

# The Economic, Social and Cultural Value of Volunteering to Western Australia



THE ECONOMIC, SOCIAL AND CULTURAL VALUE OF VOLUNTEERING TO WA IS GREATER THAN

 **39.0** BILLION

### HOW DO WE VOLUNTEER?

WESTERN AUSTRALIANS

**DONATED**



WHICH IS MORE THAN

**315,000,000** HOURS

**4 OUT OF 5**  
WA RESIDENTS

VOLUNTEER EITHER FORMALLY OR INFORMALLY IN THE COMMUNITY



### VOLUNTEERING COSTS AND BENEFITS

INDIVIDUALS SPEND **MORE THAN TWICE** AS MUCH ON THEIR VOLUNTEERING THAN WA'S 5,000+ VIOs\*

ONLY **10%** OF VOLUNTEERS **REIMBURSED**

FOR OUT OF POCKET EXPENSES

\* VOLUNTEER INVOLVING ORGANISATIONS (VIOs)

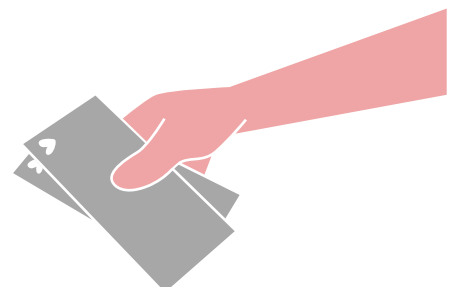
WA EMPLOYERS ENJOYED A **NET PRODUCTIVITY PREMIUM**

 **9.4** BILLION

AS A RESULT OF THEIR EMPLOYEES' VOLUNTEERING IN THE LAST 12 MONTHS

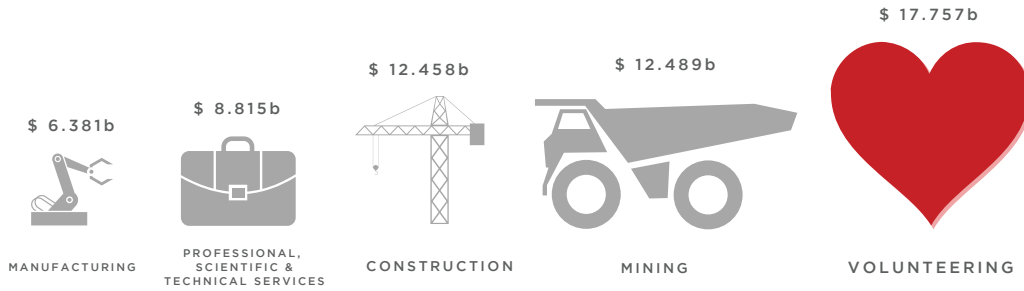


 EACH HOUR OF **VOLUNTEERING COSTS** THE COMMUNITY **\$6.15**



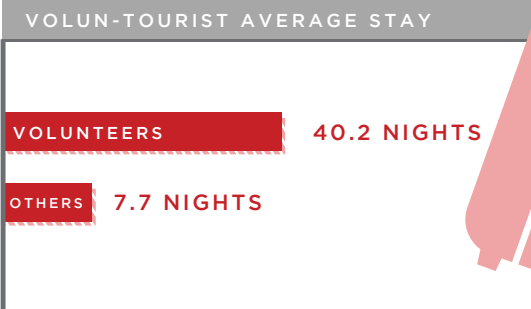
TREATED AS A SECTOR IN ITS OWN RIGHT,

# VOLUNTEERING IS WA'S LARGEST INDUSTRY BY EMPLOYMENT



## VOLUNTEERING CREATES NEW JOBS

LAST YEAR, OVER **7,500** TOURISTS VISITED WA TO VOLUNTEER



## VOLUNTEERING BENEFITS US ALL

WESTERN AUSTRALIANS IDENTIFY A PERSONAL WELL-BEING BENEFIT FROM VOLUNTEERING OF

**9.9** BILLION

FOR EVERY \$1 INVESTED IN VOLUNTEERING

**\$4.50**

IN BENEFITS ARE RETURNED TO THE COMMUNITY



## THE BEST IS YET TO COME

INCREASING THE RATE OF VOLUNTEERING BY AS LITTLE AS **1%** PER YEAR WILL CREATE AN ADDITIONAL

**6.12** BILLION BENEFITS OVER 10 YEARS



# EXECUTIVE SUMMARY

## THE ECONOMIC, SOCIAL AND CULTURAL VALUE OF VOLUNTEERING TO WESTERN AUSTRALIA



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 Western Australia. The model also illustrates how this investment improves 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.

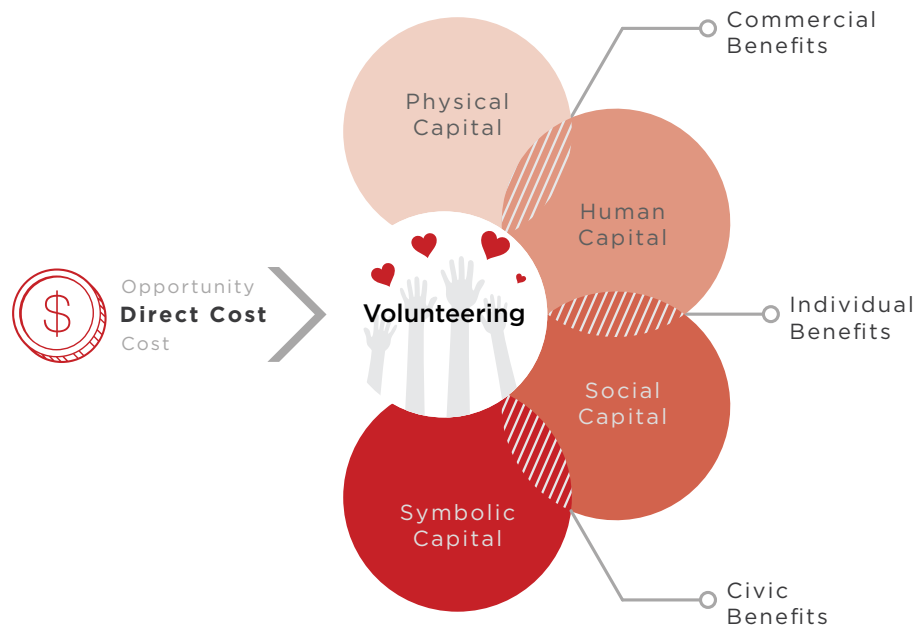
In its application, the IPM Model of Value Creation adopts the best-practice principles of cost and benefit analysis to estimate the value of the unique cluster of activities that comprise volunteering. As the largest known valuation of volunteering as an economic and cultural ecosystem within a defined 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 Western Australia in 2015 is conservatively estimated to be **\$39.0 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 analytic techniques.

Other findings of note include:

- **four out of five** Western Australians volunteered in 2014, donating a total of **315 million hours** people volunteer, on average, **15.9 hours per month**
- there are approximately **5,000 volunteer involving organisations** (VIOs) in Western Australia across the not-for-profit, government and private sectors
- each hour of volunteering directly costs the Western Australian community **\$6.15**
- 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 **Western Australia's largest industry** by employment
- Western Australian employers enjoy a net productivity premium of **\$9.4 billion** as a result of their employees' volunteering
- in the last 12 months, nearly **8,000 tourists** visited Western Australia for the purpose of volunteering. Their average stay of 40.2 nights was over five times greater than the average tourist stay of 7.7 nights
- the people of Western Australia identified a personal well-being benefit of **\$9.9 billion** from volunteering in 2014
- for *every dollar* invested in volunteering, approximately **\$4.50 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 Western Australia could yield an additional **\$6.1 billion** in benefits over ten years.

