the scope and scale of the activity. Interestingly, persons who volunteered for over eight hours per month were more than **twice as likely** to volunteer for a NFP as those who volunteered less. The converse was true for commercial volunteering.

Our other significant departure from the ABS and many other methodologies was to discriminate between volunteers over the ages of 65 and 75 respectively. It is widely recognised that volunteering occurs at a higher rate among people past retirement;[8]

[8] Although there is no official retirement age in Australia, the age threshold for access to the Government Age Pension for men and women is 65 years (Department of Human Services, 2014).

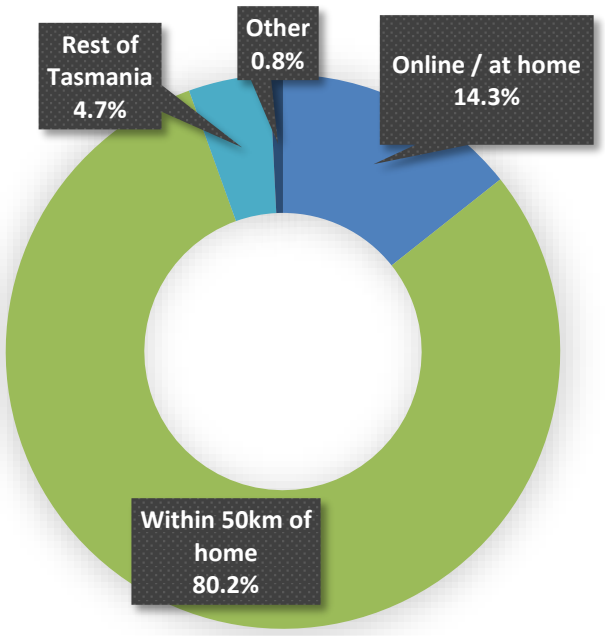
however, it should not be assumed that this increase in volunteering continues perfectly to the grave.

What we found is that income and gender are **not statistically significant** predictors of volunteering participation. In other words, even though other, widely-reported descriptive data might show variance among these groups, the variances are as likely to be an outcome of sampling error as they are meaningful departures from the norm.

Indeed, for the most part, age does not significantly matter either—except in the 65-74 year-old cohort. It was observed that that cohort donates an average of **22.8 hours per month** of their time towards volunteering, whereas all others volunteer at the rate of 12.5 hours per month. This finding also rebuts the oft-cited anecdotal presumption that young people (or 'Generation Y') are volunteering less than their elders.

Figure 4 also shows that Tasmanians generally volunteer within arm's reach of their neighbours—significantly, 14.3 per cent of people do so from the comfort of their home.

Figure 4: Volunteering by location in Tasmania, 2014



Volunteering allows local people or visitors to feel part of the larger community, it gives something back and makes people feel good by making a direct and positive contribution towards their state.

Of statistical significance were the findings that the following cohorts were more likely to extend their volunteering beyond the 50km mark:

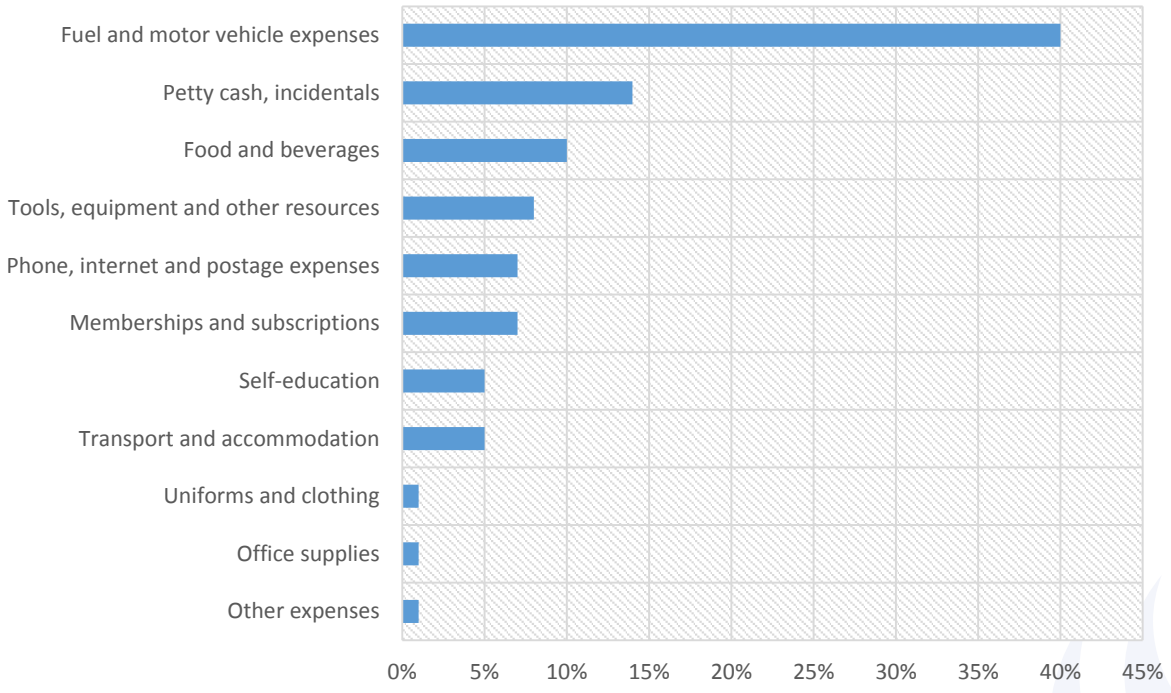
- males
- volunteers who donate more than eight hours per month
- individuals earning more than $110,000 per year, and
- residents in rural and remote parts of Tasmania.

Individuals' expenditure of volunteering is explored in more detail in the next section of this report. We can nonetheless vastly improve our understanding of the scope of individuals' investment in volunteering by commencing to build a volunteering **satellite account**.

A satellite account is a standard developed by the United Nations to measure the size of economic sectors that are not defined as industries in the national accounts (UNWTO, 2002). Volunteering is one such sector not discretely defined by the Australian Bureau of Statistics or, indeed, any central economic agency.

Volunteering inevitably involves making a variety of related purchases across already defined industries and sectors. In this study we have measured a number of these, and they are shown in Figure 5.

Figure 5: Distribution of volunteers' expenses in Tasmania, 2014

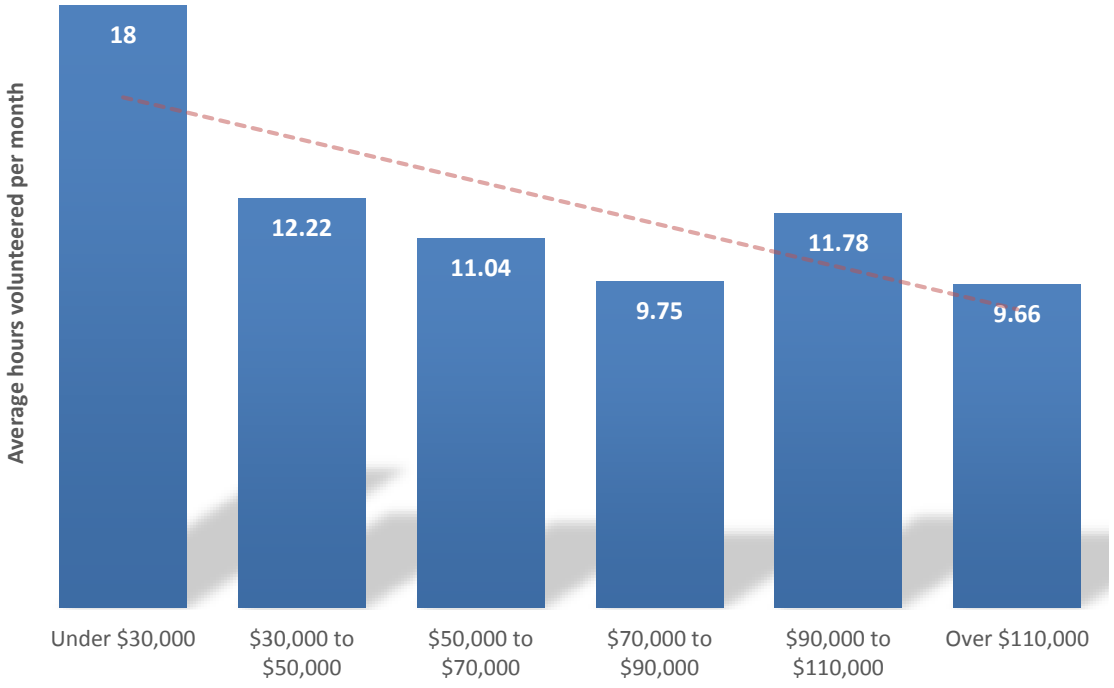


The distribution in Figure 5 shows that individuals' expenditure on volunteering in Tasmania is much more diverse than previous studies have identified. As our assessments of economic impact that follow significantly depend on this data, a more comprehensive satellite accounting of volunteers' expenditure is also commended as a direction for future research.

Interestingly, only **10.1 per cent** of volunteers reported being reimbursed for their out-of-pocket expenses; however, perhaps obviously, when reimbursed individuals were far more likely to make volunteering-related purchases.

A person's income was also a statistically significant predictor of the hours an individual volunteered. As income *increased*, the number of hours per month an individual volunteered *decreased*. Figure 6 illustrates this phenomenon.

Figure 6: Household income versus average hours volunteered in Tasmania, 2014



The expense and costs of getting to the volunteer venue puts a lot of people off, especially when they are not reimbursed for the costs.

Volunteer involving organisations (VIOs)

As a separate process, with the assistance of Volunteering Tasmania, we undertook an online census of Tasmanian VIOs over the month of July, 2014. From 334 organisational responses, we were able to use the telephone survey data on the total number of volunteers in Tasmania to estimate a VIO population of 1,984 across the NFP, government and private sectors.

VIOs self-reported their preferences for the following channels to recruit and motivate their volunteers. On average, they used 2.6 recruitment and 2.8 motivation methods in complement, suggesting a limited reliance on multi-channel strategies in the sector.

Figure 7: How VIOs recruit volunteers in Tasmania, 2014

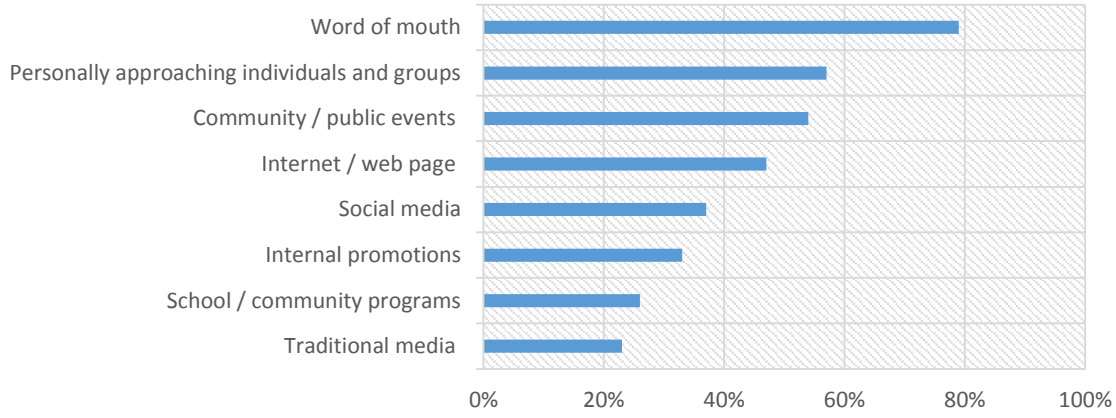
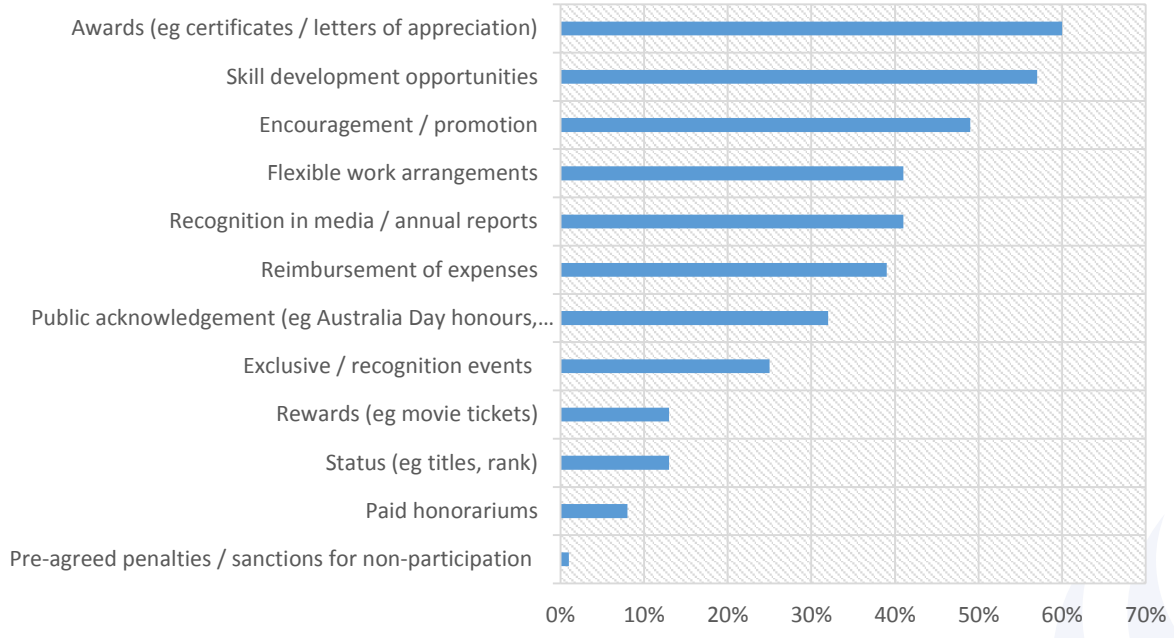


Figure 8: How VIOs motivate volunteers in Tasmania, 2014



The sources of related income and distribution of volunteering related expenses were also self-reported by VIOs, as follows.

Figure 9: Sources of VIOs' income in Tasmania, 2014

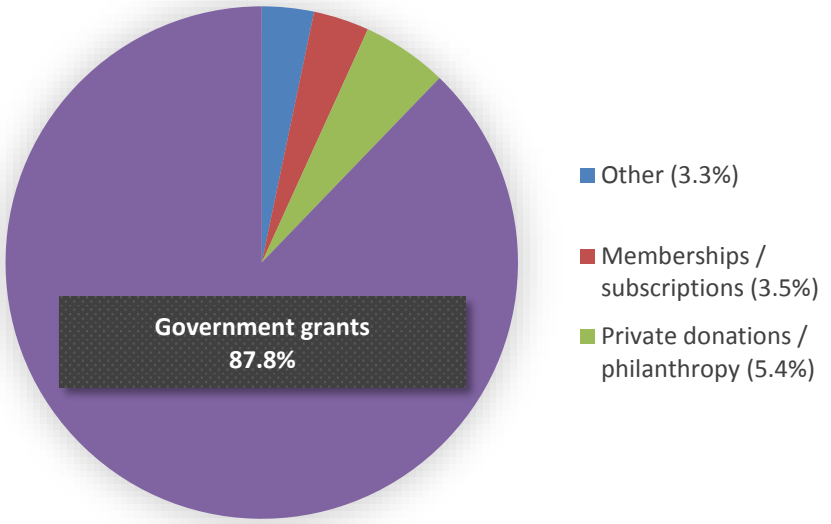
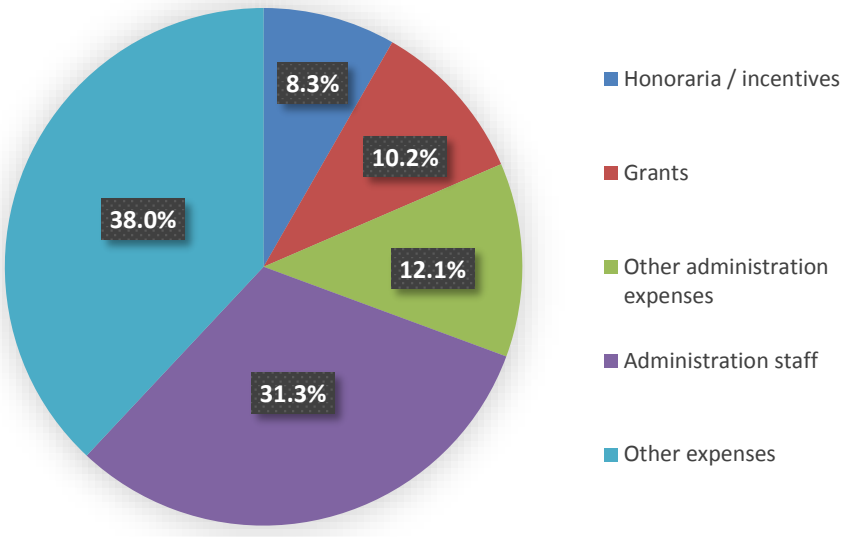


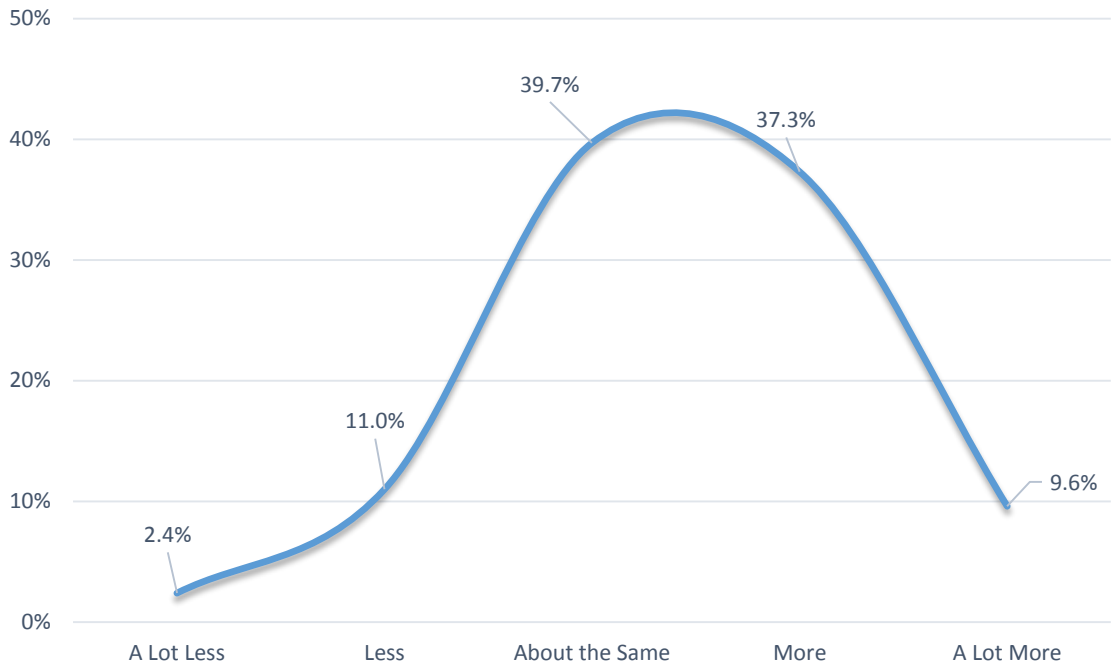
Figure 10: Distribution of VIOs' expenses in Tasmania, 2014



Responding VIOs were also quite bullish in their forecasts of volunteer engagement in the coming three years. When asked, "In 3 years from now, are people more or less likely to be volunteering with your organisation?" the pattern in Figure 11 was observed.