Hypothetically, then, government should be willing to pay up to \$612.2 million per year to achieve this outcome. This amount is approximately **84 per cent** of the \$727.6 million VIOs—including government agencies—currently spend on volunteering in Western Australia.

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.



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# PREFACE







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

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In my role as Governor of this wonderful state, I have the great pleasure of witnessing first-hand the extraordinary, far-reaching impact of the work of Western Australia's more than 600,000 volunteers.

Every day, people from all walks of life tirelessly and selflessly give their time, skills and talents in the service of others and the natural and man-made environment, without fanfare or expectation of reward. Our community would be much poorer without these unsung heroes and heroines. They are the 'life-blood' of the community they serve and their endeavours fill us with hope and confidence for the future.

Volunteers are significant contributors to the economic, social and cultural wellbeing of Western Australia and the true measure of their impact is not often fully appreciated or utilised. I am indeed pleased that this vital research has been undertaken for it is essential to have accurate, up to date, evidence-based information so that we can understand and continue to support volunteering. This knowledge will inform current and future planning, development and investment in volunteering so that its impact can be maximised.

Congratulations to all involved in this valuable research. Volunteering is an extraordinary gift of service that deserves to be celebrated and must be valued and nurtured. As an outcome of this work, I look forward to volunteering and through it our community being strengthened across Western Australia.

x



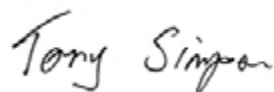
**Her Excellency**  
**The Hon Kerry Sanderson AO**  
Governor of Western Australia  
Patron of Volunteering WA

Without volunteers, many communities would grind to a halt. Volunteers give of themselves without expectation of reward and have a vital role in creating strong, vibrant communities. As a volunteer myself, and as Minister for Seniors and Volunteering, I am committed to fostering the development of volunteering in Western Australia. It is particularly pleasing to see the results from this research, which was carried out with financial support from the Department of Local Government and Communities.

In 2015 alone, the socio-economic and cultural contribution volunteering makes to the State is conservatively estimated to be worth \$39 billion. This figure is much higher than previous estimates, which were based on economic impact alone. Though an economic lens can provide a tangible measure, it does not capture the whole picture. Research that better understands the holistic value volunteering provides to the State was needed.

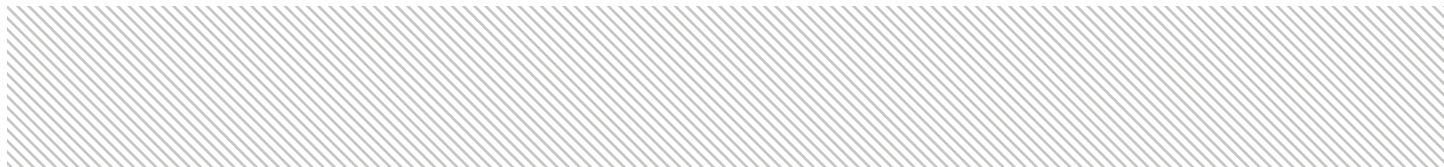
I am delighted that Paul Muller from the Institute of Project Management conducted this research to better understand the value of volunteering to our State. He prepared a similar report for Tasmania in 2014 and, interestingly, a number of the findings closely correlate. For example, treated as a sector in its own right, volunteering is Western Australia's largest industry by employment.

I look forward to seeing the insights from this research helping to inform and strengthen the development of programs to assist volunteers in Western Australia.



**Hon Tony Simpson MIA**  
Minister For Local Government;  
Community Services;  
Seniors And Volunteering; Youth





Local governments can play a vital role in boosting their volunteer sector through capacity building activities in partnership with Volunteering WA, other levels of government, the community and private sectors.

The City of Joondalup, which I have the privilege of representing, directly engages over 450 volunteers in a broad range of community services, programs, events and activities. The City also has 10 officers facilitating programs that directly support volunteer-involving groups and organisations in community, economic and environmental development.

The Joondalup Volunteer Resource Centre, a 13 year partnership between the City and Volunteering WA, has referred over 10,000 people into volunteering roles. This dedicated volunteer support service has been integral to increasing volunteerism in Joondalup to higher than the metropolitan average. The social return on investment delivered through volunteering in the City of Joondalup has been extraordinary, a great example of what can be achieved through collaboration at the grass roots level.

The socio-economic and cultural impact of volunteering to Western Australia is widely underestimated. This important research provides community, private and government sectors with a better understanding of the benefits of volunteering and the imperative to enhance support of the volunteer sector.



**Troy Pickard**

Mayor City of Joondalup  
President Western Australian Local Government Association  
President Australian Local Government Association

During the past eight months, over 1,000 volunteer involving organisations and 1,000 volunteers from across Western Australia participated in the largest and most comprehensive research project into volunteering that our state has seen.

As a society that has service, giving and a concern for others, the environment and the well-being of our state at its heart, it is inspirational but not surprising to have confirmed through up to date, evidence-based data the extraordinary impact and contribution of volunteering.

The research findings deliver a comprehensive picture of the value of volunteering to Western Australia from a social, cultural and economic perspective.

A principal finding of the study is that although the current levels of investment in volunteering yield a very strong return of \$4.50 benefit for every one dollar invested, a more economically efficient outcome can easily be achieved by even marginally increasing the regular rate of volunteering across the state.

We sincerely thank our valued sponsors for generously partnering with Volunteering WA in enabling this vital work to be undertaken. Thank you to the Department of Local Government and Communities, the Stan Perron Charitable Trust, the City of Armadale, the City of Joondalup, the City of Swan, the Town of Victoria Park, and the Volunteering WA Research Committee. The investment made by each sponsor in this project will be enduring and help inform the current and future growth, direction and perception of volunteering in Western Australia.

Thank you also to Paul Muller, Director, Institute of Project Management, who led this research. The breadth of knowledge, guidance, patience, and enthusiasm shared by Paul Muller has been motivating. Together our work has resulted in a comprehensive report that for the first time clearly presents the extraordinarily story of the value of volunteering to the socio-economic and cultural wellbeing of Western Australia and its people.



The impressive findings of this report are a testament to the marvellous spirit of service of the four in five Western Australians who formally and informally give of their time, skill and talent. They are also a tribute to the valuable work of the state's thousands of volunteer involving organisations and the dedicated volunteer managers who so ably support their volunteers.

We look forward to using this research to continue to promote and advance volunteering. By stepping up, reaching out and working together through volunteering, we have the fortitude to realise our dreams and address our challenges.



**Peter Clough**  
Chair  
Volunteering WA



**Mara Basanovic**  
CEO  
Volunteering WA

Special thanks to the generosity and support of the following sponsors of this project.



Government of **Western Australia**  
Department of **Local Government and Communities**

Stan Perron Charitable Trust



TOWN OF  
**VICTORIA PARK**



City of  
**Joondalup**



CITY OF **Armadale**



city of **swan**

# ACKNOWLEDGEMENTS

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

The analysis and opinion within this report 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:

- Mara Basanovic, Gilda Davies and the team at Volunteering WA
- Sandra Simpson and the team at West Coast Field Services.

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. In respect of their confidentiality, we do not identify them here.



Paul Muller  
Dr Dave Arthur  
John Harvey  
Anne Fisher  
Ian McMahon

**May, 2015**



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**“WE WOULD BE LOST WITHOUT THEM - MANY SITUATIONS  
AND JOBS WOULDN'T GET DONE OTHERWISE.”**

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# 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.