This is critical to the future of volunteering in Tasmania, as responding organisations self-rated themselves as being **69.2 per cent** dependent on the contribution of volunteers. Effectively, then, the vast majority of the services provided by this mix of NFPs, government agencies and private providers would be lost in the absence of volunteering.

Figure 11: Volunteering outlook over three years in Tasmania, VIOs as at 2014



Further detail about the nature of household and VIO engagement with volunteering is revealed throughout this report.

I like to help people. If you give a bit to the community you get it back when needed. I like to feel part of the community.

5. Costs

Inputs that enable and facilitate volunteering in Tasmania and their related outputs come at a cost. Labour, materials and infrastructure are either directly purchased or donated to that end. Furthermore, given the scarce resources of consumers, the diversion of money to volunteering implies that other opportunities to improve individual welfare are denied—another social cost that must be considered.

The total social and economic cost of volunteering in Tasmania and its related enterprises in 2014 is estimated to be **$1.2 billion**. This includes direct costs of $410.6 million and opportunities 'lost' to individuals, investors and the community of $766.2 million.

Allows the community to achieve things through volunteering that maybe would not be achievable, whether it be raising funds for charity or helping out at a nursing home.

Direct costs

The direct costs cited here estimate the change in final demand attributable to volunteering in Tasmania in 2014. These are the costs borne by individuals in the support of volunteering consumption and associated activities.

To avoid double counts, intermediate inputs such as the costs of production are incorporated and not counted separately. In other words, the costs of staging volunteering events are assumed in the final purchase price. Similarly, the equipment, labour and utility overheads of the related merchandise providers are assumed to be fully recovered by sales.

Using our basic satellite account of consumption, we observed that individuals spent *$362.4 million* on their personal volunteering in Tasmania in 2014. According to VIOs, $90.6 million was reimbursed, leaving individuals with a net cash outflow of **$271.8 million.**

The sum of VIO expenditure on volunteer management was reported to be **$138.8 million**, including the aforementioned reimbursements. Therefore the sum of direct costs attributable to volunteering—the change in final demand—is estimated to be **$410.6 million** in Tasmania in 2014.

It should be noted that these costs are significantly broader in their coverage and greater than previous estimates of the transaction costs attributed to volunteering in Tasmania. These departures are reasonably explained by the application of our satellite accounting methodology.

Importantly, our method implicitly accommodates **all forms of volunteering**—and not just formal, venue-based production—by assuming that consumers account for this in their relative expressions of (satellite) expenditure.

The other (hopefully obvious) point to make is that these transactions are a **cost**, *not a benefit.* Studies that treat the volume of volunteering purchases otherwise—or disregard them entirely, as the majority of the ones we reviewed do—are particularly unlikely to influence the economic gatekeepers to policy reform.

Opportunity costs

An opportunity cost is the value lost (or forgone) as a result of making a decision between mutually exclusive choices. Thus, before assessing the economic benefits of volunteering in Tasmania, it is useful to consider what we might have gained by using the allocated resources to their 'next best' ends. In order to resolve the opportunity cost conundrum, this study supposes that there is no volunteering in Tasmania, and that the assets presently devoted to it are put to alternate productive ends.

The opportunity cost of the human and financial resource allocations to volunteering in Tasmania can be measured by identifying the potential value in dollar terms of an alternative allocation. The effective cost of volunteer labour 'lost' to donors in 2014 is estimated to be $758.3 million. The opportunity lost through the private purchases that enable volunteering is $4.6 million, and the opportunity cost of government tax exemptions to not-for-profit groups is $3.3 million.

The gross cost of the opportunities diverted to volunteering in Tasmania in 2014 is therefore estimated to be **$776.0 million**.

Opportunity cost of labour

There is some dispute in the literature as to whether the opportunity cost of volunteer labour should be at the value of work or leisure time. Our preference is to tie the opportunity cost to the hourly compensation that volunteers normally receive from the paid jobs that they hold.

This approach has been criticised on the basis that the skills, responsibility and qualifications associated with a volunteer's role may differ substantially from the volunteer's usual employment. As Mook (2009) put it, "The hourly rate that Bill Gates receives from Microsoft for his services would not be an appropriate standard if he were to spend a day volunteering at a local food bank. An opposite problem might arise if the food bank volunteer were unemployed and therefore without an hourly wage; it would be incorrect to suggest that the service is worth nothing."

Within the CBA framework, this simply highlights the importance of appropriately identifying and classifying the bearers of costs and the recipients of benefits. Mook's criticism—and others like it—fails on a number of levels.

First of all, opportunity cost is a concept distinct from replacement cost, as we have previously highlighted. In the example cited, the opportunity *cost* of Mr Gates' time relates

only to his personal sacrifice. He has forgone one day's take-home wage (net of taxes) to volunteer; therefore, the opportunity cost of his time is an equivalent amount.

For accounting purposes, the *benefit* in this example flows to the local food bank. Admittedly the food bank receives what may be a minimum wage equivalent in physical services rendered; however, is that all they receive? In this regard, Mr Gates' participation is very well likely to be of greater value than the unemployed volunteer's, as he brings to bear the sum of his human, social, and symbolic capital onto the role. Therefore, to replace Bill Gates, you need to pay Bill Gates' wage (including on-costs).

What, then, of the unemployed person? The opportunity cost of their labour is effectively zero, as they are not forgoing work to volunteer. Their replacement cost, however, is at the market equivalent rate; presumably, in this instance, the minimum wage.

So how do we account at the population level for this mix of top tier earners and the unemployed who are all volunteering?

Recognising that not all wages are equal, the opportunity cost of volunteering labour is estimated using the average weekly earnings for part-time and full-time workers for each age cohort, less a 35 per cent marginal rate of tax (D. Warburton & P. Hendy, 2006). The hourly rate is also weighted to reflect the composition of the Tasmanian work-force at each interval; in other words, by the percentage of full-time, part-time and non-participants per age-group (Table 2).

This approach applies a simple leisure/work trade-off model that identifies the opportunity cost of one hour of leisure by the income that could have been earned by working for an extra hour. This is consistent with a flexible labour model and assumes that additional work opportunity is available. As one would expect, the opportunity cost of leisure is low for the very young or very old—where significant numbers of people are un- or under-employed—but quite high for those in age groups with greater workforce participation.

Therefore, the 7.1 million hours donated to the Tasmanian community by volunteers in 2014 came at an opportunity cost to participants of **$758.3 million**.

Can see the benefit for local sports club and my family involvement in sport.

Table 2: Opportunity cost of labour in Tasmania, 2014

	Full-time Tas	Part-time Tas	Total Population	Full-time $/hr	Part-time $/hr	Weighted Average	less 35% MTR
15–19	3,184	9,871	33,778	$ 13.82	$ 10.92	$ 4.49	**$ 2.92**
20-24	15,581	6,223	31,511	$ 20.52	$ 22.88	$ 14.67	**$ 9.53**
25–34	31,236	9,725	58,889	$ 28.77	$ 31.02	$ 20.39	**$ 13.25**
35–44	33,428	16,696	64,473	$ 34.65	$ 37.49	$ 27.67	**$ 17.99**
45–54	37,853	18,214	71,787	$ 34.50	$ 37.76	$ 27.75	**$ 18.04**
55–59	16,425	7,278	35,756	$ 32.06	$ 41.13	$ 23.10	**$ 15.01**
60-64	7,632	6,621	33,267	$ 32.56	$ 37.67	$ 14.97	**$ 9.73**
65 +	3,965	5,184	88,570	$ 30.97	$ 31.02	$ 3.20	**$ 2.08**

Sources: ABS (2014a), ABS (2014e), D. Warburton and P. Hendy (2006).

Opportunity cost of investments

An assumption is made here with respect to the opportunity cost of the purchases by volunteers and VIOs made to enable their volunteering activity: if these purchases were withheld because no value was placed on volunteering by the community, then the value of that contribution could be invested in long-term growth—the supposed next best alternative use. Therefore the value of volunteering to its stakeholders is at least equal to the profit forgone on their investments.

Volunteering opportunity cost = I x r

I = investment

r = rate of return on investment

The rate of return is determined from the 10 year bond rate of 3.49 per cent, as at 1 October, 2014 (RBA, 2014). An estimate of 2.8 per cent is further identified as the long-run inflation rate, based on the final-year projection of the percentage change in consumer price index (ABS, 2014d).

$$r = i - \pi$$

r = real discount rate (or cost of investment)

i = nominal long-run interest rate (3.49 per cent)

π = long-run inflation forecast (2.3 per cent)

The long-run cost of investment thus applied is 1.12 per cent. To that end, we estimate that the gross cost of the opportunities diverted to volunteering by individuals and VIOs in Tasmania in 2014 is approximately **$4.6 million.**

Opportunity cost of taxes forgone

Many VIOs are classified as not for profit (NFP) by the Australian Taxation Office (ATO). As such, they use any profit made to further the purposes of the organisation, as opposed to distributing profit to the organisation's owners, members or shareholders (ATO, 2011). By granting these organisations tax exemption, the Australian Government is forgoing potential tax revenue, which is another opportunity cost.

In order to calculate the value of forgone revenue, the corporate income tax rate of 30 per cent (ATO, 2012) is applied to the reported turnover of the NFP organisations. The total reported 'profit' of the NFP VIOs in Tasmania in 2014 was $11.0 million, which results in forgone tax revenue of approximately **$3.3 million**.

It is assumed that the opportunity cost of other government grants and subsidies is fully captured in the opportunity cost of investors (above). This assumes that such government investments are either intermediate (to VIOs and individuals), or captured as final by our census method, where government acts in its capacity as a VIO.

6. Capital

In a study such as this (with its stated economic purpose), the term 'capital' is most likely to be associated with its neo-classical use in economics, where capital and labour are the most common inputs theorised in the production of goods and services. The term 'capital' in economic analysis is thus used to understand the work of tools and machines at large, with aggregation being its most useful aspect, as well as its main weakness.

This study departs from that traditional understanding to largely consider capital as an output of the production process. This is consistent with recent attempts to understand capital as more than skills and tools, which will be discussed shortly. The epistemological appreciation of capital as a 'stored potential' is not, however, rejected by this approach.

To illustrate this, the capital stored in a widget-making machine is quantified by its potential to produce X amount of widgets. The more machines, the higher the production potential is. Importantly, though, that value is conserved in the machines, and remains unchanged for the most part. The actual economic value depends on a significant number of environmental variables, including, among other things: the quality of raw inputs; operator skill; and wear or tear (or decay).

The question must therefore be asked, which is more significant to this study's stated purpose of valuation: the *potential* that is accrued, or how that potential is ultimately *expressed*?

Contemporary academic theory is replete with models that purport to illustrate different aspects and interpretations of capital. The following list is by no means an exhaustive catalogue of the varieties discussed today:

- *Aesthetic capital* (Anderson, Grunert, Katz, & Lovascio, 2010)
- *Cultural capital* (Bourdieu, 1993; L. Johnson, 2006)
- *Economic capital* (Laeven & Goovaerts, 2004)
- *Erotic / sexual capital* (Hakim, 2010; Michael, 2004)
- *Human capital* (Marx, 1859; A. Smith, 1828)
- *Intellectual capital* (Stewart & Ruckdeschel, 1998; Teece & Teece, 2000)
- *Knowledge capital* (Carr, Markusen, & Maskus, 1998; Lööf & Heshmati, 2002)
- *Natural capital* (Costanza et al., 2007; Ress & Wackernagel, 1996)

- *Psychological capital* (Luthans, Youssef, & Avolio, 2007)
- *Social capital* (Putnam, 2000; Woolcock, 1998)
- *Spiritual capital* (Finke, 2003; Iannaccone & Klick, 2003)
- *Symbolic capital* (De Clercq & Voronov, 2009; DiMaggio & Useem, 1978)

Therefore if 'capital' in this study refers to the potential stored in an entity that can be either drawn down or employed in perpetuity, the capital created by volunteering must allude to any individually endowed capacity that is attributable to the cluster of activities that it enables. And, although there is nothing to preclude its measurement relying on one or more of the other forms of capital established in the literature, for this capital to be distinct it must identify a unique suite of outcomes that can be traced back to the activity, and by extension the activity inputs (or costs).

The capital enabled by volunteering is understood here to be a non-fungible attribute that accrues discretely within individuals, and collectively in firms and the community. It is only when citizens collectively *express* their capital that its effect can be quantified and reconciled with costs to arrive at estimates of value. Importantly, users should be mindful that this capital can theoretically at least be expressed positively (for example, to promote social inclusion (Nichols & Ralston, 2011; Seyfang, 2004; Valls & Kyriakides, 2013)) or negatively (for example, to promote harmful or offensive ideals (M. Harrison, 2006; Whittaker & Holland-Smith, 2014; Winograd, 2014)).

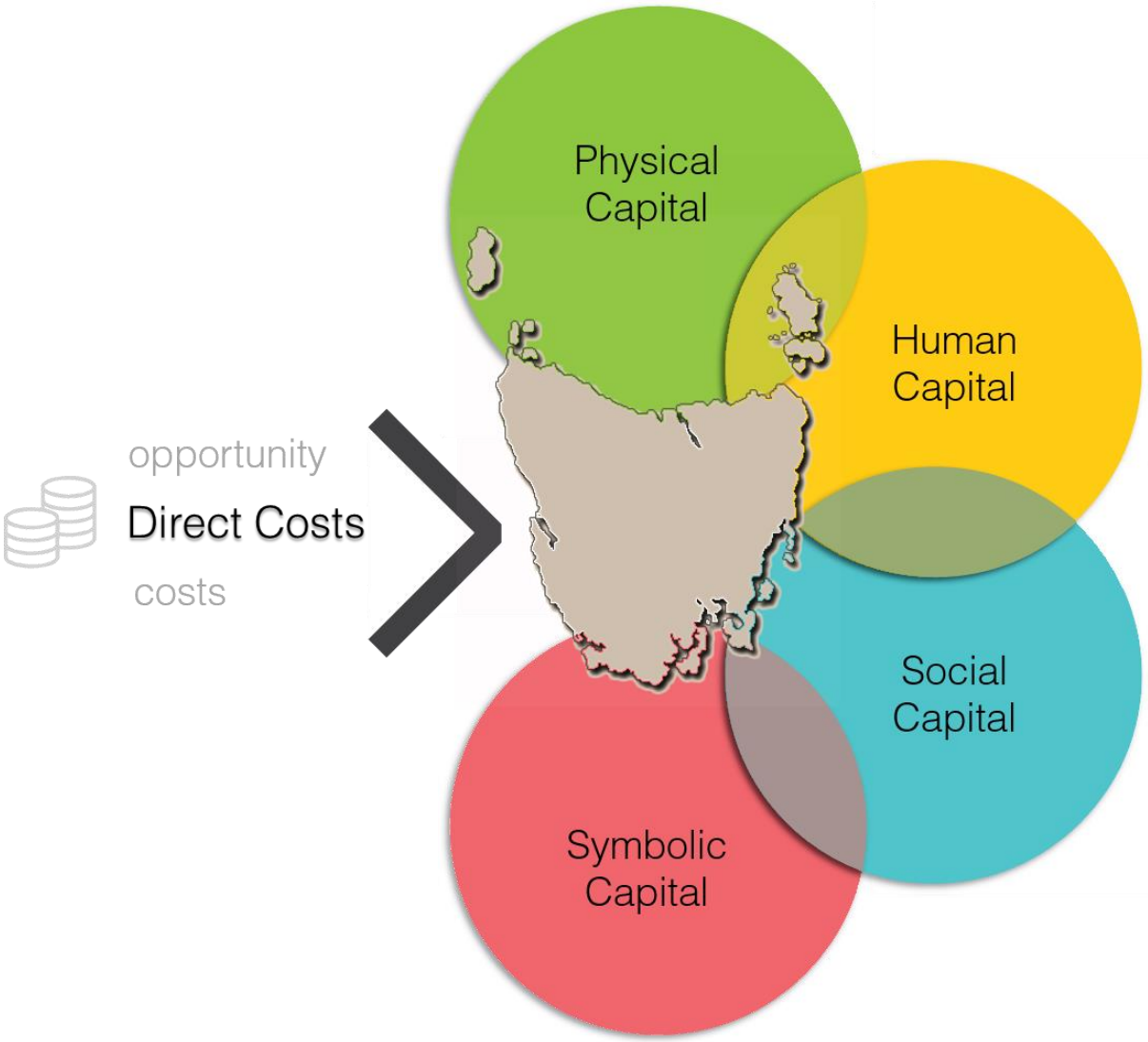
Volunteering capital therefore lies at the nexus between inputs (costs) and outputs. Economic expressions of this capital will be unique to the social setting (in this case, Tasmania), even though the potential for good or harm within it is theoretically uniform. In addition to this, it can be taken as axiomatic that, all things being equal, the more widespread and/or intense the participation of the community, the greater the impact volunteering in Tasmania will have on these factors.

For that reason, the value of this capital *per se* is irrelevant, and no attempt is made to quantify it. Nevertheless, the separation of capital from inputs and outputs is not merely an indulgence of modelling and generalisation. Instead, articulating capital in this way serves as a heuristic tool to explain the different forms of input that are at stake when studying volunteering.

It should also be noted that the definition of capital proposed is not intended to rebut alternative descriptions of volunteering capital; for examples, see J. D. Smith (2001) and

Sfeir-Younis (2002), among others. The difference lies in that instead of trying to *distinguish* the value of volunteering from the traditional economic forms of capital, this study *integrates* all definitions to embrace and capture the holistic spectrum of value.

The discussion that follows thus connects already defined expressions of capital in the context of the volunteering in Tasmania. It does so by interrogating the literature on the volunteering, isolating discrete references to value, and illustrating the way in which they relate to both volunteering and its associated activities, and to each other.



Physical capital

Physical capital takes the form of buildings, infrastructure, equipment, products, computers and software in its materialised form – all collectively known as tangible property (Walukiewicz, 2007). It relates to material wealth, as capital that can be readily transformed into money and/or institutionalised in terms of property rights (Spaaij, 2009). In this instance, physical capital essentially refers to the suite of saleable artefacts of volunteering in Tasmania.

The physical assets and infrastructure produced and maintained by Tasmania's volunteering sector are more wide-reaching and substantial than what might be assumed at a glance. They extend beyond the saleable goods and services volunteering creates, to include where volunteering is performed (for example, at aged care facilities, community halls, and sporting fields); managed (for example, in government agencies and not-for-profit groups); promoted (via traditional and new media); and sold (for example, at fêtes and festivals) throughout the broader community.

Volunteering infrastructure enhances and strengthens communities, contributing to senses of belonging and place. It also builds historic continuance, exploiting under-utilised capacity and creating utility where none might otherwise exist. Volunteering can also have a similarly positive impact on open-air areas, public spaces and the natural environment.

Other expressions of physical capital to manifest in response to volunteering in Tasmania include consumables such as volunteers' equipment, resources, education, accommodation, and transport services. For although many of these would exist without volunteering, to the extent that demand for their consumption is driven and therefore attributable to the activity, it is relevant to our study.

Yet even though it is the most visible capital created by volunteering, physical capital is only a small part of the combination of capital forms which underpin the activity.

> *Without volunteers we would not be able to provide a transport service for the frail, aged and disabled members of the Tasmanian community. We would literally have to close the doors given our current funding.*

Human capital

Human capital is derived from the competences, tacit knowledge, skills, education and training of people. The OECD consider it to be critical to the well-being of communities and define it as, "The knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (Côté & Healy, 2001).

While human capital has often been defined and measured with reference to acquired cognitive skills and explicit knowledge, a broader notion of human capital, including attributes, more adequately reflects how various non-cognitive skills and other attributes contribute to well-being and can be influenced and changed by the external environment. To that end, we can more fully appreciate human capital as the sum of:

- psychological capital
- knowledge capital, and
- physical health.

Psychological Capital

Psychological capital is a recent construct arguing that the states (as opposed to dispositional traits) of self-efficacy, hope, optimism, and resilience can be amassed in the individual and converted into commercial gain (Luthans, Avolio, & Youseff, 2007). The exploratory work on psychological capital done thus far suggests that in positive iterations it can enhance workplace performance, individual commitment and satisfaction, and—as a contagion—effect constructive organisational change (Luthans & Youssef, 2004). The work of Luthans and colleagues, however, has been confined to linking positive organisational climate with psychological capital, and as yet has not investigated its place in external sources.

Despite the volunteering literature failing to directly attend as yet to this theoretical development, there is strong *prima facie* congruence between volunteering and the nurture of psychological capital.

A number of studies exploring volunteer motivations and attitudes at all stages of life suggest that there is a positive correlation between volunteering and self-efficacy (Bathini & Vohra, 2014; Brown, Hoye, & Nicholson, 2012). Interestingly, improving individuals' self-efficacy was observed to motivate a corresponding increase in volunteering participation (Eden & Kinnar, 1991), as much as self-efficacy was seen as an outcome of volunteering (Helmes & Govindan, 2007).

Hope, too, is seen as both an outcome for volunteers (Ferrari, Haq, & Williams, 2014) and the recipients of volunteer services (Hitchman, 2010; Koleth, 2014), while the related psychological state of optimism is understood to mediate the relationship between volunteer status and personal well-being (Mellor et al., 2008). The efforts of volunteers in emergency / civil crisis settings is also known to be a significant contributor to individual and community resilience (Bruce, 2014; Volunteering Queensland, 2011); although, it is also observable in a variety of other settings (Greenfield & Marks, 2004; K. Oliver, Collin, Burns, & Nicholas, 2006).

Knowledge Capital

Knowledge capital is also sub-divisible, in this case into two forms: technological and experiential (Hiser, 1998). As a catalytic variety of capital, the technological or experiential knowledge acquired through volunteering has long been understood to be transferable to other domains, including the workplace (Janey, Tuckwiller, & Lonnquist, 1991; Thomas, 2001).

Yet beyond the obvious examples of volunteering-earned skills, the ability to engage in a conversation about a shared volunteering interest could also be seen as a means of facilitating or extending social networks. As a form of exploitable knowledge (Tymon & Stumpf, 2003), these networks are more of an earned—rather than learned—attribute. For that reason, the modern view that network capacity is a product of social exchange is not disturbed, and that it is often a common interest or knowledge that founds this.

The more interesting intersection between knowledge and social capital occurs in the field of ethics. On the one hand, the social capital literature is replete with references to its capacity to transfer ethical norms and standards (Fuller & Tian, 2006; Pastoriza, Ariño, & Ricart, 2008). Volunteering, with its own cultures of integrity and ethical conduct might therefore be seen as both a microcosm of social morality and a proxy for its communication. Indeed, this has recently been advanced as a genuine driver of corporate volunteering programs (Basil, Runte, Easwaramoorthy, & Barr, 2009; De Gilder, Schuyt, & Breedijk, 2005; Lee & Higgins, 2001).

For as the literature on cultural differentiation argues, ethics are a learned value (Hassam, 2007; Small, 2006). Conformity to the ethics of a society has also been demonstrated to yield sustainable profit for both individuals and firms (Bowie, 1998; Maxfield, 2008; Verschoor, 2006). Therefore, when social and knowledge capitals combine through volunteering, there is a significant potential for ethical development, which (like the other skills so enlarged) may stimulate productivity and profit.

Physical health

Physical health is defined here as the embodiment of the health, wellbeing, cognitive and other physical benefits (including for example, stamina, dexterity and erotic capital) that would ordinarily ensue from participation in volunteering.

It is not the place of this report to rehearse the arguments for the physical benefits of volunteering. Even a cursory scan of the academic and popular literature on the topic will inundate the reader with evidence that volunteering improves the health of both volunteer donors (Jenkinson et al., 2013; Oman, 2007; Pillemer, Fuller-Rowell, Reid, & Wells, 2010; Van Willigen, 2000) and recipients (Dawson & Downward, 2013; Hyde, Dunn, Scuffham, & Chambers, 2014; Křížová, 2012). The argument is generally qualified by the expectation that the greater the intensity and frequency of the relevant activity, the more likely the reported (positive) outcome (L. Farrell & Shields, 2004).

Yet beyond those benefits that are privately enjoyed, the relationship between physical health and the productive capacity of the individual is now considered to be causally inarguable. In the first instance, there is a clear link between levels of physical activity and cognitive performance across all age groups (Bailey, 2006; Fox, 1999; Mechling, 2005). Other manifest industrial outcomes include reductions in workplace absenteeism, occupational injuries and employee turnover (Lloyd & Foster, 2006; Shephard, 1986).

Perceived productivity and job satisfaction are also significantly correlated to an employee's physical capacity (Wattles & Harris, 2003). Therefore, if volunteering has the potential to increase a person's physical health, it can be reasonably expected to act as a catalyst for more commercially productive behaviour. It is thus entirely plausible to allege that volunteering has the potential to act as catalyst for profit in any organisation.

It helps people have a broader understanding of all walks of life. It is another way besides paid work to make friends, experience another industry and gain new skills.

Social capital

Social capital is defined by the OECD as ”the norms and social relations embedded in the social structures of societies that enable people to co-ordinate action to achieve desired goals” (Grootaert, 1998). Both qualitative and quantitative instruments used to measure social capital generally cluster their enquiry into the operationalisation of individuals' trust, happiness, inter-personal networks and civic engagement (Dudwick, Kuehnast, Jones, & Woolcock, 2006; Grootaert & Basterlaer, 2002; Putnam, 2002). Perhaps unsurprisingly then, the literature supports the view that these are the main independent determinants of social capital.

An appreciation of social capital has recently emerged within volunteering research. Because social capital can simply exist within extant community or cultural structures, or be developed through structured programs (such as sport development initiatives (Skinner, Zakus, & Cowell, 2008)), governments have sought to incorporate the development of social capital through volunteering as a means to strengthen communities both within Australia (Nicholson & Hoye, 2008; Tittensor, 2007), and abroad (A. Adams, 2014; Culum & Forcic, 2008).

It is important to note that social capital is not necessarily a static concept that never changes; it will vary considerably across space and time and it is important to recognise that its form will vary considerably depending on geographical and social context. One element of this is the difference between what Putnam (2000) called bridging (or inclusive) and bonding (or exclusive) social capital. Bridging social capital relates to wider ties across heterogeneous groups which may be different in ethnicity or religion, whereas bonding social capital exists between known individuals and/or between relatively homogenous groups such as families and dense, or tight-knit networks (Blackshaw & Long, 2005; Onyx & Bullen, 2000). There is strong evidence that volunteering can contribute to both.

Nonetheless, it is important not to romanticise the role of volunteering in social capital development. Several studies point to inequalities and social divisions associated with volunteering. In some cases they can be traced to the negative outcomes of social capital (C. Farrell, 2007; McLennan, 2014; Numerato & Baglioni, 2012). While networks and the associated norms of trust and reciprocity can be beneficial for those inside a particular network (such as the member of a particular supporter group), the external effects on others can be negative. Thus, social capital can, in some cases, be linked to problems such as racism (Arneil, 2006), sectarianism (Fukuyama, 2001), social exclusion (Portes, 1998), and corruption (Callahan, 2005).

Symbolic capital

In this analysis, we invert Bourdieu's popular, if bastardised, expression of *cultural capital* (or status) to emphasise the symbolic attributes of volunteering engagement.

Symbolic capital as a defined concept is often implicit, but under-explored, in volunteering. Bourdieu (1993) was the first to use the term to describe the value derived from being known and recognised, a concept synonymous with standing, good name, honour, fame, prestige, and reputation. In brand terms this is a precise fit with goodwill; for example, the symbolic value of the brand explains why a person is prepared to pay more for a Nike shoe than a less-celebrated equivalent.

In the context of this report, certain voluntary occupations bring with them a heightened social profile. Immediate examples include directorships of major philanthropic or community organisations. For the individual so endowed, symbolic capital acts less as a driver of productivity and more reliably as a conductor. A person is not necessarily able to produce more widgets as a consequence of symbolism, but it is feasible that their symbolism is a consequence of their volunteering reputation. That symbolism has a momentum that exponentially both attracts additional enterprise and becomes an inspiration for subsequent industrial performance.

This is because symbolic capital is also used by external actors as a means of legitimising consumption and endowing upon the consumer a form of distinction that will be recognised by their peers (Flint & Rowlands, 2003). Together with the other forms of capital acquired as a result of their volunteering experiences, this may explain why 'socialites' are often able to pursue successful business careers despite a lack of formal qualifications.

Yet symbolic capital need not necessarily be confined to the elite domain. There is a limited form of symbolic capital observable in all hierarchies, which in turn are replete in volunteering. Indeed, the talismanic quality of symbolic capital—the factor that inspires others to emulate their heroes—requires a degree of proximity to be effective (Bandura, 1971; Payne, Reynolds, Brown, & Fleming, 2003).

So whereas it may be unrealistic for me to believe I can become a director of the Australian Ballet, I can achieve a certain symbolic cachet by serving on my school committee or local government Council. Alternately, I may be able to attract a more desirable partner by trading on the perceived value of volunteering for the homeless or an environmental cause.

Thus, the catalytic potential of volunteering-endowed symbolic capital is multiple: it can be accrued as a means of fulfilling one's sense of self-worth (aspiration); it can be exploited by individuals, groups and even VIOs for financial or social leverage (brand); or it can be used as a motivation for productivity in those who are deficient (inspiration).

7. Benefits

Volunteering in Tasmania alters the states of physical, human, social and symbolic capital in individuals, firms and communities. This is then converted into a set of economically valuable outputs that contribute to the welfare of all. In 2014, it is estimated that volunteering in Tasmania enabled at least **$4.9 billion** worth of such benefits across the community.

Commercial benefits

The increase in wages, rents, profits and taxes associated with the increase in production motivated by volunteering in Tasmania is estimated to have delivered *$63.3 million* of additional value, or profit, to all Tasmanian producers (compared to an alternative case in which all the expenditure enabled by volunteering ceased).

Taken together with an employer-enjoyed productivity premium of *$1,202.6 million*, the sum of benefits returned to businesses as a result of volunteering in Tasmania in 2014 was estimated to be **$1.2 billion.**

Civic benefits

The cost of replacing volunteers is conservatively estimated to be *$2.7 billion*. If government or other civic institutions did not meet this shortfall, the absence of voluntary labour would increase the cost of living in the State by this amount. The expenditure associated with volunteering in Tasmania is also estimated to have enabled in the order of nearly 5,400 full-time and part-time jobs to the value of *$205.6 million*, and taxation revenue to all tiers of government of *$82.2 million*.

Beyond this **$3.0 billion**, civic benefits acknowledged but not quantified by this study include the significant tourism impacts, as well as the costs potentially avoided by our civil systems of health, criminal and social justice.

Individual benefits

Although a person may pay $750 for an object, they might be willing to pay $2,000 for the same item, because of the amount of satisfaction they receive from the transaction. The difference of $1,250 would be a real economic measure of their 'consumer surplus', or the benefit in well-being they internalise. The community benefits enabled by that enterprise may be further appreciated by non-consumers.

This study uniquely identifies here a 2014 well-being surplus (the sum of use and non-use values) of **$651.4 million** attributable to volunteering in Tasmania.

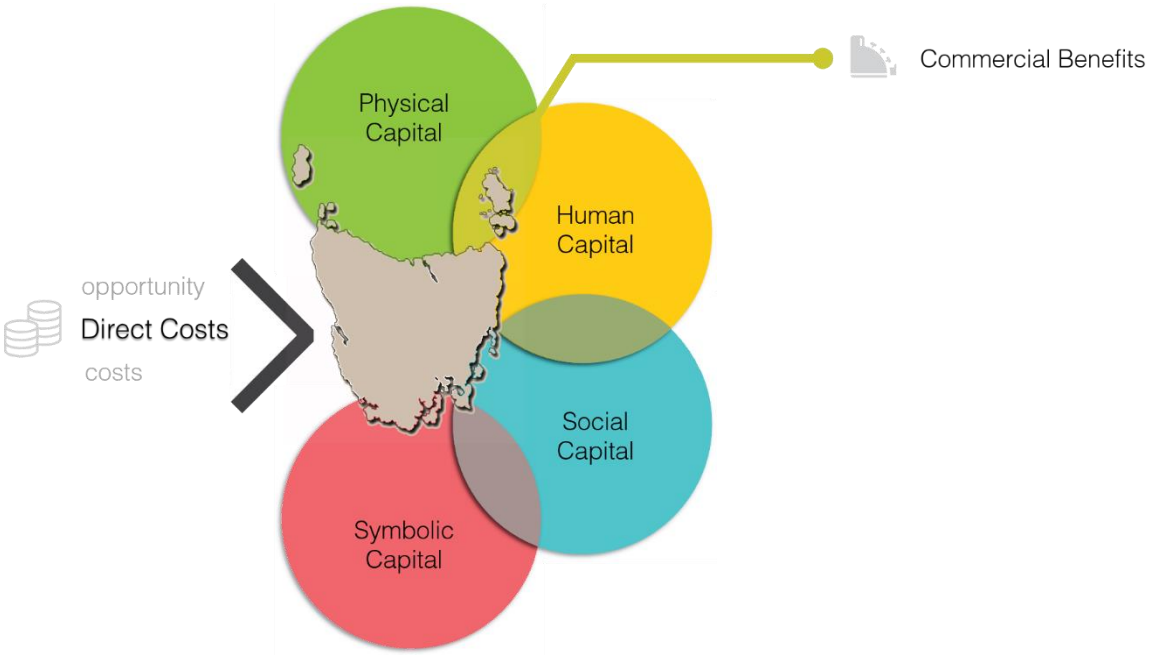
Commercial benefits

When the physical artefacts of volunteering are exploited by human endeavour, a significant suite of commercial benefits accrue. Our analysis reveals that the change in final demand of $5.0 billion brought about by the volunteering expenditure of consumers (Direct Costs) increases output in the Tasmanian economy by $9.7 billion. This enables **$63.3 million** in profits for producers across a wide range of industries.

The efficiency with which this process occurs is known as productivity. The financial return that volunteering-dependent enterprises receive on their investments of capital, labour, energy, materials and services is therefore estimated to be **9.4 per cent**.

Of more interest is a relatively under-explored and unquantified benefit: the productivity benefits which consumers of volunteering receive, enabling them to be more effective and efficient in their chosen employment. In this report, it is conservatively estimated that consumers enjoyed **$1,202.6 million** in net productivity benefits as a result of their engagement with and consumption of volunteering. Although accrued by individuals, this benefit was actually realised by their employers, and as such is represented here as a commercial benefit.

Therefore, the sum of benefits returned to businesses as a result of volunteering in Tasmania in 2014 was estimated to be **$1.3 billion.**



Input / output modelling

The value of expenditure associated with volunteering in Tasmania can be understood in two contexts. Firstly, the amounts spent by individuals, businesses or government on volunteering reveal a value that the community perceives in the activity. Secondly, expenditure on volunteering creates a change in final demand that has an economic impact on employment, output and gross national product. The economic impact includes the impact on intermediate goods and the compensation of employees.

Analysis of the total impact, including indirect effects, is based on an understanding that industries, and individual companies within these industries, do not exist in a vacuum, but use each other's products to produce their own. Thus, an increase in demand for one industry's products leads to increases in the demand of other 'linked' industries.

An input / output (I/O) representation of the economy is comprised of a set of industries which are linked by these I/O or intermediate relationships and by the final demand for each industry's output. The model used in this report is the Tasmanian Regional Input-Output Matrix (RIOM) model.

Broadly speaking, I/O modelling examines how different industries interact to produce final demand. For example, a dairy farmer (as part of the Agriculture industry) may sell some of his or her milk to a cheese-maker (part of the Manufacturing industry), who uses it as an ingredient in his or her cheese. This company in turn sells some of its output to a retail wholesaler (part of the Wholesale Trade industry), who sells some of it to a VIO, who passes it on in a meal to a homeless person.

The same 50 millilitres of milk has been sold several times, but only the last transaction represents final demand. Thus, the inputs required by one industry form part of the demand for the products of another.

There are two major types of I/O models: open and closed models. In open models, the labour and wages of employees and the gross operating surplus of companies are treated as primary inputs in the production of goods and services; if you want to produce more widgets, you must employ more widget makers. This type of model captures the direct and indirect effects of changes in demand in one industry on the other industries in the economy.

By contrast, RIOM is a closed model that includes the household sector as a separate industry. This enables the consideration of induced effects of changes in demand. Induced impacts reflect the changes in consumer spending resulting from changes in economic activity and therefore in employment. The household sector is considered as an 'industry' whose outputs are labour, and whose inputs consist of consumer spending; if you create more employment, you also create an increase in demand from the household sector for consumer goods like food, accommodation, entertainment and so on.

RIOM applies the Australian Bureau of Statistics 2008-09 transaction tables (ABS, 2012) in conjunction with demand and employment information for each Australian State and Territory to model the impact of changes in demand on these regional economies, estimating changes in their output, employment and gross state product.

The transaction tables used in the model identify 57 industries across 17 industry sectors. For expenditure allocated to each industry sector, a unique multiplier impact is calculated estimating the impact on gross supply, output, gross state product (following the value-added method), employment, wages, imports, and taxation. The Leontief multiplier is given here as:

$$(1\text{-}X\text{-}C)^{-1} \times \mathrm{LV_E} = \Delta O$$

$\mathrm{LV_E}$ = vector of volunteering expenditure
ΔO = change in total output
X = transaction table of intermediate demand
C = table of induced consumption demand

As previously noted, the producers of volunteering in Tasmania spent a combined amount of $410.6 million in 2014. This figure represents final demand in five main industry categories:

- Accommodation and Food services (H1)
- Communication services (J1)
- Retail Trade (G1)
- Road Transport (I1), and
- Personal and other services (Q1).

The expenditure on volunteering in Tasmania has an economic impact that includes a combination of increased output by industries directly subject to increased volunteering-related demand, increased output by suppliers to those industries and their suppliers, as well as increased output by all industries that have a role in supplying the demand of increased expenditure by households, generated by increased wages.

Changes in employment and gross state product (GSP) are proportional to changes in output following the constant return to scale assumption inherent in I/O models. A number of the assumptions that underpin the analysis are disclosed here:

- The motivating expenditure for the analysis is the estimated expenditure in 2014. Unless explicitly stated and adjusted for, all data is sourced from that period.
- Financial multipliers are calculated using the Tasmanian Regional Input-Output Matrix (RIOM) model. This model is derived from the 2008-09 Tasmanian Input-Output Table adjusted for each State and Territory's demand and employment data. Financial multipliers are assumed to be consistent between 2014 and 2008-09.
- Employment impacts are estimated using RIOM, with expenditure adjusted for CPI movement between 2008-09 and 2014.
- Volunteering activities were fully realised within Tasmania in 2014. Investment expenditure is limited to items included in the survey responses, which are assumed to represent typical annual expenditure.
- Impacts are calculated based on direct, indirect (intermediate inputs), and household consumption effects. Increases in gross operating surplus or taxation revenue are not assumed to directly result in increased expenditure in the Tasmanian economy (the government sector is not closed).
- Where demand results in importation of goods or services from outside of Tasmania (interstate or overseas), no further impact is assumed on the economy.