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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 in this area. 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 Australian Bureau of Statistics (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:

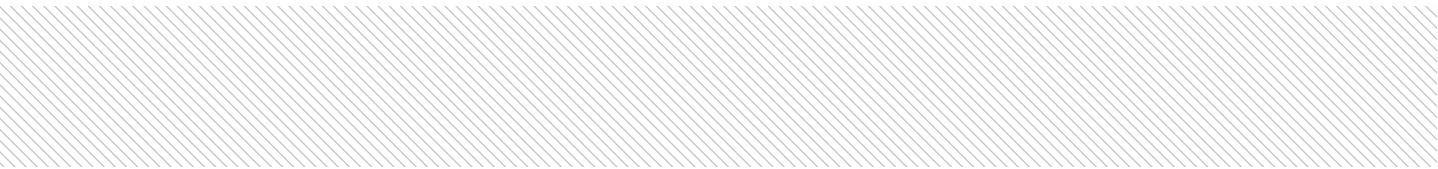
### **DOES THIS INVESTMENT LEAD TO A NET INCREASE IN SOCIAL WELFARE?**

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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.

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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
- 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 this 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 the volunteering sector in Western Australia, in addition to its direct, indirect and potential stakeholders.



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

- quantifying the social and economic contribution that volunteering makes to Western Australian 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 Western Australia 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”.

A group of people, mostly young adults, are gathered in a wooded area. They are holding up large letters to spell out the word 'LEARN'. The letters are held in various ways: some are held high above their heads, some are held in front of their chests, and some are held in their hands. The people are wearing casual outdoor clothing like t-shirts, hats, and sunglasses. The background shows trees and a path. The entire image has a red overlay.

# 2 SCOPE



Before we commence our enquiry into the value of volunteering to Western Australia, 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 pre-empt or replace alternative definitions of volunteering currently under consideration or 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, 74.0 per cent in 1997, 31.0 per cent in 2007, 10.0 per cent in 2009, and 52.0 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 Australian 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;
- or no financial payment; and
- in designated volunteer positions only" (Volunteering Australia, 2013).

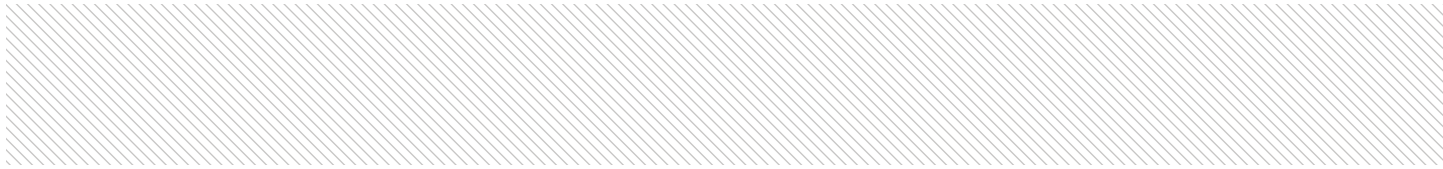
Presumably, this is the scope of their interest, and other forms of formal volunteering—such as government or private enterprise involved volunteering—are not relevant to them.

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**"<sup>1</sup> (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*.

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# 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 in-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 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 *Western Australian Volunteers and Food and Other Donors (Protection from 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”.

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—

- receives no remuneration for doing that work other than—
- remuneration that the person would receive whether or not the person did that work; or
- the reimbursement of reasonable expenses incurred by the person in doing that work; or
- receives remuneration that is not greater than the amount, if any, prescribed by the regulations”<sup>2</sup>.

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:

- 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:
- reimbursement of reasonable expenses incurred by the individual in doing the work; or
- 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.

**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).**

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" (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 statement, 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<sup>4</sup> (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."



.....

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. 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
- 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).

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/Job Services Australia 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 VT 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.





# 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). 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).

Several researchers note that a disproportionate amount of volunteering research is focussed on formal volunteering. 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.

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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” (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 / mining issues, 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).

### **“BENEFIT TO OTHERS” AS ONE OF THE CORE CHARACTERISTICS OF VOLUNTEERING**

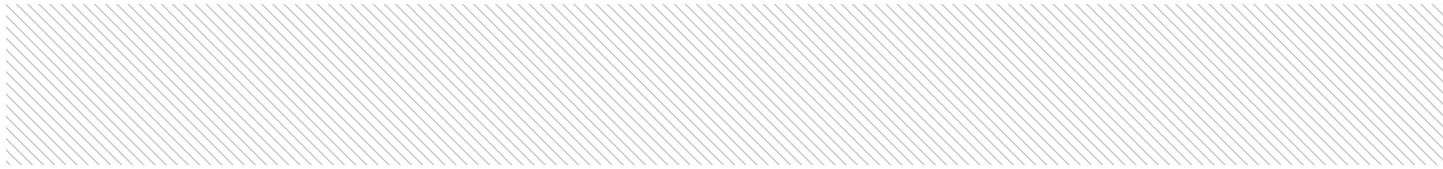
Most Anglo-Saxon Australians would accept this distinction between someone who provides unpaid household help to a stranger or neighbour, and one who provides the same services for an elderly parent. This intuitive rationale perhaps explains why many of the Western definitions cited above have non-controversially 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 and community benefit” (P. Oliver & Love, 2007).

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



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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 VT 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:

- remuneration;
- free choice;
- structure;
- intended beneficiaries; and
- time.

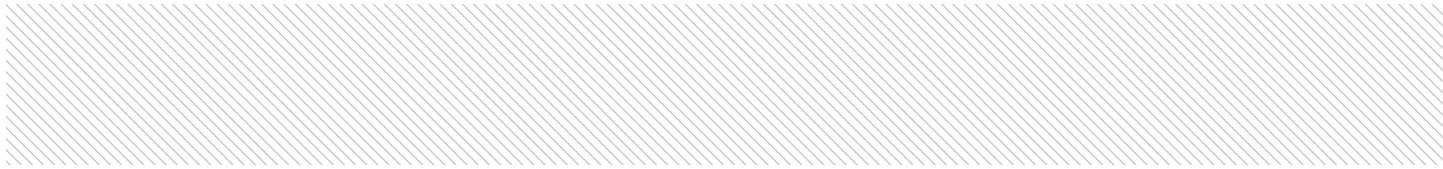
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The dilemma has long been to separate volunteering from other, related activities that do not fit with popular notions of the activity. The consequences of this include difficulties in generalising, replicating or comparing results over time, or between 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 Western Australia 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.





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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 Introduction we are ultimately responding to the question: does volunteering in Western Australia lead to a net increase in social welfare?

Therefore—and cognisant 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





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.

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# ECONOMIC VALUE

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 implication is to understand the conditions under which valuation claims are made. When this study uses money to make 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. Explaining the costs and benefits of volunteering in dollars and cents 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. Rather it makes a pragmatic recognition of the fact that decision-making in policy is inevitably fiscally constrained – and driven. Given the governing assumption that volunteering is accepted as 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 pejorative 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 sufficiently 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 very definition of volunteering. 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 Western Australia spent \$382.1 million enabling volunteering in 2014. This is roughly equal to the Western Australian State Government's investment in Perth link rail works (Government of Western Australia, 2014).

Meaningful comparisons on the basis of finances alone, however, are problematic for a number of reasons. For example, in 2009 Western Australian households spent 57 per cent as much on alcoholic beverages as they did on medical and health expenses. Does this mean that cigarette and tobacco sales contribute half as much value to Western Australians 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 Western Australia is not the same as the value of that industry to Western Australia.

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



**“VOLUNTEERS ARE A DEMONSTRATION OF THE CULTURAL AND SOCIAL STRENGTH OF THE WESTERN AUSTRALIAN COMMUNITY”.**

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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.

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 Western Australians, 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.





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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.

# 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 (2008), 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 PREFERENCE

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.





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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. Many organisations similarly 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 (see the VIVA model discussion, above).