The estimated economic impact of direct volunteering in Tasmania related and motivated expenditure is shown in Table 3. The total expenditures used to motivate the analysis are shown in column A and sum to $410.6 million.

In RIOM, each type of expenditure is allocated to a specific industry sector for the determination of economic impact. It is estimated that the impact of this expenditure is to increase output in the Tasmanian economy by $675.2 million (Column B). This includes the production of intermediate goods as well as imports of $182.5 million.

The Gross Value Added (GVA) to the Tasmanian economy is therefore **$351.1 million,** or **1.3 per cent** of Tasmania's Gross Domestic Product (GDP) of $27.2 billion (ABS, 2014c).

Table 3: The economic impact of volunteering in Tasmania, 2014 ($million) Part 1

	Demand Expenditure (A)	Output Impact (B)	Gross Value Added (C)	Producers' Surplus (D)
H1	$ 36.7	$ 70.5	$ 27.7	$ 6.9
J1	$ 26.1	$ 46.2	$ 35.2	$ 0.1
Q1	$ 148.0	$ 228.8	$ 128.8	$ 4.0
G1	$ 39.2	$ 70.2	$ 35.7	$ 10.0
I1	$ 160.7	$ 259.5	$ 123.7	$ 42.3
TOTAL	**$ 410.6**	**$ 675.2**	**$ 351.1**	**$ 63.3**

Tasmanian firms also enjoy a net commercial benefit that is attributable to volunteering. Known as the producers' surplus, this is an economic measure of the difference between the amount that a producer of a good receives and the minimum amount that he or she would be willing to accept for the good. The difference, or surplus amount, is the benefit that the producer receives for selling the good in the market. An alternative, if theoretically imperfect, description of this is net profit.

As material inputs are already allowed for, and the assumption is that the infrastructure would exist regardless of volunteering, if GVA is discounted by the cost of labour and taxes (Table 4, Columns G and H) we are left with a theoretical surplus to firms of **$63.3 million** (Table 3, Column D).

In equilibrium, this surplus represents the fair return to providers of capital which will be sufficient to cover the cost of investment and the opportunity cost of the use of land or buildings for other purposes. It should be noted that this is fundamentally a short-run

concept in competitive markets. In the long-run, economic profits (profits in excess of the cost of capital) would generate new entrants that reduce profitability to normal.

Note that the nature of the modelling means that this $63.3 million is distributed amongst **all** Tasmanian firms who contribute intermediate or final goods and/or services that are consumed as a result of volunteering in Tasmania, and not just volunteering producers.

Productivity benefits

A review of the productivity literature reveals that there are many different measures of productivity. The choice between the measures depends either on the purpose of the productivity measurement and/or the amount of data that is available (OECD, 2001). In this report, two distinct expressions of productivity enabled by volunteering in Tasmania are identified.

The first is a traditional measure of input productivity. This is the financial return to producers that volunteering in Tasmania generates on the investments of capital, labour, energy, materials and services. It is estimated in the previous section that this was equal to $63.3 million in 2014, or a return of **9.4 per cent** on the $675.2 billion invested in total. To avoid double counting, however, this dollar amount is excluded from the gross reckoning.

Of more interest is a relatively under-explored and unquantified benefit: the productivity benefits which volunteering in Tasmania delivers to individuals, enabling them to be more effective and efficient in their work. This is the second dimension explored in the following estimation of a productivity premium.

The productivity premium

Productivity is often defined as the ratio of a volume measure of output to a volume measure of input. In other words, if a business purchases a quantity of paint, brushes and canvases for X amount of dollars to produce a work of art to sell for Y amount of dollars, then the difference (or relationship) between X and Y is productivity.

Yet one question overlooked by the productivity literature is, “How does the act of engaging with an activity (for example, volunteering) change and/or enhance the actor’s productivity?” In other words, if I volunteer to satisfy what are essentially my leisure (or well-being) needs, to what extent is that satisfaction observable in my work performance? Does my employer receive a consequent productivity bonus?

Intuitively at least, this productivity premium is real, if hereto intangible; after all, a significant market in Tasmania is found in businesses sponsoring volunteering through

workplace programs. The conclusion must be that there is some corporate benefit to be gained from employee volunteering – the question remains, however, what is its quantum?

With no previous studies to assist in this regard, we applied an iteration of the contingent valuation method (CVM) introduced in the earlier chapter on Methodology.

Volunteers were surveyed about the relationship between their attendance and immediately subsequent work performance. Respondents were asked to what extent they believed their volunteering interest impacted—positively or negatively—on their work performance. As a follow-up, they were asked to quantify this impact (in percentage terms).

A total of 43.2 per cent of respondents felt that volunteering had an average 47.9 per cent positive impact on their productivity, whereas 4.7 per cent felt that it had an average 9.8 per cent negative impact. This allowed us to estimate a productivity premium enjoyed by employers as a result of their employees' volunteering using the following formula.

$$\text{Productivity premium} = \hat{w} \times m_p \times v \times r$$

$\hat{w}$ = median annual wage per cohort
m_p = productivity multiplier
v = total volunteers
r = discount rate

Thus the extent to which attendance volunteering in Tasmania improved the productivity of individuals in 2014 (a benefit enjoyed by their employers) is estimated to be **$1.2 billion**.

This is the sum of self-reported positive and negative impacts, where the negative impacts are noted here as a dis-benefit—rather than a cost—as they are not an input into volunteering, but a negative outcome.

There is much need for additional research in this regard. For example, the conservative assumption is made that consumers only receive an increase in productivity from participating as a volunteer; however, it is also likely that those who are the recipients of volunteering may also experience productivity benefits. Further empirical research into the effects of volunteering on productivity would thus be well-received.

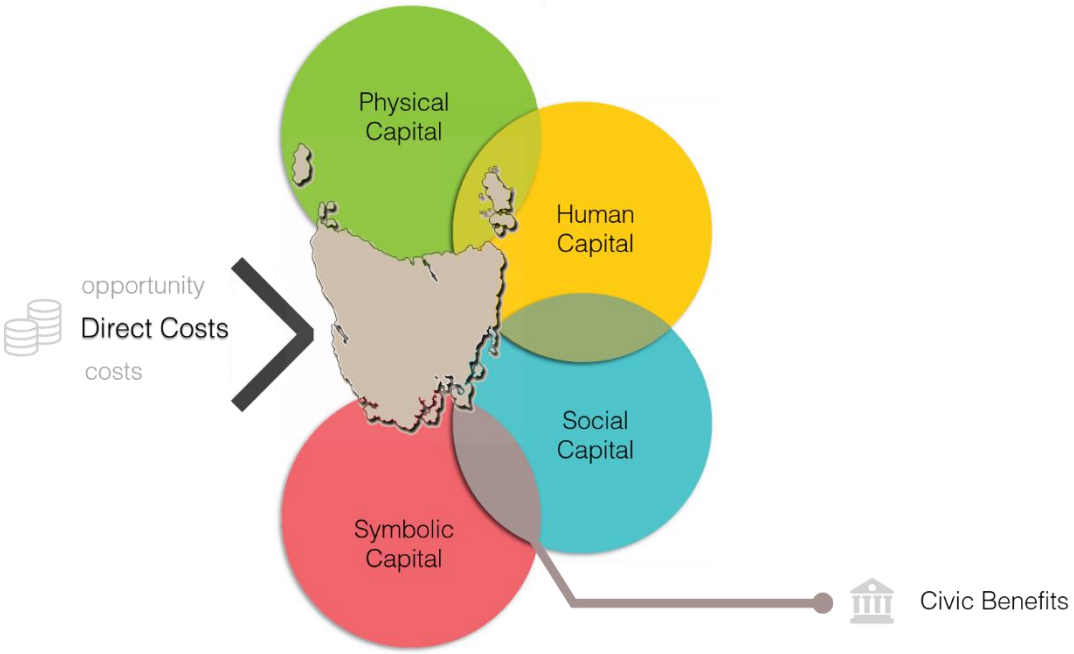
Civic benefits

For the purposes of this study, a civic benefit is a contribution made by having volunteering in Tasmania that would otherwise have to be provided (presumably by the state) if the same community-wide standard of living were to be enjoyed. In other words, it typically represents a cost avoided by government.

Two easy-to-identify instances of civic benefit can be immediately found. The expenditure associated with volunteering in Tasmania is estimated to generate in the order of **5,379 jobs**, 3,320 of which are full-time. This realises a wage benefit of *$205.6 million* that is directly returned to households, with an equivalent welfare cost avoided by government. It is also observed that the estimate of taxes generated by volunteering-related or -motivated expenditure is *$82.2 million*.

Volunteers further relieve other civic bodies (such as governments and community groups) of the need to directly provide the services they enable. The replacement cost of these services is estimated to be *$2.9 billion*, meaning that Tasmania enjoys at least **$3.2 billion** in civic benefits from volunteering in the State.

Civic benefits acknowledged but not quantified by this study include the hereto understated inbound tourism impact of volunteering in Tasmania, as well as the costs potentially avoided by our civil systems of health, criminal and social justice.



Input / output modelling

In Table 4, the expenditure associated with volunteering is estimated to generate in the order of 5,379 jobs, 3,320 of which are full-time. This is a wage-equivalent benefit of **$205.6 million** (Column G) directly returned to households, with an equivalent welfare cost avoided by government.

It is also observed in Column H that the estimate of taxes generated by volunteering-related or -motivated expenditure is **$82.2 million**. Note that the taxation receipts may not be directly proportional to the relevant investment of each tier of government. Nevertheless, as it is unlikely that the volunteering industry receives an equivalent quantum of re-investment from government, it could be argued that the direct tax returns from volunteering are used to finance other policy and social investments, such as hospitals and schools.

Table 4: The economic impact of volunteering in Tasmania, 2014 ($million) Part 2

	FT Employment (E)	PT Employment (F)	Wages Impact (G)	Taxes Impact (H)
H1	268	258	$ 14.2	$ 6.7
J1	260	286	$ 26.4	$ 8.9
Q1	1,466	785	$ 91.2	$ 33.3
G1	324	306	$ 18.3	$ 7.3
I1	1,001	422	$ 55.4	$ 26.0
TOTAL	**3,320**	**2,058**	**$ 205.6**	**$ 82.2**

Donations of time and money

The labour of volunteers is another civic contribution of volunteering. As already stated, it is estimated that volunteers donated over 7.1 million hours to Tasmania in 2014. The replacement cost of this labour is determined by calculating what it would cost beneficiaries to employ people to perform the equivalent work.

Continuing the discussion commenced earlier in opportunity costs, it is presumed that each volunteer necessarily brings skills commensurate with their professional experience; therefore, it is not simply a case of replacing them with industry minimum wage labour.

It is also noted from our primary data, that in our sample of 700 Tasmanian residents, *not one respondent* volunteered in a single sector as a full-time equivalent employee. It is thus wholly inappropriate to price volunteers' labour at the full-time market wage; for even if the sum of volunteer work could be levelled into full-time work, the unique capital every volunteer brings cannot be so trivially reduced.

The overhead costs of administration and capital must also apply to each hour of labour, and the additional costs of taxation (such as superannuation, workers' compensation and payroll tax) should be allowed for.

Table 5: Replacement cost of volunteers' labour in Tasmania, 2014

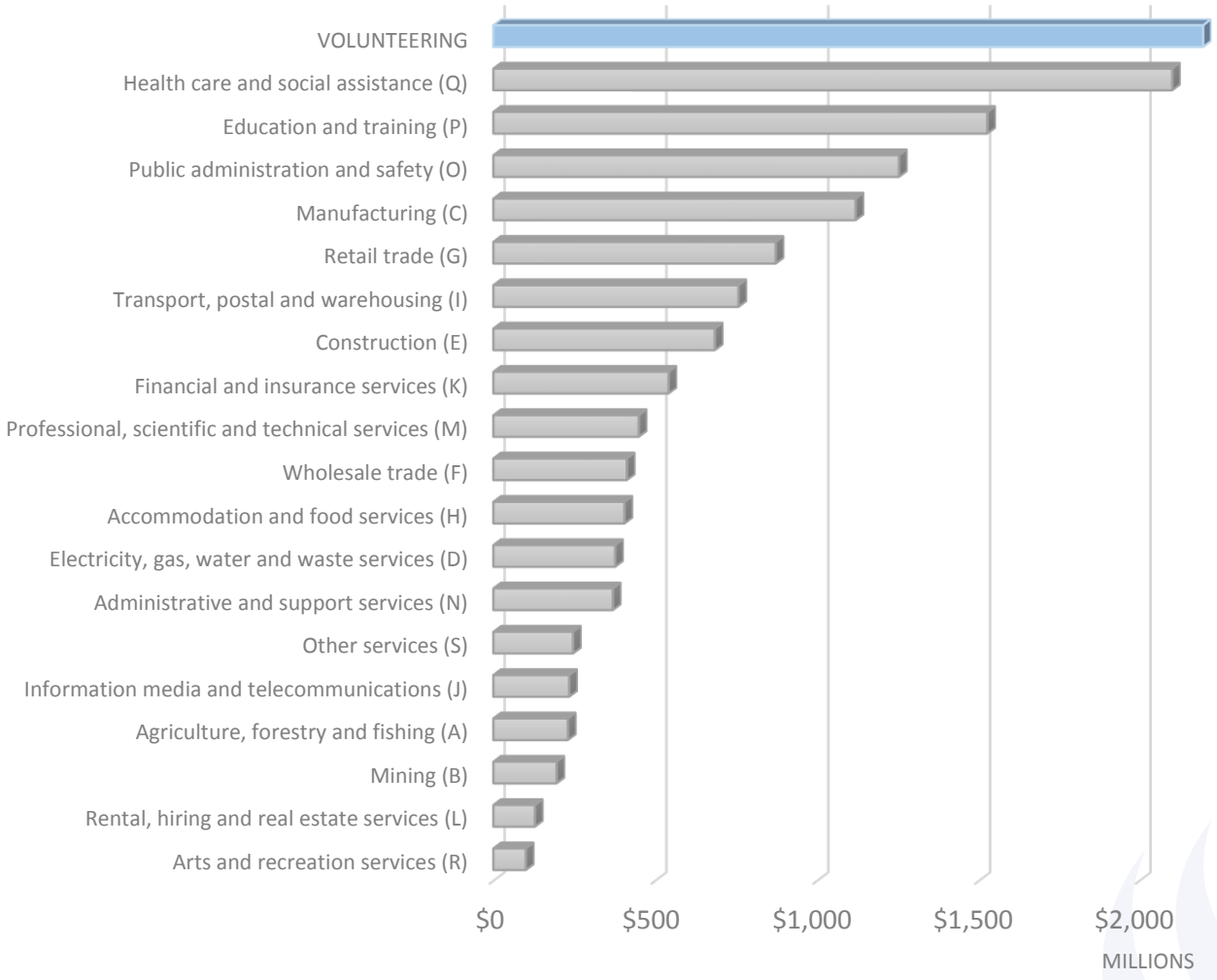
	Average hours / year	Population TAS	Volunteering in TAS	Replacement cost / hour	Total $'m
15–24	150.2	65,289	99.2%	$ 20.03	**$ 194.9**
25–34	156.1	58,889	99.2%	$ 27.45	**$ 250.3**
35–44	166.6	64,473	99.2%	$ 37.23	**$ 396.9**
45–54	154.6	71,787	99.2%	$ 44.99	**$ 495.6**
55–64	175.6	69,023	99.2%	$ 45.20	**$ 543.6**
65-74	273.9	50,719	99.2%	$ 37.23	**$ 513.2**
75+	114.1	37,851	99.2%	$ 37.23	**$ 159.5**
					$ 2,554.0

Using median wage data for each age cohort; allowing an additional 20 per cent for superannuation, payroll and administration costs; and, discounting for volunteering that occurs outside Tasmania, it is found that the cost to the community of replacing volunteers' labour in Tasmania would be *$2.5 billion*. Add to this the direct costs of $138.8 million that VIOs incur in the pursuit of their volunteering, and this figure blows out to **$2.7 billion**.

This amount is equal to **53.2 per cent** of the Tasmanian state government's entire budget for 2014 (Department of Treasury and Finance, 2014).

Salamon *et al*. (2011) make an interesting observation using the replacement cost of labour method: if compared to the adult population of all countries, the global volunteering workforce would be the second largest 'country' in the world, behind China and ahead of India. Appropriating that idea and applying it to the total compensation of Tasmanian employees by industry (ABS, 2014b), using the ABS method it can be seen in Figure 12 that on a labour cost replacement basis, volunteering is **Tasmania's largest industry**.

Figure 12: The compensation of Tasmanian employees by industry, 2014



Other civic benefits

There are a number of formal systems of care that are paid for by society through taxes and personal expenditure. These include all private and public, recurrent and capital expenditure on health, criminal and social justice. The discussion on Capital describes how these are realised through volunteering. By pricing an intermediate input (the replacement cost of volunteering) instead of those outcomes, we effectively understate the true savings that flow from volunteering and which are enjoyed by the state.

Additionally, every time that Tasmania is internationally associated with a volunteering event, activity or individual, it 'brands' the State—all be it temporarily—in the wider public consciousness. Such links are known to influence related purchase behaviour (Balabanis & Diamantopoulos, 2011; Kang & Yang, 2010).

For regions or the nation as a whole, this means that people make tourism, export or even migration decisions that are founded on the strong and positive associations they have with that brand. As such a significant player in the State's cultural economy, it is reasonable to suggest that volunteering has a prominent role to play in this associative dynamic.

Indeed, our survey of VIOs revealed that in the last 12 months approximately **4,222 tourists** visited Tasmania for the purpose of volunteering. Their average stay of 13.9 nights was significantly higher than the average visitor stay of 8.9 nights (Tourism Tasmania, 2014). On this basis, volunteer tourism represents an under-realised potential for the State.

Philosophers from Aristotle to Dworkin (2006) have also argued that a robust democracy depends on the active participation of its citizens. The logic has been that for a government to be truly representative, as many constituents as possible must be connected and contributing to the social discourse. It should therefore be acknowledged that volunteering can act as a gateway for those marginalised to either contribute toward a political cause, draw strength from, or generate ideas that bring about political change (Caruso, 2005).

This report has not attempted to locate and assign an economic value to these surplus volunteering benefits; no doubt many more could also be identified. This is commended as a direction for future research.