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; instead terms such as “intangible” and “invaluable” are frequently used.

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 it is 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

In this study, the contingent valuation method (CVM) is preferred to quantify the hidden benefits 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 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 their purchase. 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; 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 VALUE

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; 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 evaluation 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:

- Individuals, including:
  - volunteers
  - users of volunteer services, and
  - others in the community;
- businesses; and
- 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 Western Australia. 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.

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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 isn't 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 Western Australia 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 license 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 (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

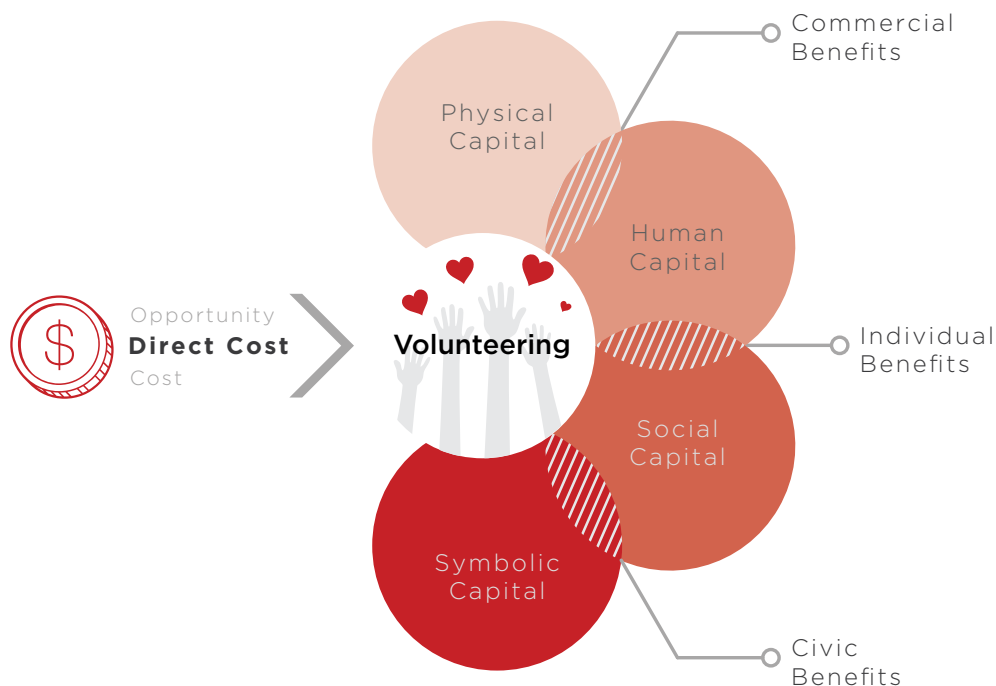
Every activity has its inputs, which come at a cost. These include the direct costs of the goods and services which enable it, and the costs of consumption that might otherwise have been spent on alternative activities (for example, the cost of the time an individual spends performing the activity, or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

The four states of human capital are:

1. **physical capital**, which refers to the saleable assets created by the activity;
2. **human capital**, which refers to, among other things, a person's health, psychological well-being, knowledge and skills;
3. **social capital**, an individual's extant levels of happiness, trust, and engagement with others; and
4. **symbolic capital**, which refers to 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



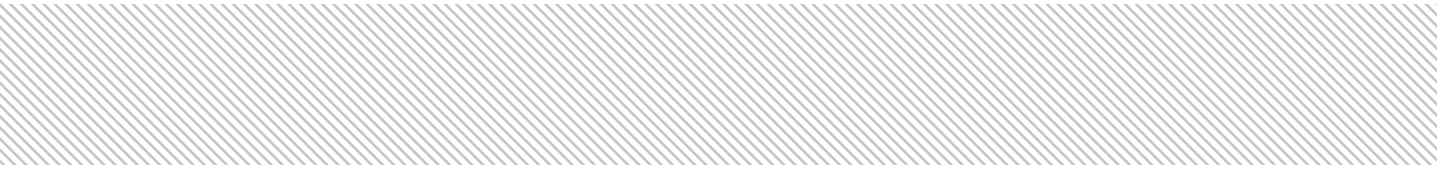
Capital of any kind, however, is a latent attribute. As such, it does not so much defeat measurement; it is just that its measurement is highly arbitrary and, for economic purposes, somewhat pointless. It is only when the potential of capital is expressed that it has utility, or value. Tangible and measurable 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, reliable 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;
- 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.





**“IT HAS A RIPPLE EFFECT AND NOT ONLY MAKES YOU FEEL GOOD  
BUT ALSO HAS A FLOW ON AFFECT TO OTHER PEOPLE.”**

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4

VOLUNTEERING  
IN WESTERN  
AUSTRALIA



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

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# INDIVIDUALS

West Coast Field Services surveyed 1,002 residents of Western Australia aged 15 years and over. Interviews were conducted by telephone over December, 2014 by fully trained and briefed interviewers.

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

- aquota 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 ABS data on Western Australian 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	1,77	15 to 24	1,50
25 to 34	2,07	25 to 34	1,76
35 to 44	1,32	35 to 44	1,13
45 to 54	1,04	45 to 54	0,88
55 to 64	0,82	55 to 64	0,70
65 to 74	0,54	65 to 74	0,46
Over 75	0,66	Over 75	0,56

Without weighting, the p value of the Chi-squared test on gender distribution heterogeneity was 0.0038 ( $p < 0.05$ ); 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), Adams and Picone (2009), Paull (2009), Petriwskyj and Warburton (2007), Rochester (2006).

Analysis of the responses revealed the following characteristics of volunteering in Western Australia in the period under analysis<sup>1</sup>.

### WESTERN AUSTRALIANS VOLUNTEER, DONATING A TOTAL OF 315 MILLION HOURS IN 2014.



<sup>1</sup> 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

**Figure 2:** Distribution of volunteering in Western Australia by context, 2014

The data shows that **79.5 percent** of Western Australians volunteer. Whereas 15.5 per cent of volunteering occurred 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 an organisation.

This figure of 64.0 per cent is much greater than previous ABS estimates of the volume of volunteering in Western Australia, which were most recently: 38.0 per cent (ABS, 2006a) and 34.9 per cent (ABS, 2010a). This difference can be explained by subtle, albeit important, differences in methodology.

### 34 PERCENT OF PEOPLE VOLUNTEERED FOR MORE THAN TWELVE HOURS PER MONTH FOR ORGANISATIONS

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 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 34.0 percent of people volunteered for more than twelve hours per month for organisations (or two hours per week), versus 45.5 per cent who volunteered for less. It is thus hypothesised that twelve 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.



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.

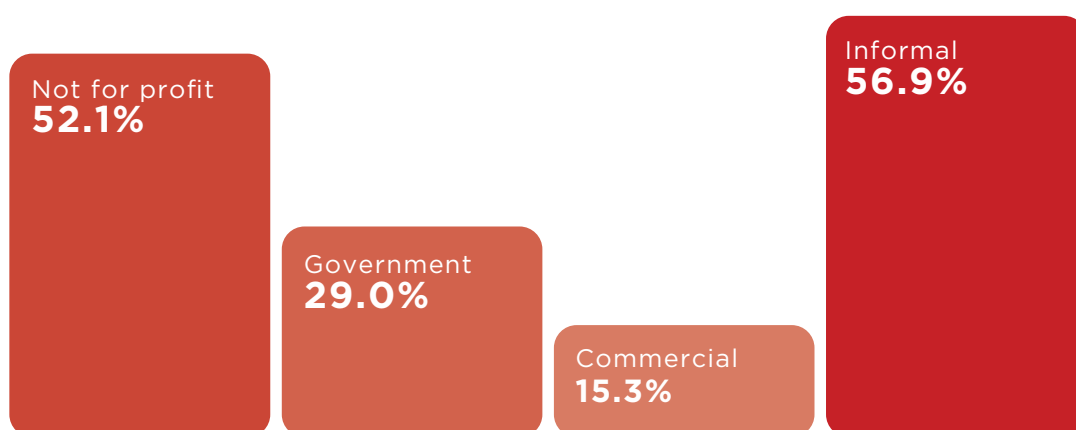
Interestingly, persons who volunteered for over twelve hours per month were more than likely to volunteer for a non-for-profit (NFP) organisation than those who volunteered less. The converse was true for government based volunteering, where persons who volunteer between zero and twelve hours per month are more likely to participate.