Should be an essential part of the community. People feel rewarded for it. For people who have problems, volunteers can be the agent for change, bring their needs before government and the rest of society

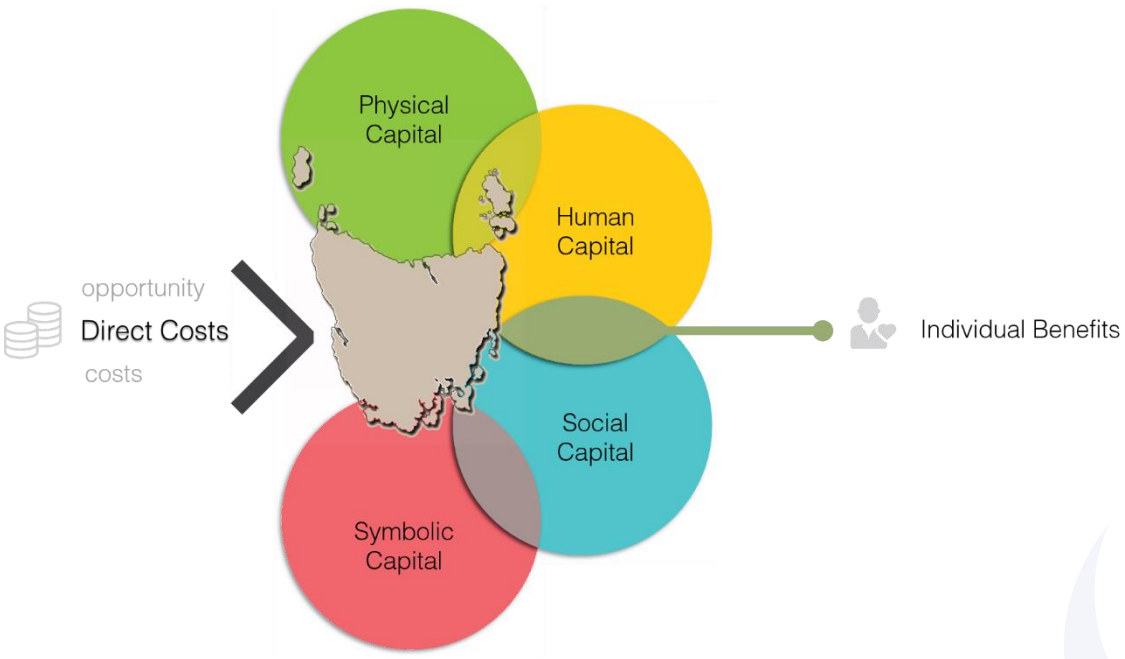
Individual benefits

To this point, our study has described and, where possible, quantified outputs that add value to our commercial and civic systems. In this section it is asked, how much is the intrinsic satisfaction or pleasure that the community derives from SAC?

When consumers engage with volunteering through an act or purchase, they are assumed to derive some benefit from the decision. A rational economic framework imposes the assumption that decision-makers are acting to maximise utility in some fashion and do not intentionally make decisions that reduce this. Therefore, for each act of participation or consumption, there is assumed to be a gross benefit (or gross consumer surplus) attached to that act.

At the very least, the gross benefit is equal to their expenditure on the items concerned. The revealed preference framework can therefore be applied to identify the minimum benefits associated with volunteer engagement; in this case, the $271.8 million households spend on volunteering-motivated purchases. Yet how much would individuals be willing to pay above and beyond this amount for the full set of benefits that might accrue from their volunteering experience? *And what of non-volunteers?* Do they identify a level of satisfaction, even though they may not be directly participating?

Determining the benefits to individuals associated with their engagement involves adding their revealed preferences to the contingent value of their volunteering consumption. In this section it is found that Tasmanians recognise a well-being surplus of **$651.4 million** that was directly attributable to volunteering in the State in 2014.

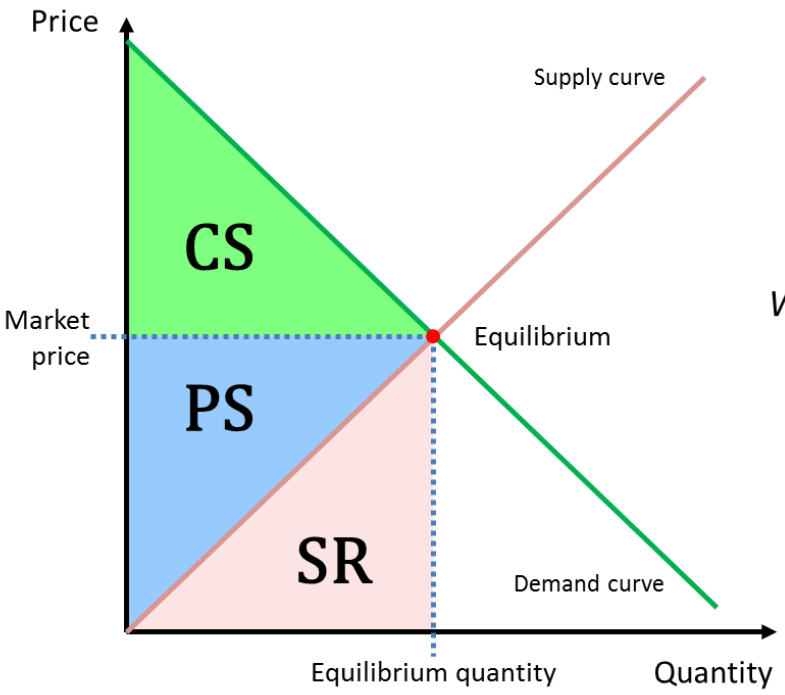


Contingent valuation

It is argued that the places where transactions occur (markets) are a social good because the exchange will only occur when both buyer and seller perceive value in their end of the deal. For the vendor, this means making a profit that exceeds their costs of production. This profit is also known as the producers' surplus, and its value is estimated in the Commercial Benefits section of this report. For the purchaser, though, value means achieving a 'bargain', in that they would have been willing to pay more than they actually did for the article to satisfy their need. The welfare of both parties is thus improved, and goods and services that do not meet this twin threshold are naturally selected out of the market.

Thus the net consumer surplus is the net benefit or additional utility an individual receives in excess of the cost associated with an activity or act of consumption. In many cases, consumer surplus is an important benefit in calculating the net costs or benefits of an activity, for it allows us to arrive at a **use value** of a product or service. The use value (or value-in-use) is what a person would be willing to pay for their purchase / consumption of a good or service, and includes the ultimate satisfaction (or utility) they derive from it. As such, it is the sum of the purchase (or market) price and consumer surplus.

Figure 13: Use value



$$V = CS + PS + SR$$

Where:

V = Value in use
CS = Consumer's surplus
PS = Producer's surplus
SR = Cost of supply

It is known from the survey of volunteers that the market price for volunteering-related goods and services consumed in Tasmania by individuals (households) in 2014 was $271.8 million. Figure 5 shows that this market price is the sum of the producer's surplus and the cost of supply.

Survey respondents were then asked if they would be hypothetically willing to pay (WTP) to support volunteering and, if so, what the value this contribution might be over 12 months. WTP is thus a quantification of an individual's satisfaction with (or consumer surplus attached to) an entity, in this case volunteering.

Overall, 55.1 per cent of respondents were WTP something above and beyond the current market price of volunteering to sustain or enlarge the activity. Interestingly, age appears to significantly mediate WTP—the younger a person is, the more likely they are to value volunteering in Tasmania in this way.

However, there was evidence to suggest some people exaggerated their preferences in reporting their WTP. Of the 700 survey respondents, 18 people (or 2.6 percent of our sample) reported a WTP much greater than $10,000, a significant deviation from the norm. Therefore to control for respondents possibly attempting to influence results, WTP was capped at $10,000. Although WTP should not be confused with an individual's capacity to pay (as it is essentially a measure of gross satisfaction), this allowed for WTP to vary within cohorts while removing the influence of potentially misrepresented preferences.

This methodology resulted in a conservative estimate of average WTP for volunteers of $1,006.66, or approximately $19 per week. With a standard error of $107.28, there is a 95 per cent probability that the true average WTP lies in the interval $796.39 to $1,216.93. Among the 79.8 per cent of the population who volunteered in Tasmania in 2014, this allows for a gross consumer surplus of **$333.5 million**, or 122.7 per cent of their actual expenditure (not including shadow costs).

Beyond this, the 20.2 per cent of *non-users* (or non-volunteers) also perceive a benefit to volunteering. Even though they do not volunteer themselves, continuing the method described above estimates their gross WTP to be **$46.1 million**.

The value of volunteering to individuals in Tasmania, being the sum of market price and consumer surplus across users and non-users, is therefore estimated to be **$651.4 million.**

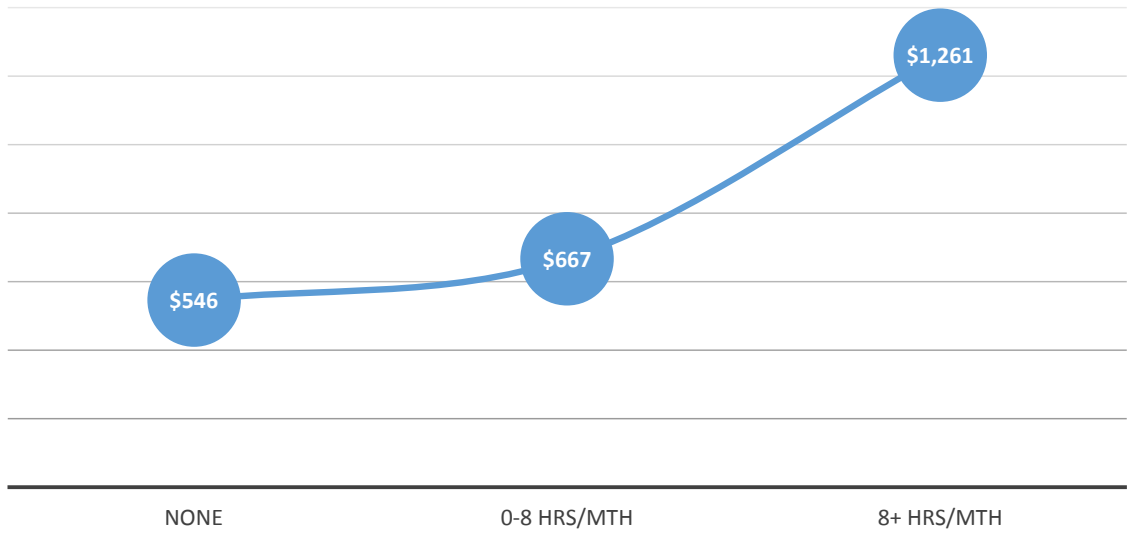
An interesting observation here is that non-volunteers place a value on the regular benefits of volunteering that is **five times lower** than the costs of participation (the current and opportunity costs to the individual of regular participation in SPR are estimated to be $54 per week, whereas non-volunteers WTP is $10.50).

This finding might indicate that the financial barriers to volunteering for this group are real and that on current terms volunteering is not worth the investment. This is significant when juxtaposed with Figure 6, which showed that the higher a person's income is, the less volume of hours they are likely to volunteer.

On the other hand, it may suggest that they are either content to subsidise the regular volunteering of others (in return for the sum of community benefits enabled), and/or they are valuing their option to volunteer at a later date. Further research is required in this regard.

We can also reveal that as well as being significant in distinguishing our survey method from the ABS', the **eight hours per month** threshold for volunteering participation we have used throughout this report is the *most statistically significant* predictor of an individual's satisfaction with their volunteering (WTP). The intervals highlighted in Figure 14 show that individuals who volunteer regularly at more than eight hours per month value volunteering much greater than those who only volunteer occasionally.

Figure 14: Average WTP for (satisfaction with) volunteering in Tasmania, 2014



So what?

The particular benefits that individuals and the community receive from volunteering in Tasmania are not unique. Viewed in isolation, they may not even be that efficient. For example, people might equally improve their social capital by going to church; they could also transfer their social obligations to government in the form of increased taxes. Perhaps then users (and potentially non-users) are valuing the ability of volunteering to originally combine and distribute these discrete economic, social and cultural contributions to Tasmania's welfare.

Well-controlled WTP studies suggest that the easier it is to replace a benefit, the less people are willing to pay to preserve it. In this case, there are a number of competing leisure alternatives to volunteering in Tasmania. Although a comparative WTP study with these options has not been performed here, the fact that the community of volunteers and non-volunteers are theoretically willing to defend the activity to the extent described is an original and significant finding.

A cautionary note

Expressions of willingness to pay essentially measure satisfaction, and should not be confused with a desire on the part of consumers to pay more. Indeed, willingness should not be conflated with an individual's *capacity* to pay. In terms of value, increasing prices (or withdrawing subsidies) would result in a zero sum for current volunteers and their audience, as their consumers' surplus would be converted into producers' surplus for no net gain.

Furthermore, even though it is also known that volunteering supply is relatively inelastic, there is compelling evidence here to suggest that non-volunteers are highly price-sensitive. Therefore, non-users would be alienated by price rises that were not linked to new value, and this would reflect in their adjusted WTP. As it is assumed that a significant community benefit can be realised by converting non-volunteers into active participants, deliberately exploiting the presently high levels of the community's WTP by either increasing prices or withdrawing subsidies is likely to be counterproductive.

8. The value of volunteering to Tasmania, 2014

The value of volunteering to Tasmania across the entire community is the sum of the benefits enabled. This study estimates these to be worth **$4.9 billion** in 2014.

This figure is significantly greater than previous estimates based on price or economic impact, yet is likely to be an underestimate given the limitations of the available data and forensic techniques.

Table 6: The value of volunteering in Tasmania, 2014 ($m)

Costs			
Direct		$ 410.6	
Opportunity		$ 776.2	$ 1,176.7
Benefits			
Commercial			
Producers' surplus	$ 63.3		
Productivity premium	$ 1,202.6	$ 1,265.9	
Civic			
Employment	$ 205.6		
Taxation revenue	$ 82.2		
Labour	$ 2,692.8	$ 2,980.5	
Individual			
Volunteers	$ 605.3		
Others	$ 46.1	$ 651.4	**$ 4,897.8**
Net benefit			$ 3,721.1
Benefit : cost ratio	**4.2 : 1**		

On its own, $4.9 billion is a fairly meaningless sum. The power of numbers lies in their ability to provide a standardised basis for comparison, and—short of performing the same exercise for every other human activity—a top-line valuation of every human endeavour is impractical, if not impossible.

For that reason this study contrasts the net value of volunteering in Tasmania with the cost of inputs. It can be seen that for every dollar invested by the community, over **four dollars** are returned.

9. What if …?

The Australian Government's Department of Finance and Deregulation (Office of Best Practice Regulation) succinctly summarises the purpose of cost-benefit analysis.

> Ideally, all government policies would improve the welfare of society. A policy that made at least some people better-off, while making nobody worse-off, would unambiguously improve social welfare; in economic theory such a policy is termed *Pareto efficient*. However, in reality such policies rarely exist, and a requirement for Pareto efficiency would result in policy inertia. A more practical requirement is that a policy should only be implemented when those who gain from the policy could compensate those who lose, and still be better off. Such a policy is said to offer a *potential* Pareto improvement.
>
> The aim of cost-benefit analysis (CBA) is to provide a framework for assessing the ability of a project or regulation to offer a potential Pareto improvement. If the benefits are greater than the costs—if there is a *net social benefit*—then in theory the gainers from the proposal would be able to compensate the losers and still be better-off, and the policy represents a potential Pareto improvement (OBPR, 2005).

Pareto efficiency is a term used by neo-classical economics to describe a situation in which all disposable resources are put into use, without any idle or wasteful remnants. To illustrate this, suppose there are two individuals sharing a given bundle of goods, and that they exchange their respective goods wilfully and rationally until the point where they are unwilling to exchange any further. Assuming this final outcome delivers a surplus to each, the outcome would be said to be a Pareto efficient one if any further exchange would result in a decrease in the previously achieved benefit (Varian, 2008).

This principle is often used to argue against the inefficient allocation of resources. When discussed in the context of investment, an outcome of inefficiency can mean either that invested capital is less than the capital needed in order to use all disposable resources efficiently, or the inverse is true: there is an over-investment of capital relative to the amount required to use resources efficiently.

In public policy, the Pareto principle—that underused resources constitute a loss of efficiency—is often continued to imply a proportionate loss in social welfare, and to a certain extent this is true. However, it is fair to say that Pareto equilibrium describes theoretical, but not practical situations. This is because the principle relies foremost on conditions of perfect competition (for example, the factors of production are perfectly mobile and frictionless) that can never be realised.

Secondly, the efficiency noted depends upon dichotomous or limited choices with a finite and foreseeable horizon. In reality, the dynamic, competitive pressure of markets will ultimately return all decisions to scale.

Given the pragmatic purpose of this study, it is impractical to propose a model where the conditions of Pareto efficiency are strictly met. It would be a disservice and a theoretical

faux pas to take this route. Nevertheless, the plausibility of under-investment in volunteering in Tasmania can be tested. Such arguments can take the form of logical inference and qualitative interpretations based on the data gathered.

Therefore, having established that volunteering delivers a net social benefit, the question that remains is whether or not the whole of community investment in volunteering can be optimised. In other words, can an increase in public investment motivate an *exponentially* larger yield?

The variable on which volunteering value most keenly depends is the rate of regular participation, especially when clustered around the plus-or-minus eight hours discriminator.

Figure 15: Distribution of hours volunteered by participant per month

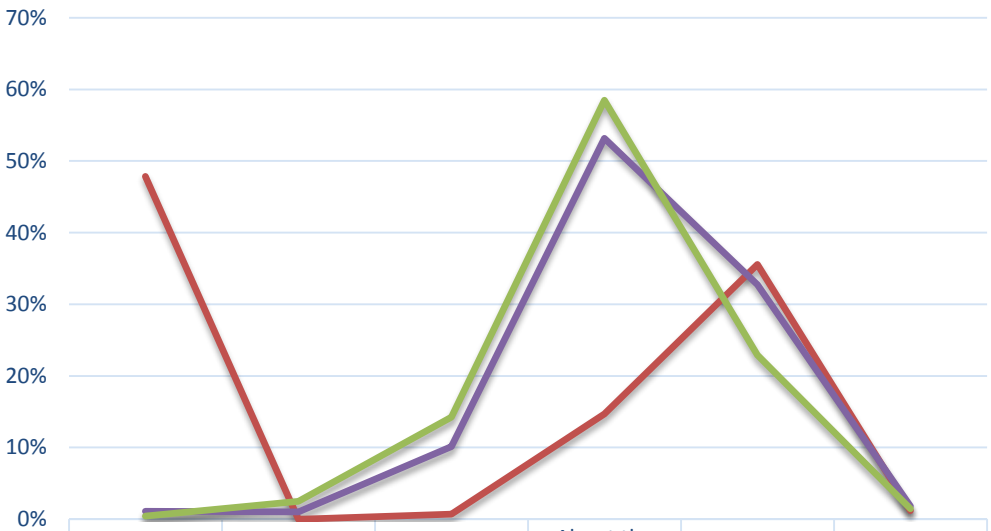
Because market forces have apparently settled upon the current rates of volunteering participation in Tasmania, it is theorised that a significant change to these rates can only be effected by stimulus from the government. What, then, might that change look like?

On the whole, the Tasmanian population was positive in their outlook towards their future volunteering. Only 8.7 per cent of all respondents stated that they did not see themselves volunteering in 3 years, versus 20.2 per cent of the population who are currently not volunteering. Yet the disconnect between intended and actual behaviour is well-documented in academic literature, so these numbers should be treated with caution. Probing of the motivations of respondents in this regard is encouraged as a direction for future research.

Government work can't do everything. Volunteers are a necessity.

Nevertheless we can see in Figure 16 that people currently volunteering at less than eight hours each month are noticeably willing to volunteer "**more**", presumably if circumstances are favourable, but not "**much more**". On the other hand, people currently volunteering more than eight hours each month are all but balanced between wanting to volunteer more and less, giving them the appearance of optimisation.

Figure 16: Tasmanian volunteers' intentions in three years, as at 2014



	Not at all	Much Less	Less	About the Same	More	Much More
None	47.9%	0.0%	0.7%	14.7%	35.6%	1.2%
0-8 hrs/mth	1.1%	1.0%	10.1%	53.2%	32.7%	1.8%
8+ hrs/mth	0.4%	2.5%	14.2%	58.5%	22.9%	1.5%

Therefore, expecting non-volunteers to suddenly participate at the maximum rate would seem an unrealistic policy objective. An incremental approach is instead counselled, whereby practical interventions are made to facilitate the transfer of non-volunteers to donate 0-8 hours per month, and under-utilised volunteers in the 0-8-hour band are encouraged to volunteer eight hours or more.

Therefore the final question advanced by this report is: *how much should the government be willing to spend to achieve this outcome*—an outcome that approaches Pareto efficiency?

In this report we hypothesise a scenario whereby optimisation is advanced at the rate of **one per cent per year** for each age cohort, compounding over 10 years. In other words, one per cent of Tasmania's non-volunteers aged 15-24 will be motivated to contribute 0-8 hours

in 2015; one per cent of the remaining non-volunteers aged 15-24 will be encouraged in 2016; and so forth.

The net change in participation over 10 years is illustrated in the following two charts.

Figure 17: Volunteering in Tasmania, 2014

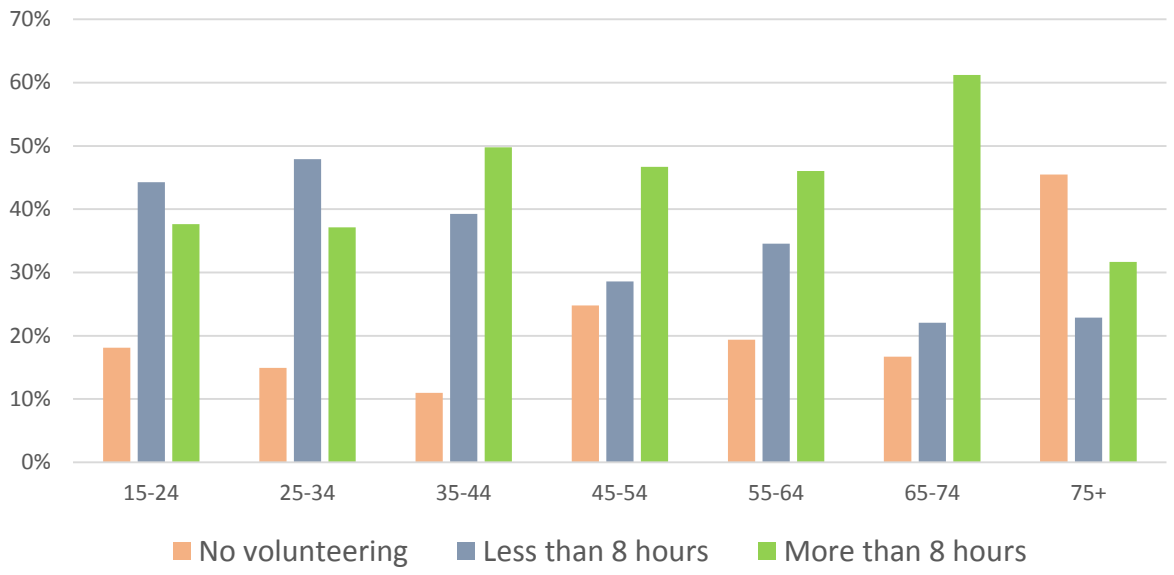
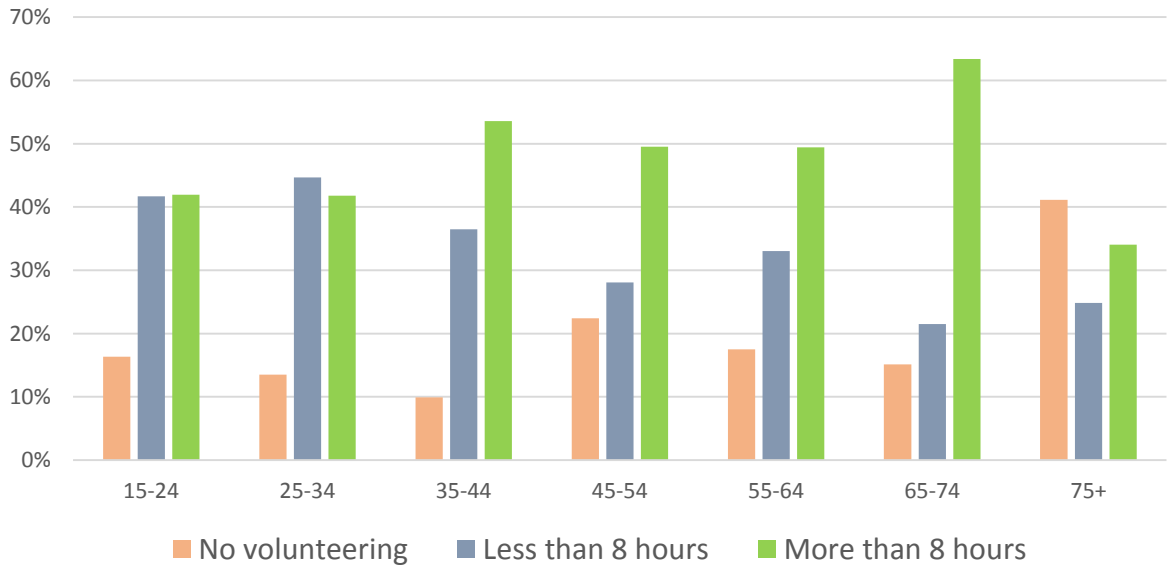


Figure 18: Volunteering in Tasmania, 2024 (hypothetical)



Our modelling indicates that if this scenario were realised—compared to an alternative case in which volunteering participation rates remained constant—the net yield would be in the order of **$706.1 million** after ten years.

Hypothetically, then, government should be willing to pay up to $70.6 million per year to achieve this outcome. This amount is approximately **50 per cent** of the $138.9 million VIOs—including government agencies—currently spend on volunteering in Tasmania.

Specific contingency analysis of the strategic investment alternatives would need to be undertaken, before recommendations as to the efficacy of various interventions could be made. For that reason, this report stops short of proposing how such an investment might be distributed (or efficiently employed); suffice to say, it would be disappointing in the extreme if increasing by nearly half as much again the current allocation to volunteering in Tasmania could not induce a 10 per cent change in behaviour among a community already predisposed.

In fact, should this goal be achieved with a lesser investment, a greater surplus could be enjoyed by all.

A lot of communities run on volunteers. Government let volunteers do a lot of the work that they should be paying for!

---

10. Conclusion

The findings of this study largely speak for themselves. If you could absolutely guarantee a minimum annual return of over 400 per cent on every dollar invested commercially, then there would be a run on the banks tomorrow. Yet although this result may be cause for celebration amongst advocates for volunteering, the full potential of the industry is yet to be realised.

It is beyond the brief of this project to make recommendations as to *how* government investment in volunteering can be made more efficient. That would require the application of the IPM Model of Value Creation to specific programs and policy contingencies. The results reported, however, reveal a number of conclusions that should be of particular interest to public policy.

On the participative side, just under 80 per cent of Tasmanians volunteer in their community in one form or another. This figure is much greater than previous estimates, suggesting that to this point volunteering has been under-quantified and potentially undervalued in the public discourse.

From the perspective of economic impact, this report challenges the conventional wisdom in demonstrating that volunteering labour is of far more significance to the welfare of the community than its mere replacement cost. Volunteering is an industry that influences economic activity across almost the entire spectrum of government and commercial interests—in fact, by analogous measures, it is Tasmania's largest industry. To that end, there should be a concerted effort to more efficiently share the resources and knowledge embedded in volunteering throughout society.

The cost-benefit analysis in this study has also shown that because the external benefits of volunteering exceed the social costs, the outcome is not inefficient. The effect of VIO and government subsidies is to reduce the cost to participants of engaging in volunteering. Our marginal analysis nonetheless hypothesises that enlarging this investment will yield an exponential return, thereby moving the volunteering economy closer to a Pareto efficient outcome.

Ultimately, this study has examined whether those who donate their time and money to volunteering are supporting the common good. It is hoped that this report can educate readers to the economically real and significant value of volunteering to Tasmania. All too often, advocates of volunteering are accused of being evangelists, appealing to the intuition of their audience in the absence of economic reason.

Yet even if some of the findings herein are to be contested, it is argued that this report is a major step towards filling a gap in the debate for (or against) volunteering. Although there are a number of limitations to the study that would benefit from future research, the potential now exists for decision-makers in both industry and government to leverage this framework for continual improvement in the marketing and delivery of their services.

Opportunities for future research

This study has identified a number of gaps in our understanding of the empirical impacts of volunteering in Tasmania. Future research is therefore encouraged in the following areas:

- Further, detailed analysis of volunteering in Tasmania is required, including:
    - sub-regional and other demographic drivers
    - motivations for and constraints to participation.
- The development of a volunteering satellite account will comprehensively resolve the extent to which volunteering directly impacts on the Tasmanian economy.
- The input / output model used in this study made significant State-wide generalisations, particularly about imports, that may or may not have accurately reflected the actual flow of transactions in the volunteering in Tasmania micro-economy. Although collation and integration of the level of detail required to customise the model was beyond the means of this study, larger applications of the I/O method should consider this.
- Empirical research into the impact of volunteering on the productivity of consumers and any employer-enjoyed surpluses they carry forward into their work would also be well-received.
- Quantification of the full suite of volunteering costs and benefits attributable to civil society is encouraged. Domains of enquiry might include:
    - population-attributable health risks and benefits
    - criminal and social justice
    - brand impacts on exports (such as tourism), and
    - civic engagement.
- Modelling of various efficiency-based scenarios would better inform policy-makers at all levels on the costs and benefits of future volunteering investment in Tasmania.

Appendix 1: Telephone survey of Tasmanian residents

1a. Are you employed—full-time, part-time or casual?

Yes 1 No 2 *(go to Q3a)*

1b. How many hours of *paid work* do you do in an average week? ……. *hours*

2a. Do you participate in a workplace volunteering program?
This is a program where you are paid by your employer to volunteer with another organisation such as a charity.

Yes 1 No 2 *(go to Q3a)*

2b. And how many hours does this involve on average per month? ……. *hours*

3a. In the last 12 months, have you given your time to any of the following?

Explanation: At this stage, we are only interested in unpaid donations of time, not money. By unpaid, we mean that the respondent did not receive a salary or wage for their effort, unless they were paid through a formal, employer-sponsored volunteering program. They may, however, receive an honorarium or have had their expenses reimbursed. We also do not want to include donations of time that only benefit the respondent's family. For example, in this study, helping your cousin, child or grandchild with their homework is not volunteering; however, coaching their football team does count, because other, non-family members directly benefit.

	If no to all of Q3a, go to Q7	**3a**	**3b**
1	**A not-for-profit organisation such as a sporting club, political party, church or charity?**	Yes 1 No 2 *(go to 2)*	…….. *(hours per month)*
2	**For government-sponsored organisations, such as schools, hospitals, emergency services, land care groups and the like?**	Yes 1 No 2 *(go to 3)*	…….. *(hours per month)*
3	**For a private organisation, such as an aged care facility, festival or event?**	Yes 1 No 2 *(go to 4)*	…….. *(hours per month)*
4	**To people in your community, *excluding family members*? Examples might include looking after children, property or pets; providing home or personal assistance; or giving someone a lift or advice.**	Yes 1 No 2 *(go to Q3c)*	…….. *(hours per month)*

3b. *(if yes)* **Including travel time, actual volunteering, administration, and any online or other activities—on average, how many hours per month would that be?**

3c. And is this volunteering …

Location	*Yes / No*	*% total*	
Online or from home		**%**	
Within 50km of home		**%**	
Somewhere else in Tasmania		**%**	
Somewhere else in Australia		**%**	
In a developing country		**%**	
In the rest of world		**%**	

3d. And what percentage is that of your total volunteering? *(record above)*
Don't worry if it doesn't add up to 100% - we will fix this afterwards

4a. On average, how much money do you personally spend each month on these activities? I will read a list of categories and get you to provide a rough estimate for each.

	$ spend
Memberships and subscriptions	$...../month
Fuel and motor vehicle expenses	$...../month
Office supplies	$...../month
Uniforms and clothing	$...../month
Tools, equipment and other resources	$...../month
Phone, internet and postage expenses	$...../month
Food and beverages	$...../month
Transport and accommodation	$...../month
Any other expenses*? *(give specifics)*	$...../month

* *details of other expenses*

……

4b. And do you get reimbursed for any of these expenses?

Yes 1 No 2 *(go to Q5)*

4c.. *(if yes)* **How much are you reimbursed in an average month?** $.....

5. So why do you volunteer? *(unprompted)*

……

……

…

(Only ask Q6 if currently employed—otherwise go to Q7)

6a. Now I'd like you to think about how volunteering impacts on your employment. For example, you might be a happier person, have stronger networks, and have access to certain skills that all improve your productivity. On the flip side, you might need to take a few more days off.

So do you think your volunteering impacts positively or negatively on your employment, or does it make no difference?

Positively 1 Negatively 2 No difference 3 *(go to Q7)*

6b. And to what extent is that—just an approximate percentage? …… *%*

7. In 3 years' time, are you likely to be volunteering more, less or about the same?

Much more	More	About the same	Less	Much less	Not at all	Don't know/ unsure
5	4	3	2	1	0	n

8a. So how do you think volunteering benefits your community? *(unprompted)*

……

……

8b. What would you say are the things that stop more people giving more time as volunteers? *(unprompted)*

……

……

9a. Hypothetically, would you be willing to provide additional financial or other assistance (such as a donation of goods, services or time) to encourage more volunteering in the community?

Yes 1 No 2 *(go to Q10a)*

9b. *(if yes)* **Over 12 months, what do you think that assistance could be worth?** *Probe—get them to express other units (eg time) in $*

$……

10a. Just to finish, over the last 12 months, was your approximate annual household income— *(read out)*

Under $30,000	1	**$90,000 to $110,000**	5
$30,000 to $50,000	2	**Over $110,000**	6
$50,000 to $70,000	3	*declined*	7
$70,000 to $90,000	4	*unknown / unsure*	8

10b. Gender Male 1 Female 2

10c. And your age range—are you

15 to 24	1	**55 to 64**	5
25 to 34	2	**65 to 74**	6
35 to 44	3	**75+**	7
45 to 54	4	*declined*	*8*

Appendix 2: The principles of input / output models

The principles of input-output models are described briefly here. The essential feature is that the output of any industry is not entirely sold on a market for the industry's product; some of it will be used by industries associated within the chain of production as an input for production; an example is the output of the sheet metal industry which will be in the large part purchased by motor vehicle and white goods manufacturers as input to the production of motor vehicles and refrigerators. More relevant local examples are the output of the agricultural industries, which provide inputs for the production of food and beverages, dairy production and support the manufacture of confectionary and dairy products; timber harvested by forest companies is sold to timber processors; while mining output is an input to the mineral processing industries. This backward and forward linking structure is an essential feature of an I/O table and defines its set of inter-industry relationships.

The development of an I/O model applied in this analysis is based on a transaction table developed by the ABS with the following structure:

- Each row shows the distribution of one industry to other industries and to final demand, while each column records the industry in questions' acquisition of inputs from other industries in an economy. These are referred to as 'intermediate purchases' to distinguish them from final purchases/sales.
- The table contains four quadrants:
    - The processing sector is shown as Quadrant 1 and records the flow of goods and services between individual industries during a year.
    - The second quadrant records the consumption expenditures of final buyers and the other industry sectors from which they are made. A particular feature of Quadrant 2 is the presence of capital items which are included as part of the total expenditure of the individual industries, however, these capital goods are not used up for production in the current period and so they are shown for the production sector only.
    - Quadrant 3 records payments for the use of primary inputs in particular to labour (wages, recorded as Compensation Of Employees), to corporations as profits or rents (Gross Operating Surplus), to governments in various tiers as indirect taxes and charges and to importers. The value added by each industry to total national income, Gross Domestic or State Product measured at factor (input) cost is the combination of some of these payments as follows:

$$Value\ Added_i = WSS_i + GOS_i + Indirect\ taxes_i - subsidies_i$$

- So the value added by industry i is the sum of wages, salaries and supplements or compensation of employees (COE_i) paid to labour, the gross operating surplus (GOS_i) plus indirect taxes and charges net of subsidies paid by government to industry i. The sum of all the value added by the i industries constituting the economy is the value of Australia's national income, namely GDP (Quadrant 4).

One of the objectives of the modelling is to determine how much GDP increases in response to the expenditure of an XXX project and in response to the increased expenditure by persons in response to XXX project, for example increased tourism.

In our analysis we also included an intermediary Table 1 (with matrix identifier Z) which indicates the proportion of total supply of an industries output is met by a given industry. This is necessary due to the fact that sum industries produce goods that are measured as part of another sector (for example the 'Other Industries' sector producing service that are recorded as 'Personal Services'). At this stage we also exclude the leakage associated with imports. This occurs when demand results in output of a particular sector being imported from overseas.

Figure 19: Quadrants of the transaction table

STRUCTURE OF AUSTRALIAN INPUT-OUTPUT TABLES

Direct allocation of imports, Basic prices, Recording of intra-industry flows

	To / From	Row prefix	Intermediate Uses					Intermediate uses (sub-total)	Final Uses							Final Uses (sub-total)	Total supply (grand total)
			Agriculture, etc	*Mining*	*Manufacturing, etc*	*Construction*	*Services*		*Final consumption expenditure — household*	*Final consumption expenditure — government*	*Gross fixed capital formation — private*	*Gross fixed capital formation — public enterprises*	*Gross fixed capital formation — general government*	*Changes in inventories*	*Exports of goods and services*		
	Column prefix		0101-0400	1100-1500	2101-3701	4101-4102	4501-9601		Q1	Q2	Q3	Q4	Q5	Q 6	Q 7		
Intermediate uses	Agriculture	0101-0400	QUADRANT 1 INTERMEDIATE USE						QUADRANT 2 FINAL USE								
	Mining	1100-1500															
	Manufacturing, etc.	2101-3701															
	Construction	4101-4102															
	Services	4501-9601															
	Intermediate uses (sub-total)																
Primary inputs	Compensation of employees	P1	QUADRANT 3 PRIMARY INPUTS TO PRODUCTION						QUADRANT 4 PRIMARY INPUTS TO FINAL USE								
	Gross operating surplus and mixed income	P2															
	Taxes on products (net)	P3															
	Other taxes on production (net)	P4															
	Imports	P5															
	Australian production																

The shaded areas correspond to aggregates shown in the Gross Domestic Product Account.

corresponds to aggregates shown as the components of gross domestic product, income approach.

corresponds to aggregates shown as the components of gross domestic product, expenditure approach.

The math of I/O modelling

The transaction table may be presented in the following matrix form where X_{ij} is the amount of industry j's output purchased by industry i as an input and D_i is the final demand for industry i's output.

The transaction table above is defined by dividing the elements of the matrix above by the current value of industry i's output. By this definition:

$$a_{ij} = \frac{x_{ij}}{x_j} \tag{1}$$

These a_{ij} are the technical coefficients of production and they represent the amount of industry i's output required to produce a unit of output in industry j.