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;<sup>2</sup> however, it should not be assumed that this increase in volunteering continues perfectly as people continue to age.

Nevertheless, what we found is that age and gender are not statistically significant predictors of volunteering participation. More research is needed to assess the widely reported variance among these groups, as these variances are as likely to occur from a sampling error as they are meaningful departures from the norm. This finding also rebuts the oft-cited anecdotal presumption that young people (or 'Generation Y') are volunteering less than their elders.

Personal satisfaction derived from volunteering also significantly predicts the number of hours volunteered by individuals. For every dollar increase in satisfaction from volunteering, the total time volunteered per month increases by 2.5 seconds.

**Figure 3:** Population-wide volunteering by setting in Western Australia, 2014



<sup>2</sup>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).

Figure 4 also shows that Western Australians generally volunteer within arm's reach of their neighbours – significantly, 15.2 per cent of people do so from the comfort of their home.

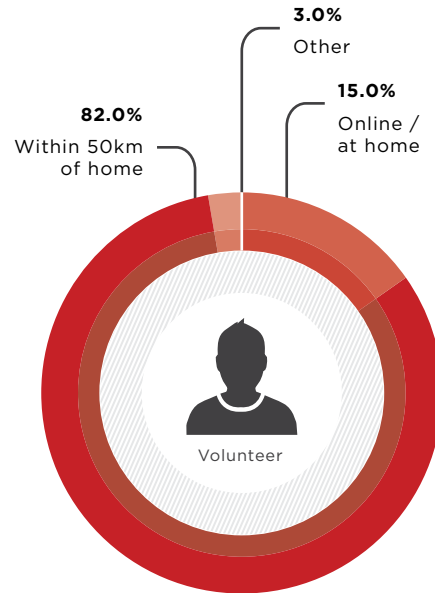
Findings of statistical significance were:

- Volunteers who donate more than 12 hours per month were more likely to extend their volunteering beyond the 50km mark; and
- 25-44 year-olds did a higher percentage of their volunteering at home or online.

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.

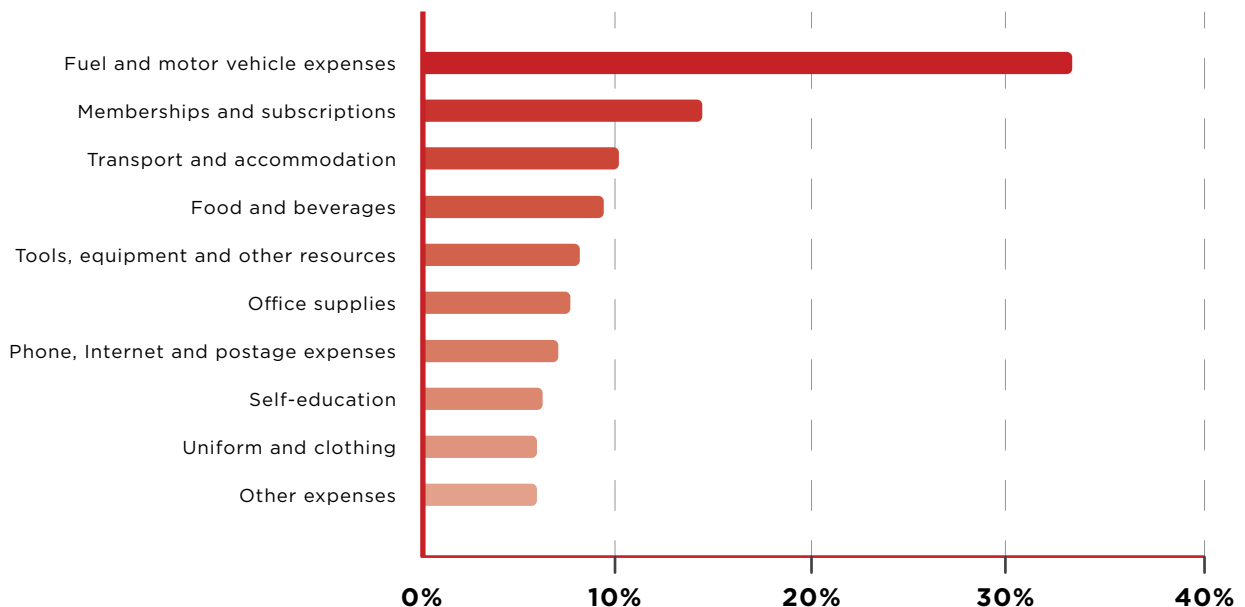
A satellite account is a standard developed by the United Nations to measure the size of economic sectors that are not defined as industries in the national accounts (UNWTO, 2002). Volunteering is one such sector not discretely defined by the ABS or, indeed, any central economic agency. Volunteering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

Figure 4: Volunteering by location in Western Australia, 2014



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 Western Australia, 2014





**ONLY 10.1 PERCENT OF VOLUNTEERS REPORTED BEING REIMBURSED FOR THEIR OUT-OF-POCKET EXPENSES**

The distribution in Figure 5 shows that individuals' expenditure on volunteering in Western Australia 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.

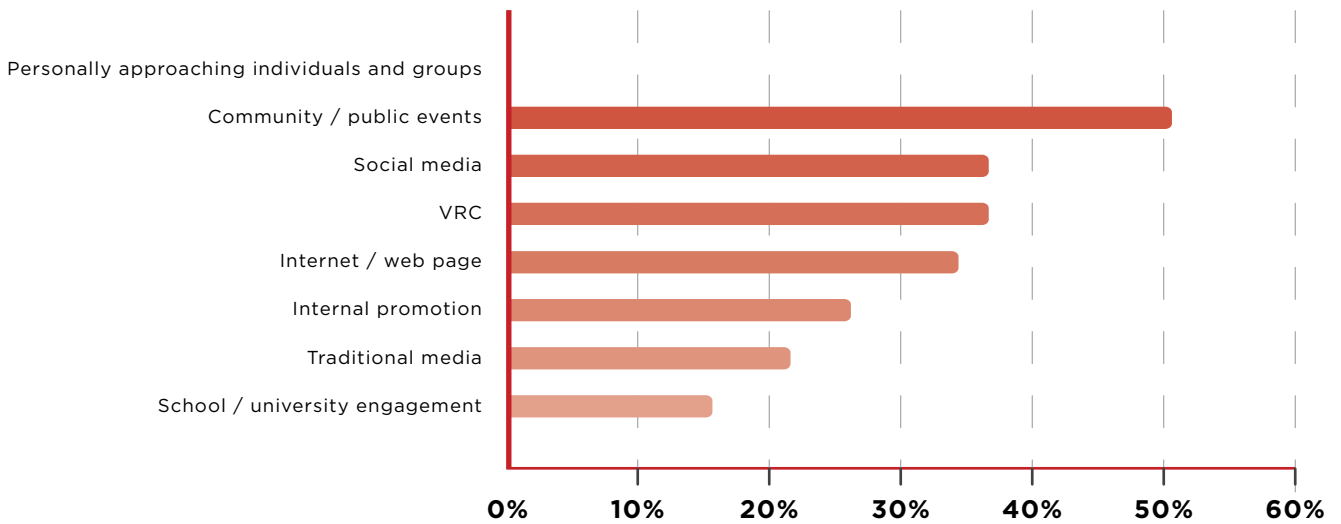
Interestingly, only 10.1 percent of volunteers reported being reimbursed for their out-of-pocket expenses; however, perhaps obviously, when reimbursed individuals were far more likely to make volunteering-related purchases.

# VOLUNTEER INVOLVING ORGANISATIONS (VIOs)

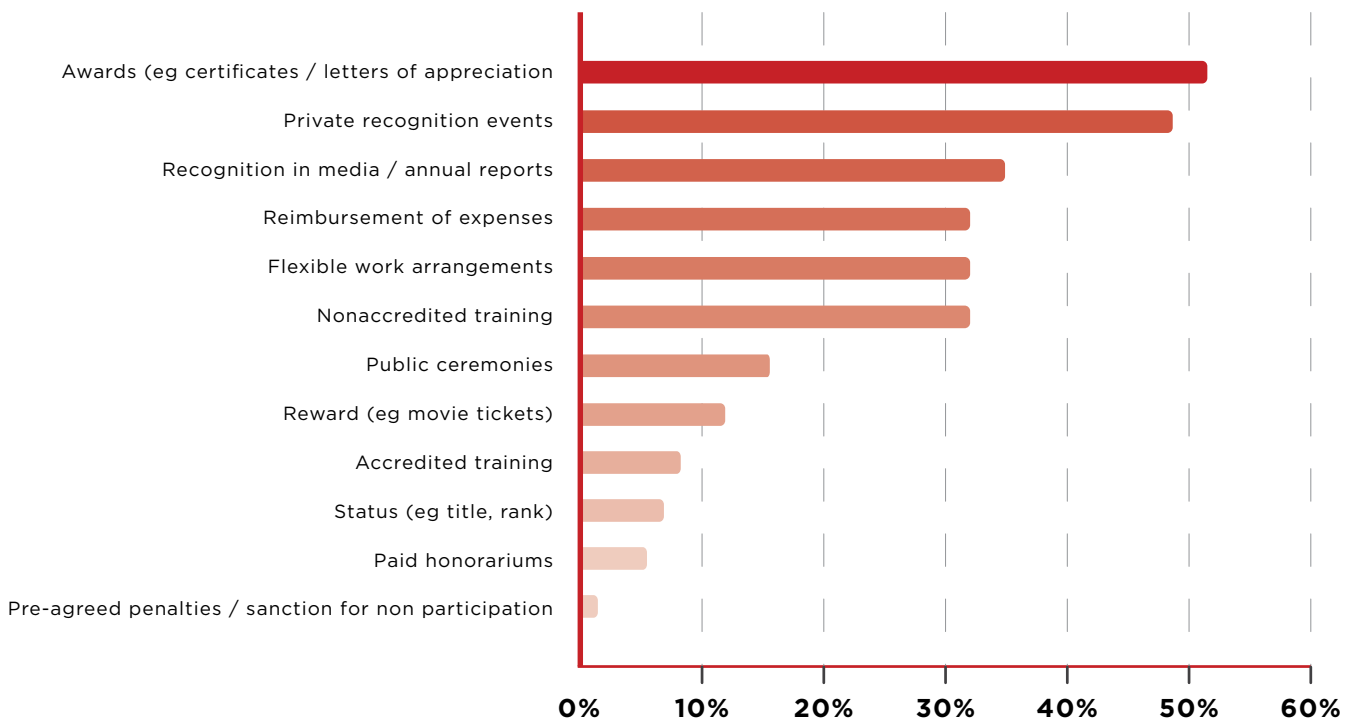
As a separate process, with the assistance of Volunteering WA, we undertook an online census of Western Australian VIOs over December, 2014 to February, 2015. From 670 organisational responses, we were able to use the telephone survey data on the total number of volunteers in Western Australia to estimate a VIO population of 5,098 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 2.8 recruitment and 3.9 motivation methods in complement, suggesting a limited reliance on multi-channel strategies in the sector.

**Figure 6:** How VIOs recruit volunteers in Western Australia, 2014

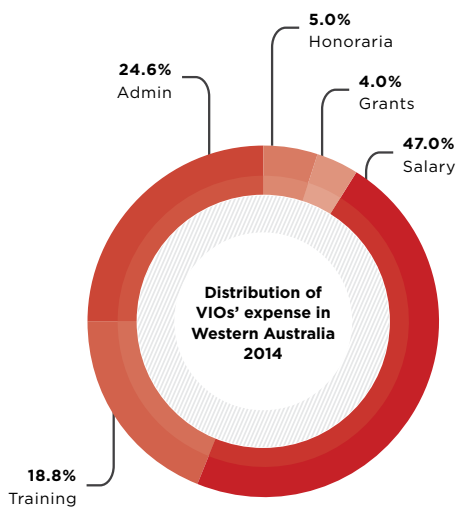


**Figure 7:** How VIOs motivate volunteers in Western Australia, 2014



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

**Figure 8:** Distribution of VIOs' expenses in Western Australia

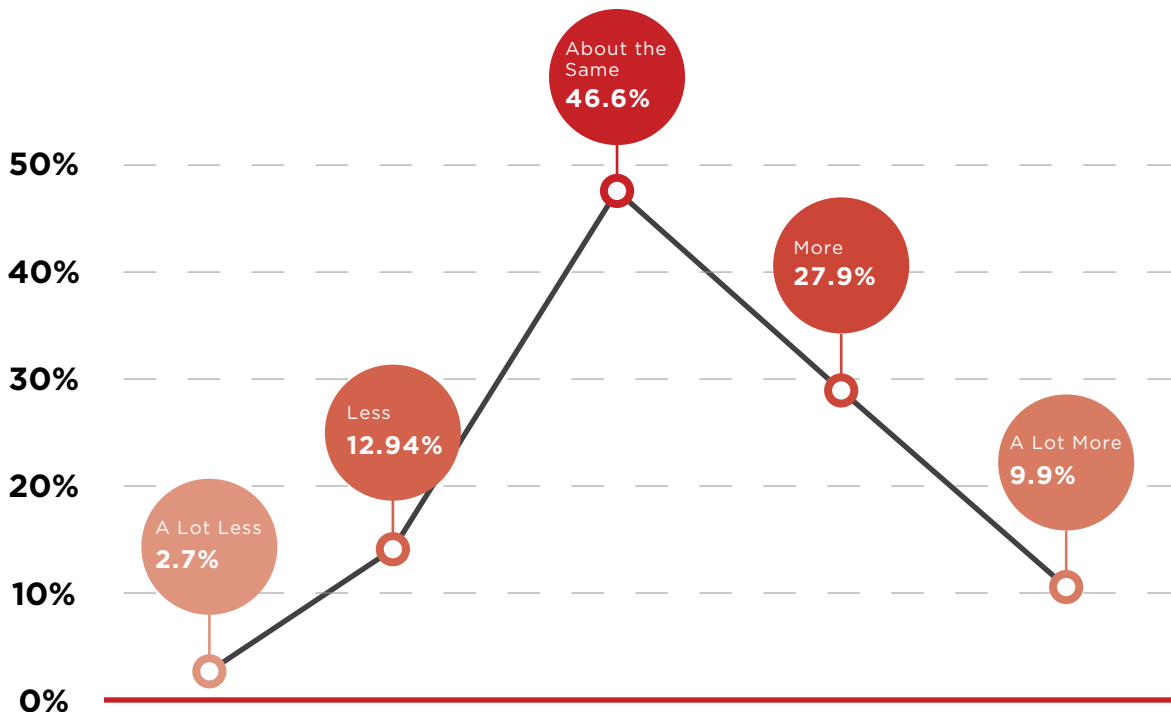


Responding VIOs were also quite confident in their forecasts of volunteer engagement in the coming three years. When asked, “In 3 years from now, are people more or less likely to be volunteering with your organisation?” the pattern in Figure 9 was observed.