From (1) we can write:

$$x_{ij} = a_{ij} x_j \tag{2}$$

and the output for industry i is the sum of intermediate sales and purchases plus the final demand for i's output (D_i) as follows:

$$X = AX + D \tag{3}$$

Where X is a vector of industry outputs, D is a vector of final demands and A is an i_{xj} matrix of technical coefficients.

The expression (3) can be solved for X as a function of D:

$$X - AX = D \tag{4}$$

$$X(1 - A) = D \tag{5}$$

$$X = (1 - A)^{-1} D \tag{6}$$

$$X = BD \tag{7}$$

The solution vector represents the output of industries as some multiple of final demand (D) the multiple is the matrix $(I-A)^{-1}=B$. This is known as the Leontief inverse after its creator. Now B is structured in the following manner:

$$B = \begin{bmatrix} b_{11} & b_{12} \ldots\ldots b_{ij} \ldots\ldots b_{1n} \\ \vdots & \vdots \\ b_{21} & b_{22} \ldots\ldots b_{2j} \ldots\ldots b_{2n} \\ \vdots & \vdots \\ b_{i1} & b_{i2} \ldots\ldots b_{ij} \ldots\ldots b_{in} \\ \vdots & \vdots \\ b_{n1} & b_{n2} \ldots\ldots b_{nj} \ldots\ldots b_{un} \end{bmatrix} \quad (8)$$

This is referred to as the *table of interdependence coefficients* and measures the direct, induced and indirect effects of a change in final demand for one of the industry outputs. *The columns of this interdependence coefficient table are the output multipliers.*

What do I/O output multipliers tell us? I/O output multipliers measure the changes in all industry outputs generated by a change in the final demand for any one output. For example, if the demand for agricultural output in Australia increased by 10%, then I/O output multipliers measure the impact on all industry output including agriculture.

Employment multipliers describe the impact of a change in the final demand for a specific industry's output on employment in the same and all other industries. These I/O employment multipliers are derived from employment equations, which are derived in turn by simply multiplying the output equations for each industry by the employment (E_i)/Output (X_1) ratio for the industry in question. So the employment equation for industry 1 is found by multiplying (1) though by E_i/X_1. Then I/O employment multipliers are found in the same way by inverting the set of employment equations solving for employment in industry i.

Wage multipliers are found in an identical fashion, but on this occasion wage equations are employed to derive these. The wage multiplier measures the change in all industry wage incomes flowing from a change in any of the final demands.

However, there is also a wage-multiplier effect which effectively 'closes' the model with respect to the household sector. The wage-multiplier identifies the extent to which

increased household income from wages raises expenditure in the community, thereby generating additional economic activity and employment. To incorporate the impact of increased wages on household final consumption expenditure (a component of final demand D) we derive a matrix C which is parallel to the matrix A. The element of matrix C, cij relate the expected increase in household final consumption expenditure associated with a unit increase in output by industry j.

Therefore final demand D contains a dependent component based on wages and an independent component that with identify as FD. We describe this relationship in equation [0.1].

$$FD = D - CX \qquad [0.1]$$

The expression [1.5] can be substituted into [1.4] while maintaining the equality as follows:

$$Y = AX + CX + FD \qquad [0.2]$$

The expression [1.6] can then be solved for equilibrium X = Y as a function of FD:

$$Y - AY - CY = FD \qquad [0.3]$$
$$Y\left(1 - A - C\right) = FD \qquad [0.4]$$
$$Y = \left(1 - A - C\right)^{-1} FD \qquad [0.5]$$
$$Y = \left(1 - A - C\right)^{-1} FD \qquad [0.6]$$
$$Y = X = L \times FD \qquad [0.7]$$

The solution vector B represent the output of industries as some multiple of final demand (FD) the multiple is the matrix $\left(1 - A - C\right)^{-1} = L$. The structure of L is a table of interdependence coefficients and measures the direct, indirect and induced (where the model is closed) effects of a change in final demand for one of the industry outputs. The columns of this inter-dependence table are the output multipliers.

Output I/O multipliers measure the change in all industry outputs generated by a change in the final demand for any one output. Wage, value-added and employment multipliers are calculated based on the output multipliers. It is assumed that the relationship between

output of a given sector and its wage, value-added and employment are constant (effectively determined by technology and structural parameters in the industry) so that if output in a sector increases by a given amount, then the value-added, wage and employment impacts can be calculated using a constant ratio for each industry.

Gross State Product (GSP) multipliers measure the contribution of a final demand change to each industry's value added or its individual contribution to GSP. GSP multipliers are derived from total income equations which are output equations converted to total income relationships by applying value added/output ratios to each industry's outputs.

All four sets of multipliers are applied to the task of identifying employment, GSP, wage and output effects of the XXXX project not proceeding.

Here, a distinction should be made between Type I and Type II multipliers. Type I income or output multipliers are the ratio of the direct plus indirect income or output change of demand to the direct income change resulting from a dollar increase in final demand for any given industry.

Type II multipliers are those derived mathematically above and can be read off the column of the B matrix in (7). In either case, type I or II, the I/O model is closed with respect to households which is the case here.

The practicality of I/O models depends on certain properties and assumptions. First, a workable I/O model will be mathematically stable which happens if the following holds:

The table of technical coefficients must have at least one column which sums to a number less than one. No column in the table can exceed one in the aggregate (no industry can pay more for its inputs than it receives from the sale of its output).

The following assumptions underpin all practical I/O models:

- A single production function exists for all firms in an industry.
- This production function must be linear and be homogeneous of degree I (Constant Returns to scale applies).
- There is no substitutability between factions of production (labour and capital).

Glossary

ABS	Australian Bureau of Statistics
ATO	Australian Taxation Office
CBA	Cost Benefit Analysis
CVM	Contingent Valuation Method
DPAC	Department of Premier and Cabinet (Tasmania)
EPP	Employment Pathway Plans
GDP / GSP	Gross Domestic (State) Product
GVA	Gross Value Added
I/O	Input / Output (modelling)
ILO	International Labour Organisation
IPM	Institute of Project Management
JSA	Job Search Agency
NESB	Non-English Speaking Background
NFP	Not for Profit (organisation)
OECD	Organisation for Economic Co-operation and Development
RBA	Reserve Bank of Australia
RIOM	(IPM's proprietary) Regional Input / Output Model
ROI	Return on Investment
UNV	United Nations Volunteers
UNWTO	United Nations World Tourism Organisation
VA	Volunteering Australia
VIO	Volunteer Involving Organisation
VIVA	Volunteer Investment and Value Audit
VT	Volunteering Tasmania
WTP	Willingness to Pay

References

Abraham, K. G., & Mackie, C. (2005). Beyond the Market: Designing Nonmarket Accounts for the United States Katharine.

ABS. (2006a). 4441.0 Voluntary Work Australia 2006: Australian Bureau of Statistics.

General Social Survey 2006 Questionnaire (2006b).

ABS. (2009). *Non-Profit Institutions Satellite Account*.

ABS. (2010a). 4441.0 Voluntary Work Australia 2010: Australian Bureau of Statistics.

General Social Survey 2010 Questionnaire (2010b).

ABS. (2011). *Voluntary Work, Australia*.

ABS. (2012). Australian National Accounts: Input-Output Tables, 2008-09 (Vol. 5209.0.55.001). Canberra: Australian Bureau of Statistics.

ABS. (2013). *Value of sport, Australia*.

ABS. (2014a). Australian Demographic Statistics, June 2013 *3101.0*. Canberra: Australian Bureau of Statistics.

ABS. (2014b). Australian National Accounts: National Income, Expenditure and Product, Dec 2013, Table 27. State Final Demand, Detailed Components: Tasmania, Cat: 5206.0.

ABS. (2014c). Australian National Accounts: National Income, Expenditure and Product, Jun 2014 *5206.0*. Canberra: Australian Bureau of Statistics.

ABS. (2014d). Consumer Price Index, Australia *6401.0*. Canberra: Australian Bureau of Statistics.

ABS. (2014e). Labour Force, Australia *6202.0*. Canberra: Australian Bureau of Statistics.

Access Economics. (2006). The economic costs of obesity: Diabetes Australia.

Access Economics. (2010). *The economic value of informal care in 2010*.

Adams, A. (2014). Social capital, network governance and the strategic delivery of grassroots sport in England. *International Review for the Sociology of Sport, 49*(5), 550-574.

Adams, N., & Picone, A. (2009). Generation Y Volunteer: Volunteering Tasmania.

Ahlheim, M., & Buchholz, W. (2000). WTP or WTA - Is that the Question? Reflections on the Difference between "Willingness To Pay" and "Willingness to Accept". *Zeitschrift für Umweltpolitik & Umweltrecht, 23*, 253-271.

Anderson, T. L., Grunert, C., Katz, A., & Lovascio, S. (2010). Aesthetic Capital: A Research Review on Beauty Perks and Penalties. *Sociology Compass, 4*(8), 564.

Arneil, B. (2006). Diverse communities. *The Problem with Social Capital*.

Arrow, K., Solow, R., Portney, P. R., Leamer, E. E., Radner, R., & Schuman, H. (1993). Report of the NOAA panel on contingent valuation (Vol. 58): Federal Register.

ATO. (2011). Tax Basics for Non-Profit Organisations.

ATO. (2012). Company Tax Rates. Retrieved 14 November, 2012

ATO. (2014). Payments to Volunteers: Are Payments to Volunteers Assessable Income?

Bailey, R. (2006). Physical Education and Sport in Schools: A Review of Benefits and Outcomes. *The Journal of School Health, 76*(8), 397.

Balabanis, G., & Diamantopoulos, A. (2011). Gains and losses from the misperception of brand origin: The role of brand strength and country-of-origin image. *Journal of International Marketing, 19*(2), 95-116.

Bandura. (1971). *Social Learning Theory*. Morristown NJ: General Learning Press.

Basil, D. Z., Runte, M. S., Easwaramoorthy, M., & Barr, C. (2009). Company support for employee volunteering: a national survey of companies in Canada. *Journal of Business Ethics, 85*(2), 387-398.

Bateman, I. J., Carson, R. T., Day, B., Hanemann, M., Hanley, N., Hett, T., . . . Özdemiroglu, E. (2002). Economic valuation with stated preference techniques: a manual. *Economic valuation with stated preference techniques: a manual*.

Bathini, D. R., & Vohra, N. (2014). Volunteering: The Role of Individual-level Psychological Variables. *Vikalpa: The Journal for Decision Makers, 39*(2), 113-126.

Baxter-Tomkins, A., & Wallace, M. (2009). Volunteering and remuneration : can they co-exist ? *Australasian Journal of Business and Social Inquiry, 7*, 1-11.

Blackshaw, T., & Long, J. (2005). What's the big idea? A critical exploration of the concept of social capital and its incorporation into leisure policy discourse. *Leisure Studies, 24*(3), 239-258.

Bollo, A. (2013). *Measuring Museum Impacts*.

Bourdieu, P. (1993). *The Field of Cultural Production*. New York: Columbia University Press.

Bowie, N. E. (1998). A Kantian theory of meaningful work. *Journal of Business Ethics, 17*(9/10), 1083.

Bowman, W. (2009). The economic value of volunteers to nonprofit organizations. *Nonprofit Management & Leadership, 19*(4), 491-506. doi: 10.1002/nml.232

Brookshire, D. S., Eubanks, L. S., & Randall, R. A. (1983). Estimating Option Prices and Existence Values in Wildlife Resources. *Land Economics, 69*, 1-15.

Brown, K. M., Hoye, R., & Nicholson, M. (2012). Self-Esteem, Self-Efficacy, and Social Connectedness as Mediators of the Relationship Between Volunteering and Well-Being. *Journal of Social Service Research, 38*(4), 468-483. doi: 10.1080/01488376.2012.687706

Browne, J., & Paylor, J. (2013). The value of giving a little time.

Bruce, D. (2014). Out of uniform: Building community resilience through non-traditional emergency volunteering.

Volunteering in the United States, 18 (2014).

Bureau of the Census (US). (2013). Current Population Survey - Volunteer Supplement.

Cabinet Office (UK). (2013). *Community Life Survey Technical Report*.

Callahan, W. A. (2005). Social capital and corruption: Vote buying and the politics of reform in Thailand. *Perspectives on Politics, 3*(03), 495-508.

Carlsson, F., Frykblom, P., & Liljenstolpe, C. (2003). Valuing wetland attributes: An application of choice experiments. *Ecological Economics, 47*(1), 95-103. doi: 10.1016/j.ecolecon.2002.09.003

Carr, D. L., Markusen, J. R., & Maskus, K. E. (1998). Estimating the knowledge-capital model of the multinational enterprise: National Bureau of Economic Research.

Caruso, H. Y. C. (2005). Art as a political act: Expression of cultural identity, self-identity, and gender by Suk Nam Yun and Yong Soon Min. *The Journal of Aesthetic Education, 39*(3), 71-87.

Civil Liability Act (Tas). (2002). Civil Liability Act. *2002*, s45.

Cnaan, R., Handy, F., & Wadsworth, M. (1996). Defining Who is a Volunteer: Conceptual and Empirical Considerations. *Nonprofit and Voluntary Sector Quarterly, 25*, 364-383. doi: 10.1177/0899764096253006

Commonwealth of Australia. (2006). Handbook of Cost-Benefit Analysis.

Commonwealth Volunteers Protection Act. (2003). Commonwealth Volunteers Protection Act.

Cordery, C. J., Proctor-Thomson, S. B., & Smith, K. A. (2013). Towards communicating the value of volunteers: lessons from the field. *Public Money & Management, 33*(1), 47.

Costanza, R., Wilson, M., Troy, A., Voinov, A., Liu, S., & D'Agostino, J. (2007). The value of New Jersey's ecosystem services and natural capital. *The Gund Institute of Ecological Economics, Burlington, VT and The New Jersey Department of Environmental Protection, Trenton, New Jersey*.

Côté, S., & Healy, T. (2001). The well-being of nations: The role of human and social capital. *Paris: Organisation for Economic Co-operation and Development*.

Culum, B., & Forcic, G. (2008). The Challenge of Volunteering Frequency in Croatia--Can Volunteers Contribute to the Social Capital Development Once a Year? : Online Submission.

Dawson, P., & Downward, P. (2013). The Relationship Between Participation in Sport and Sport Volunteering: An Economic Analysis. *International Journal of Sport Finance, 8*(1), 75-92.

De Clercq, D., & Voronov, M. (2009). The role of cultural and symbolic capital in entrepreneurs' ability to meet expectations about conformity and innovation. *Journal of small business management, 47*(3), 398-420.

De Gilder, D., Schuyt, T. N., & Breedijk, M. (2005). Effects of an employee volunteering program on the work force: The ABN-AMRO Case. *Journal of Business Ethics, 61*(2), 143-152.

Deloitte Australia. (2014). Deloitte | Micro-volunteering @ Deloitte Talk to us. 2014.

Citizenship Survey: 2010-11, Cohesion Research, Statistical Release Number 16 1-32 (2011).

Department of Human Services. (2014). Age Pension.

Department of Social Services. (2014). Guide to Social Security Law: Australian Government.

Department of Treasury and Finance. (2005). Project Evaluation Guidelines.

Department of Treasury and Finance. (2014). Government Services Budget Paper Number 2 (Vol. 1).

Diamond, P. A., Hausman, J. A., Leonard, G. K., & Denning, M. A. (1993). Does Contingent Valuation Measure Preferences? Experimental Evidence. In J. A. Hausman (Ed.), Contingent Valuation: A Critical Assessment. New York: North-Holland.

DiMaggio, P., & Useem, M. (1978). Social class and arts consumption. *Theory and Society, 5*(2), 141-161.

Dudwick, N., Kuehnast, K., Jones, V. N., & Woolcock, M. (2006). Analyzing Social Capital in Context: A Guide to Using Qualitative Methods and Data. Washington DC: World Bank.

Dworkin, R. (2006). *Is Democracy Possible Here?: Principles for a New Political Debate*

Eden, D., & Kinnar, J. (1991). Modeling Galatea: Boosting Self-Efficacy to Increase Volunteering. *Journal of Applied psychology, 76*(6), 770-780.

Edwards, S. F. (1992). Rethinking existence values. *Land Economics*, 120-122.

Egerton, M., & Mullan, K. (2008). Being a pretty good citizen: an analysis and monetary valuation of formal and informal voluntary work by gender and educational attainment. *The British journal of sociology, 59*, 145-164. doi: 10.1111/j.1468-4446.2007.00186.x

Ellis, C. (2005). *Tourism, volunteers and environmental researchers : an analysis of participatory environmental research tourism / Claire Ellis*: 2005.

Fair Work Act. (2009). Fair Work Act. *2*, s108-112.

Farrell, C. (2007). Thinking Critically about Social Capital. *Irish Journal of Sociology, 16*(2), 27-49.

Farrell, L., & Shields, M. (2004). Playing sport and feeling healthy: evidence from the Health Education Monitoring Study University of Melbourne

Ferrari, J. R., Haq, A., & Williams, S. M. (2014). HOPE IN CIVIC ACTION: TO BE OPTIMISTIC AND NON-PREJUDICIAL. *College Student Journal, 48*(2), 185-188.

Finke, R. (2003). Spiritual capital: Definitions, applications, and new frontiers. *Retrieved April, 24*, 2005.

Flint, J., & Rowlands, R. (2003). Commodification, normalisation and intervention: Cultural, social and symbolic capital in housing consumption and governance. *Journal of Housing and the Built Environment, 18*(3), 213.

Foster, V., & Mourato, S. (1999). Elicitation Format and Part-Whole Bias: Do Contingent Valuation and Contingent Ranking Give the Same Result?

Fox, K. (1999). The influence of physical activity on mental well-being *Public Health Nutrition, 2*(3a), 411-418.

Fukuyama, F. (2001). Social capital, civil society and development. *Third world quarterly, 22*(1), 7-20.

Fuller, T., & Tian, Y. (2006). Social and Symbolic Capital and Responsible Entrepreneurship: An Empirical Investigation of SME Narratives. *Journal of Business Ethics, 67*(3), 287.

Gaskin, K. (2011). *VIVA – The Volunteer Investment and Value Audit A self-help guide*.

Greenfield, E. A., & Marks, N. F. (2004). Formal volunteering as a protective factor for older adults' psychological well-being. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 59*(5), S258-S264.

Grootaert, C. (1998). Social Capital: the Missing Link? *Glossary of Statistical Terms.* Retrieved 3 July, 2008, from http://stats.oecd.org/glossary/detail.asp?ID=3560

Grootaert, C., & Basterlaer, T. v. (2002). Understanding and measuring social capital: A multidisciplinary tool for practitioners. Washingto DC: World Bank.

Guetzkow, J. (2002). *How the Arts Impact Communities: An introduction to the literature on arts impact studies*. Paper presented at the Taking the Measure of Culture Conference, Princeton University.

Hakim, C. (2010). Erotic capital. *European sociological review, 26*(5), 499-518.

Handy, F., & Srinivasan, N. (2004). Valuing Volunteers: An Economic Evaluation of the Net Benefits of Hospital Volunteers. *Nonprofit and Voluntary Sector Quarterly, 33*, 28-54. doi: 10.1177/0899764003260961

Hanemann, W. M. (1993). Three approaches to defining" existence" or" non-use" value under certainty.

Hanley, N., Wright, R. E., & Adamowicz, V. (1998). Using choice experiments to value the environment. *Environmental and Resource Economics, 11*(3), 413-428.

Harper, D. (2014). Volunteer. *Online Etymology Dictionary*.