This is critical to the future of volunteering in Western Australia, as responding organisations self-rated themselves as being 66.6 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.

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

**Figure 9:** Volunteering outlook over three years in Western Australia, VIOs as at 2014



A woman with glasses is shown in profile, writing on a whiteboard. The image is overlaid with a semi-transparent red filter. The number '5' is enclosed in a white circle.

5

CONCLUSION



Inputs that enable and facilitate volunteering in Western Australia 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 Western Australia and its related enterprises in 2014 is estimated to be \$8.6 billion. This includes direct costs of \$1.9 billion and opportunities 'lost' to individuals, investors and the community of \$6.7 billion.

Across the previously cited total of 315 million volunteer hours, the direct cost of volunteering to Western Australia is \$6.15 per hour, or \$27.50 when opportunity costs are included.

## DIRECT COST

**The direct costs cited here estimate the change in final demand attributable to volunteering in Western Australia 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 \$1.6 billion on their personal volunteering in Western Australia in 2014. According to VIOs, \$345 million was reimbursed, leaving individuals with a net cash outflow of \$1.2 billion.

The sum of VIO expenditure on volunteer management was reported to be \$0.7 billion, including the aforementioned reimbursements. Therefore the sum of direct costs attributable to volunteering — the change in final demand — is estimated to be \$1.9 billion in Western Australia 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 Western Australia. 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 COST

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 Western Australia, 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 Western Australia, 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 Western Australia 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 \$6.7 billion. The opportunity lost through the private purchases that enable volunteering is \$11.7 million, and the opportunity cost of government tax exemptions to NFP groups is \$35.5 million.

The gross cost of the opportunities diverted to volunteering in Western Australia in 2014 is therefore estimated to be \$6.7 billion.

## 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

### **THE GROSS COST OF THE OPPORTUNITIES DIVERTED TO VOLUNTEERING IN WESTERN AUSTRALIA IN 2014 IS THEREFORE ESTIMATED TO BE \$6.7 BILLION**

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 35.0 per cent marginal rate of tax (Warburton and Hendy, 2006). The hourly rate is also weighted to reflect the composition of the

.....  
 Western Australian 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 315 million hours donated to the Western Australian community by volunteers in 2014 came at an opportunity cost to participants of \$6.7 billion.

**Table 2:** Opportunity cost of labour in Western Australia, 2014

	Full-time WA	Part-time WA	Total Population	Full-time \$/hr	Part-time \$/hr	Weighted Average	Less 35% MTR
<b>15-19</b>	21,149	48,816	164,401	\$18.24	\$12.09	\$5.94	\$3.86
<b>20-24</b>	103,491	30,775	190,089	\$27.09	\$25.34	\$18.85	\$12.25
<b>25-34</b>	207,474	48,094	431,553	37.98	\$34.36	\$22.09	\$14.36
<b>35-44</b>	222,034	82,568	367,334	\$45.73	\$41.53	\$36.98	\$24.04
<b>45-54</b>	251,425	90,075	339,077	\$45.53	\$41.72	\$44.84	\$29.15
<b>55-59</b>	109,097	35,992	148,988	\$42.31	\$45.56	\$41.99	\$27.29
<b>60-64</b>	50,693	32,743	128,438	\$42.97	\$41.72	\$27.60	\$17.94
<b>65+</b>	26,336	25,637	303,115	\$40.88	\$34.36	\$6.46	\$4.20

### 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.

$$\text{Volunteering opportunity cost} = I \times r$$

$I$  = 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)  
 $\pi$  = 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 Western Australia in 2014 is approximately \$5.5 million.



**GROSS COST OF THE OPPORTUNITIES DIVERTED TO VOLUNTEERING BY INDIVIDUALS AND VIOs IN WESTERN AUSTRALIA IN 2014 IS APPROXIMATELY \$5.5 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 30.0 per cent (ATO, 2012) is applied to the reported turnover of the NFP organisations. The total reported 'profit' of the NFP VIOs in Western Australia in 2014 was \$118 million, which results in forgone tax revenue of approximately \$35.5 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.

**FORGONE TAX REVENUE  
OF APPROXIMATELY \$35.5  
MILLION**



6

# CAPITAL





In order to quantify the economic, social and cultural value of volunteering to Western Australia, it is first necessary to consider the concept of capital as it relates to the resources available to organisations and communities, and their capacity to utilise them.



# CAPITAL

The term 'capital' is most often associated with its neo-classical use in economics, where capital and labour are the most common inputs in the production of goods and services.

Yet to fully understand and quantify the economic, social and cultural value of volunteering to Western Australia, a more holistic perspective of capital is needed which is inclusive of human and cultural resources. The study of capital from a multidisciplinary perspective highlights its potential as a lens through which we can view its value to organisational, community and economic activity. Indeed many forms of capital have now been identified as potential resources which can be drawn from.

These forms include, but are not limited to:

- *Aesthetic capital* (Anderson, Grunert, Katz, & Lovascio, 2010)
- *Cultural capital* (Bourdieu, 1993; Johnson, 2006)
- *Economic capital* (Laeven & Goovaerts, 2004)
- *Erotic / sexual capital* (Hakim, 2010; Michael, 2004)
- *Human capital* (Marx, 1859; 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)

While capital has strong grounding in the resource-based perspectives of economics, sociologists have also explored the existence of four basic forms of capital (social, symbolic, human and financial) to explain resources and capabilities which determine the class and power structures of society (Bourdieu, 1986; Bourdieu & Wacquant, 2013). Other forms of capital, including health and psychological capital, have been posited as adaptations to the theory which relate further to the resources of people and organisations, and have the potential to be activated for the benefit of the community.

An interesting point of difference in the literature is the existence and value of potential value in stored or unrealised financial capital. For example it is debated at what point there is capital in a tree, until it is owned, felled, milled, turned into furniture or sold. The same argument exists in relation to human capital, as to the value of capital held in employees, or volunteers, who possess skills and knowledge that are un-used, or ignored. In this regard, this study considers the concept of capital to refer to the potential stored in an entity that can be either drawn down or employed in perpetuity.





Therefore the following conceptual statement is used to guide this study:

Capital created by volunteering refers to the potential of individuals to utilise their own resources and capabilities for the mutual benefit of the volunteer and the community. The capital can be created within either informal or formal contexts.