Harrison, G. W. (2002). Contingent Valuation Meets the Experts, A Critique of the NOAA Panel Report. *Environmental and Resource Economics*.

Harrison, M. (2006). An economist looks at suicide terrorism. *World Economics - Henley on Thames, 7*(3), 1.

Hassam, A. (2007). Speaking for Australia: Cross-cultural dialogue and international education. *Australian Journal of Education, 51*(1), 72.

Heaney, J.-G., & Heaney, M. F. (2003). Using economic impact analysis for arts management: An empirical application to a music institute in the USA. *International Journal of Nonprofit and Voluntary Sector Marketing, 8*(3), 251-266.

Helmes, E., & Govindan, A. (2007). Differences between Older Adult Volunteers and Non-volunteers in Depression and Self-efficacy. *Australian Journal on Volunteering, 12*(2), 30.

Help From Home. (2014). Help From Home. from http://helpfromhome.org/

Hiser, J. (1998). Understanding the value of your employees' knowledge. *The CPA Journal, 68*(7), 56.

Hitchman, M. (2010). Volunteering within acute care settings - Its role in promoting hope, recovery and social inclusion. *Mental Health and Social Inclusion, 14*(2), 24-27.

Hyde, M. K., Dunn, J., Scuffham, P. A., & Chambers, S. K. (2014). A systematic review of episodic volunteering in public health and other contexts. *BMC public health, 14*(1), 992-992. doi: 10.1186/1471-2458-14-992

Iannaccone, L. R., & Klick, J. (2003). Spiritual capital: An introduction and literature review. *Retrieved April, 24*, 2005.

ILO. (2011). Manual on the measurement of volunteer work.

International Federation of Red Cross and Red Crescent Societies. (2011). *The value of volunteers Imagine how many needs would go unanswered without volunteers*.

Ironmonger, D. (2006). The Economic Value of Volunteering in Queensland. In Department of Communities (Ed.): Queensland Government.

Ironmonger, D. (2008). The Economic Value of Volunteering in Queensland - Updated Report. In Department of Communities (Ed.): Queensland Government.

Ironmonger, D. (2009). The Economic Value of Volunteering in Western Australia. In Department for Communities (Ed.): Government of Western Australia.

Ironmonger, D. (2011). The Economic Value of Volunteering in South Australia. In Office of Volunteers (Ed.): Government of South Australia.

Ironmonger, D. (2012). The Economic Value of Volunteering in Victoria. In The Department of Planning and Community Development (Ed.): Victorian Government.

Ironmonger, D., & Soupourmas, F. (2002). Giving Time: The Economic and Social Value of Volunteering in Victoria. In Households Research Unit (Ed.): University of Melbourne.

Janey, J. P., Tuckwiller, J. E., & Lonnquist, L. E. (1991). Skill transferal benefits from volunteer experiences. *Nonprofit and Voluntary Sector Quarterly, 20*(1), 71-79.

Jenkinson, C. E., Dickens, A. P., Jones, K., Thompson-Coon, J., Taylor, R. S., Rogers, M., . . . Richards, S. H. (2013). Is volunteering a public health intervention? A systematic

review and meta-analysis of the health and survival of volunteers. *BMC public health, 13*, 773. doi: 10.1186/1471-2458-13-773

Johnson, B. K., Mondello, M. J., & Whitehead, J. C. (2007). The Value of Public Goods Generated by a National Football League Team. *Journal of Sport Management, 21*(1), 123-136.

Johnson, L. (2006). Valuing the arts: theorising and realising cultural capital in an Australian city. *Geographical Research, 44*(3), 296-309.

Kang, M., & Yang, S. U. (2010). Comparing effects of country reputation and the overall corporate reputations of a country on international consumers' product attitudes and purchase intentions. *Corporate Reputation Review, 13*(1), 52-62.

Kanter, B., & Fine, A. H. (2009). *The Giving Challenge: Assessment and Reflection Report*.

Kerr, L., Savelsberg, H., Sparrow, S., & Tedmanson, D. (2001). Experiences and perceptions of volunteering in Indigenous and non-English speaking background communities.

Koleth, M. (2014). Hope in the dark: geographies of volunteer and dark tourism in Cambodia. *Cultural Geographies, 21*(4), 681-694. doi: 10.1177/1474474013519577

Křížová, E. (2012). Volunteering and Mutual Aid in Health and Social Care in the Czech Republic as an Example of Active Citizenship. *Central European Journal of Public Health, 20*(2), 110-115.

Laeven, R. J. A., & Goovaerts, M. J. (2004). An optimization approach to the dynamic allocation of economic capital. *Insurance: Mathematics and Economics, 35*(2), 299-319.

Larson, D. M. (1993). On measuring existence value. *Land Economics, 69*(4), 377-388.

Lee, L., & Higgins, C. (2001). Corporate Volunteering. *Journal of Corporate Citizenship, 2001*(4), 79-90.

Lloyd, P. J., & Foster, S. L. (2006). Creating healthy, high-performance workplaces strategies from health and sports psychology. *Consulting Psychology Journal, 58*(1), 23-39.

Lööf, H., & Heshmati, A. (2002). Knowledge capital and performance heterogeneity:: A firm-level innovation study. *International Journal of Production Economics, 76*(1), 61-85.

Loomis, J. B. (1987). Balancing public trust resources of Mono Lake and Los Angeles' Water Right: An economic approach. *Water Resources Research, 23*(8), 1449.

Luthans, F., Avolio, B. J., & Youseff, C. (2007). *Psychological Capital: Developing the Human Capital Edge*. Oxford, UK: Oxford University Press.

Luthans, F., & Youssef, C. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics, 33*(2), 143-160.

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*: Oxford University Press, USA.

Madden, C. (2001). Using Economic Impact Studies in Arts and Cultural Advocacy: A Cautionary Note. *Media International Australia incorporating Culture and Policy, 98*(February), 161-178.

Madden, C., & Bloom, T. (2004). Creativity, health and arts advocacy. *International Journal of Cultural Policy, 10*(2), 133-156. doi: 10.1080/1028663042000255772

Maher, A. (2005). The Definition and Principles of Volunteering: What's All the Fuss About? *Australian Journal of Emergency Management, 20*, 3-5.

Marx, K. (1859). The Emancipation Question. *New York Daily Tribune*.

Maxfield, S. (2008). Reconciling Corporate Citizenship and Competitive Strategy: Insights from Economic Theory. *Journal of Business Ethics, 80*(2), 367.

McConnell, K. E. (1983). Existence and bequest value. *Managing air quality and scenic resources at national parks and wilderness areas*, 254-264.

McConnell, K. E. (1997). Does altruism undermine existence value? *Journal of Environmental Economics and Management, 32*(1), 22-37.

McLennan, S. (2014). Medical voluntourism in Honduras: 'Helping' the poor? *Progress in Development Studies, 14*(2), 163-179. doi: 10.1177/1464993413517789

Mechling, H. (2005). Physical activity, sport and successful aging. *Ko?rperlich-sportliche Aktivita?t und erfolgreiches Altern, 48*(8), 899-905.

Mellor, D., Hayashi, Y., Firth, L., Stokes, M., Chambers, S., & Cummins, R. (2008). Volunteering and Well-Being: Do Self-Esteem, Optimism, and Perceived Control Mediate the Relationship? *Journal of Social Service Research, 34*(4), 61-70.

Michael, R. T. (2004). Sexual capital: an extension of Grossman's concept of health capital. *Journal of health economics, 23*(4), 643-652.

Milgrom, P. (1993). Is sympathy an economic value?: Philosophy, Economics, and the contingent valuation method. *Contributions to Economic Analysis, 220*, 417-441.

Mohan, J. (2011). Mapping the Big Society : perspectives from the Third Sector Research Centre.

Mook, L. (2009). Calculating the Value of Volunteer Contributions for Financial Statements. *The Philanthropist, 18*, 71-83.

Mook, L., & Quarter, J. (2006). Accounting for the Social Economy. 247-269.

Muller, P., & al. (2013). *The Economic, Social and Cultural Value of Salamanca Arts Centre 2011-12*.

Muller, P., Wadsley, A., Adams, D., Arthur, D., & Felmingham, B. (2010). The Value of Sport & Physical Recreation to Tasmania. Hobart: University of Tasmania.

Nersterov, F. V. (2010). On the definition of definition. *Scientific and Technical Information Processing, 37*(2), 127-131. doi: http://dx.doi.org/10.3103/S0147688210020061

Nichols, G., & Ralston, R. (2011). Social Inclusion through Volunteering: The Legacy Potential of the 2012 Olympic Games. *Sociology, 45*(5), 900-914. doi: 10.1177/0038038511413413

Nicholson, M., & Hoye, R. (2008). *Sport and social capital*: Routledge.

Numerato, D., & Baglioni, S. (2012). The dark side of social capital: An ethnography of sport governance. *International Review for the Sociology of Sport, 47*(5), 594.

OBPR. (2005). Decision rules in regulatory cost-benefit analysis In Department of Finance and Deregulation (Ed.), *Best Practice Regulation Note*. Canberra: Office of Best Practice Regulation.

OECD. (2001). Measuring Productivity OECD Manual Measurement of Aggregate and Industry-Level Productivity Growth (pp. 156).

Office of Best Practice Regulation. (2005). Decision rules in regulatory cost-benefit analysis *Best Practice Regulation* Canberra: Department of Finance and Deregulation

Oliver, K., Collin, P., Burns, J., & Nicholas, J. (2006). Building resilience in young people through meaningful participation. *Advances in Mental Health, 5*(1), 34-40.

Mahi Aroha: Maori perspectives on volunteering and cultural obligations (2007).

Ollman, B. (1976). *Alienation: Marx's conception of man in a capitalist society*: Cambridge University Press.

Oman, D. (2007). Does volunteering foster physical health and longevity.

Onyx, J., & Bullen, P. (2000). Measuring social capital in five communities. *The journal of applied behavioral science, 36*(1), 23-42.

Pastoriza, D., Ariño, M. A., & Ricart, J. E. (2008). Ethical Managerial Behaviour as an Antecedent of Organizational Social Capital. *Journal of Business Ethics, 78*(3), 329.

Paull, M. (2009). *Barriers to volunteering by newcomers in Wheatbelt towns in Western Australia*: Volunteering WA.

Payne, W., Reynolds, M., Brown, S., & Fleming, A. (2003). Sports role models and their impact on participation in physical activity: a literature review Victoria: VicHealth.

Petriwskyj, A. M., & Warburton, J. (2007a). Motivations and barriers to volunteering by seniors: A critical review of the literature. *The International Journal of Volunteer Administration, 24*(6), 3-25.

Petriwskyj, A. M., & Warburton, J. (2007b). Redefining volunteering for the global context a measurement matrix for researchers. *Australian Journal on Volunteering, 12*, 7-13.

Pillemer, K., Fuller-Rowell, T. E., Reid, M. C., & Wells, N. M. (2010). Environmental Volunteering and Health Outcomes over a 20-Year Period. *Gerontologist, 50*(5), 594-602.

Social Capital: Its Origins and Applications in Modern Sociology, 24 1-24 (1998).

Productivity Commission. (2010). Contribution of the Not-for-Profit Sector Productivity Commission Research Report.

13 Informal carers and volunteers 325-346 (2011).

Putnam, R. (2000). *Bowling alone*: Simon & Schuster.

Putnam, R. (2002). Social Capital Community Benchmark Survey short form. http://www.hks.harvard.edu/saguaro/pdfs/socialcapitalshortform.pdf

Quinton, S., & Fennemore, P. (2013). Missing a strategic marketing trick ? The use of online social networks by UK charities. *International Journal of Nonprofit and Voluntary Sector Marketing, 51*, 36-51. doi: 10.1002/nvsm

RBA. (2014). F2 Capital Market Yields - Government Bonds. Canberra: Reserve Bank of Australia.

Ress, W. E., & Wackernagel, M. (1996). Ecological footprints and appropriated carrying capacity: Measuring the natural capital requirements of the human economy. *Focus, 6*(1), 45-60.

Rochester, C. (2006). *Making sense of volunteering A Literature Review.* Paper presented at the The Comission of the Future of Volunteering.

Rodell, J. B. (2013). FINDING MEANING THROUGH VOLUNTEERING: WHY DO EMPLOYEES VOLUNTEER AND WHAT DOES IT MEAN FOR THEIR JOBS? *Academy of Management Journal, 56*(5), 1274-1294. doi: 10.5465/amj.2012.0611

Sajardo, A., & Serra, I. (2011). The economic value of volunteer work: Methodological analysis and application to spain. *Nonprofit and Voluntary Sector Quarterly, 40*(5), 873-895. doi: 10.1177/0899764010371233

Salamon, L. M., Sokolowski, S. W., & Haddock, M. a. (2011). Measuring the Economic Value of Volunteer Work Globally: Concepts, Estimates, and a Roadmap To the Future. *Annals of Public & Cooperative Economics, 82*, 217-252.

Seyfang, G. (2004). Working outside the box: community currencies, time banks and social inclusion. *Journal of Social Policy, 33*(01), 49-71.

Sfeir-Younis, A. (2002). Volunteer capital. *Olympic Review, 27*(42), 31-34.

Shephard, R. J. (1986). *Economic benefits of enhanced fitness*.

Skinner, J., Zakus, D. H., & Cowell, J. (2008). Development through sport: Building social capital in disadvantaged communities. *Sport management review, 11*(3), 253-275.

Small, M. W. (2006). Management development: developing ethical corporate culture in three organisations. *The Journal of Management Development, 25*(6), 588.

Smith, A. (1828). *An Inquiry into the Nature and Causes of the Wealth of Nations*: A. and C. Black.

Smith, J. D. (2001). Volunteering, capital of the future? *UNESCO Courier, 54*(6), 20-21.

Snowball, J. D., & Antrobus, G. G. (2002). Valuing the Arts: Pitfalls in Economic Impact Studies of Arts Festivals. *South African Journal of Economics, 70*(8), 1297-1319. doi: 10.1111/j.1813-6982.2002.tb00067.x

Snyder, M., & Omoto, A. M. (2008). Volunteerism : Social Issues Perspectives and Social Policy Implications. *2*, 1-36.

Spaaij, R. (2009). The glue that holds the community together? Sport and sustainability in rural Australia. *Sport in Society, 12*(9), 1132-1146.

Statistics Canada. (2007). Satellite Account of Non-profit Institutions.

Caring Canadians, involved Canadians : highlights from the 2007 Canada Survey of Giving, Volunteering and Participating (2009).

Statistics New Zealand. (2004). *Non-Profit Institutions Satellite Account*.

New Zealand General Social Survey : 2012 Key facts (2013).

Stewart, T., & Ruckdeschel, C. (1998). Intellectual capital: The new wealth of organizations. *Performance Improvement, 37*(7), 56-59.

Studer, S., & Schnurbein, G. (2013). Organizational Factors Affecting Volunteers: A Literature Review on Volunteer Coordination. *Voluntas: International Journal of Voluntary & Nonprofit Organizations, 24*(2), 403-440. doi: 10.1007/s11266-012-9268-y

Teasdale, S. *Health check: A practical guide to assessing the impact of volunteering in the NHS*.

Teece, D. J., & Teece. (2000). *Managing intellectual capital: Organizational, strategic, and policy dimensions*: Taylor & Francis.

Thomas, G. (2001). *Human traffic: Skills, employers and international volunteering*: Demos.

Renewing Volunteering for Civic Renewal (2002).

Tittensor, D. (2007). Social Capital and Public Policy – The Current Challenge Facing the Victorian Government. *Australian Journal of Public Administration, 66*(4), 512-518. doi: 10.1111/j.1467-8500.2007.00549.x

Tourism Tasmania. (2014). Tasmanian Visitor Survey. http://www.tourismtasmania.com.au/research/tvs.

Tymon, W. G., & Stumpf, S. A. (2003). Social capital in the success of knowledge workers. *Career Development International, 8*(1), 12.

United Nations Volunteers (UNV). (2011). State of the World's Volunteerism Report.

UNWTO. (2002). Basic Concepts of the Tourism Satellite Account: United Nations World Tourism Organisation.

Valls, R., & Kyriakides, L. (2013). The power of Interactive Groups: how diversity of adults volunteering in classroom groups can promote inclusion and success for children of vulnerable minority ethnic populations. *Cambridge Journal of Education, 43*(1), 17-33. doi: 10.1080/0305764X.2012.749213

Van den Berg, B., Bleichrodt, H., & Eeckhoudt, L. (2005). The economic value of informal care: a study of informal caregivers' and patients' willingness to pay and willingness to accept for informal care. *Health economics, 14*(4), 363-376.

Van Willigen, M. (2000). Differential benefits of volunteering across the life course. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 55*(5), S308-S318.

Varian, H. R. (2008). *Intermediate Microeconomics* (7th ed.).

Verschoor, C. C. (2006). The Value of an Ethical Corporate Culture. *Strategic Finance, 88*(5), 21.

Volunteering Australia. (2006). Corporate Volunteering Survey.

Volunteering Australia. (2013). Research and Advocacy. from http://www.volunteeringaustralia.org/research-and-advocacy/

Volunteering Queensland. (2011). Volunteering Queensland. *National Emergency Response, 24*(Spring), 24-27.

Volunteering Tasmania. (2012). Characteristics of volunteering.

Vos, S. (2012). The value of human resources in non-public sports providers : the importance of volunteers in non-profit sports clubs versus professionals in for-profit fitness and health clubs. *International Journal of Sport Management and Marketing, 11*, 3-25.

Walsh, R. G., Loomis, J. B., & Gillman, R. A. (1984). Valuing option, existence, and bequest demands for wilderness. *Land Economics*, 14-29.

Walukiewicz, S. (2007). Four forms of capital and proximity: Working Paper WP-3-2007, Warsaw, Systems Research Institute.

Warburton, D., & Hendy, P. (2006). International Comparison of Australia's Taxes. Canberra: Australian Government Treasury.

Warburton, D., & Hendy, P. (2006). International Comparison of Australia’s Taxes. Canberra: Australian Government Treasury.

Wattles, M. G., & Harris, C. (2003). The relationship between fitness levels and employee's perceived productivity, job satisfaction and absenteeism. *Journal of Exercise Physiology Online, 6*(1), 24-32.

Weisbrod, B. (1964). Collective Consumption Services of Individual Consumption Goods. *Quarterly Journal of Economics, 78*(3), 471-477.

Weisbrod, G., & Weisbrod, B. (1997). Measuring Economic Impacts of Projects and Programs: Economic Development Research Group.

Whittaker, C. G., & Holland-Smith, D. (2014). Exposing the dark side, an exploration of the influence social capital has upon parental sports volunteers. *Sport, Education and Society*.

Wilde, O. (1891). *The Picture of Dorian Gray*.

Winograd, D. (2014). KKK Forms Neighborhood Watch in Pennsylvania Town. *Time.com*, 1-1.

Wittgenstein, L. (1953, 2001). *Philosophical Investigations*: Blackwell Publishing.

Woolcock, M. (1998). Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework. *Theory and Society., 27*, 151-208.

Yamazaki, S., Rust, S., Jennings, S., Lyle, J., & Frijlink, S. (2011). A Contingent Valuation of Recreational Fishing in Tasmania (I. o. M. a. A. Studies, Trans.). Hobart: Institute of Marine and Antarctic Studies, University of Tasmania.

Zimmeck, M. (2009). *The Compact Code of Good Practice on Volunteering : Capacity for change : A review*.