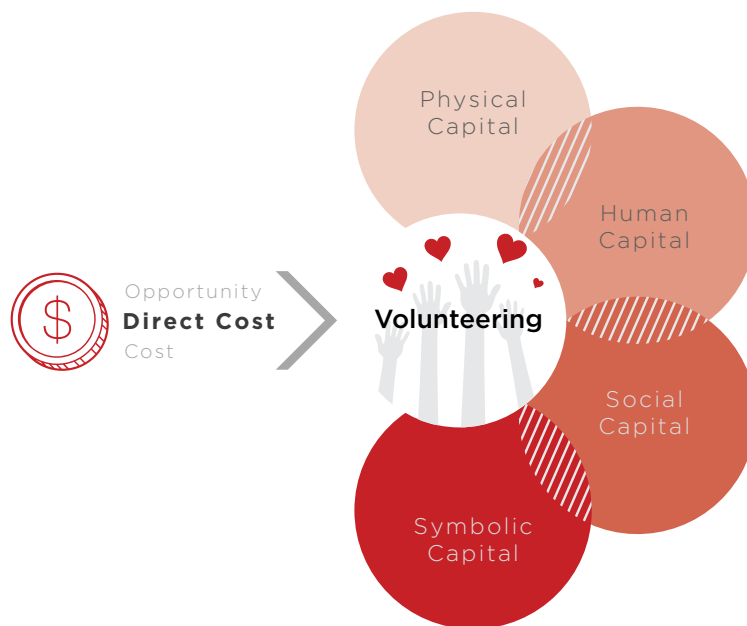
The capital enabled by volunteering is understood here to be a non-fungible attribute that accrues discretely within individuals, and collectively in the community and VIOs. It is only when citizens collectively express their capital that its effect can be quantified and reconciled with costs to arrive at estimates of value. Importantly, users should be mindful that this capital can theoretically 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 (Harrison, 2006; Whittaker & Holland-Smith, 2014; Winograd, 2014)).

Economic expressions of this capital will be unique to the social setting (in this case, Western Australia), 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 Western Australia 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 proposed definition of volunteer capital is not intended to rebut alternative descriptions of volunteering capital (see 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.

# FORMS OF CAPITAL AND VOLUNTEERING

The discussion that follows reviews the extant literature on the relationship between volunteering and capital, isolating references to the value provided to individuals, communities and VIOs. The discussion centres upon the main forms of capital that are central to determining the value of volunteering to Western Australia. As previously mentioned, the focus is on physical, human, social and symbolic capital.



# 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 (Spaij, 2009). In this instance, physical capital refers to the physical assets and infrastructure produced and maintained by Western Australia's volunteering sector.

In every sense these assets are extensive and go beyond the saleable goods and services volunteering creates to include the venues and sites 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 a sense of belonging and/or place. Consider the ownership felt towards scout halls, sporting clubs and other community owned assets by the volunteer groups which sustain them. Volunteering also builds historic continuance, exploiting under-utilised capacity and creating utility of equipment and infrastructure where none might otherwise exist. Other expressions of physical capital include consumables such as volunteers' equipment, accommodation, and transport services. Consumption of these is increased through volunteering and therefore attributable to the activity.

Volunteering can also have a positive impact on the natural environment, open-air areas, public spaces and cultural assets, thereby enhancing the physical capital of a community or city. 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. As described further below, much of the physical capital would lie dormant without the human capital needed for its activation.

# HUMAN CAPITAL

Human capital is derived from the competences, tacit knowledge, skills, education and training of people. The Organisation for Economic Cooperation and Development (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” (OECD, 2001).

## HUMAN CAPITAL IS THE SUM OF PSYCHOLOGICAL CAPITAL, KNOWLEDGE CAPITAL, AND PHYSICAL HEALTH



Its relationship to volunteering is twofold: volunteers can impart human capital to a volunteering activity through the utilisation of their own skills and knowledge; or equally they can receive improvement to their own capabilities. The value of volunteering is extended as volunteers can improve their own set of skills and take that knowledge back to their social network, household or workplace. In this sense volunteering achieves significant mutual benefit through the development of human capital.

However a broader concept of human capital is often used to encapsulate other non-cognitive skills and attributes which can contribute to well-being and 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, sense of purpose, hope, optimism, and resilience can be amassed in the individual and converted into commercial gain (Luthans, Avolio, & Yousseff, 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 & Yousseff, 2004). Indeed the work of many volunteers is in providing hope and optimism to others in the community who have been affected by disaster, loss and economic hardship and in turning those people back towards prosperity.

The value of this type of capital is hardest to quantify, and yet 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 for both those volunteering and the recipients (Bathini & Vohra, 2014; Brown, Hoyer, & Nicholson, 2012). Further it was found that 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 (Helmke & Govindan, 2007). This is an important aspect in terms of the mutual benefits of volunteering.

Perhaps the most valuable aspect of psychological capital is the 'sense of purpose' which is commonly developed through volunteering (Bradley, 1999). In a recent study of volunteering in Australia the two things respondents indicated they value most about their volunteering experiences are:

- the difference they make to the community; and
- the sense of purpose it gives them (Volunteering Australia, 2011).

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The sense of purpose provided to volunteers is also related to an improved sense of identity, and even a leisure career (Stebbins & Graham, 2004).

Hope, too, is a mutual benefit 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; Oliver, Collin, Burns, & Nicholas, 2006).

Within volunteering the combination of psychological capital with skills and knowledge creates even greater value to the volunteer activity.



**WITHIN VOLUNTEERING THE COMBINATION OF PSYCHOLOGICAL CAPITAL WITH SKILLS AND KNOWLEDGE CREATES EVEN GREATER VALUE TO THE VOLUNTEER ACTIVITY.**

## KNOWLEDGE CAPITAL

Knowledge capital relates to the information and skills of volunteers, and also includes their experience with group processes and on-the-job learning.



Knowledge capital may be brought into the VIO with a new member, or imparted to the volunteer through their volunteer activities and training. In this sense knowledge capital also refers to the education and training involved in volunteer

activities. Seniors are particularly well regarded as volunteers in this sense, with an abundance of human capital they have expertise accumulated over a lifetime of paid work and social interaction (Mutchler, Burr, & Caro, 2003).

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).

### THERE IS EVIDENCE THAT THE VALUE OF KNOWLEDGE CAPITAL COULD BE FURTHER ENHANCED WITH THE PROVISION OF MORE VOLUNTEER TRAINING.

In its two forms (technological and experiential) knowledge capital acquired through volunteering has long been understood to be transferable to other domains, including the workplace (Janey, Tuckwiller, & Lonquist, 1991; Thomas, 2001), and has led to enhancement to an individual's paid employment prospects (Day & Devlin, 1998).

It is also argued that volunteers gain tacit knowledge in the codes of ethics that exist within a VIO. Each VIO with its own culture of integrity and ethical conduct might therefore be seen as both a microcosm of social morality and

Volunteering in the education sector in Australia has a high participation rate of 17 per cent from both families of students and the wider community (ABS, 2006). Clearly this improves the knowledge capital of students at schools, as well as the human (and social) capital of volunteers to provide mutual benefit. However volunteers involved in education are also found in other environments such as heritage, sport, tourism and arts, as well as in environmental contexts. For example through the efforts of volunteers, communities learn about and address environmental issues such as waste management and tree planting (Measham & Barnett, 2008).

Yet there is evidence that the value of knowledge capital could be further enhanced with the provision of more volunteer training.

## PHYSICAL HEALTH

Physical health is defined here as the embodiment of the health, wellbeing, and cognitive and other physical benefits, such as stamina and dexterity, that would ordinarily ensue from participation in volunteering.



There is substantial evidence to demonstrate the physical benefits of volunteering across many of these facets. 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.



# 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).

Its value is measured using both qualitative and quantitative research to examine individuals’ trust, reciprocity, inter-personal networks and civic engagement (Dudwick, Kuehnast, Jones, & Woolcock, 2006; Grootaert & Basterlaer, 2002; Putnam, 2002). As with all forms of capital it is important to examine volunteering activities as a catalyst for mobilising resources into purposive action (Lin, 2001) where social capital can be utilised to facilitate coordination and cooperation within society for mutual benefit (Putnam, 1995).

## THROUGH VOLUNTEERING SOCIAL CAPITAL CAN DEVELOP OR REINFORCE SOCIAL TIES BETWEEN KNOWN GROUPS OR INDIVIDUALS (BONDING CAPITAL).

As such social capital can simply exist within existing community or cultural structures, or be developed through structured programs such as those delivered by VIOs. Recognising the explicit link between social capital and volunteering, governments have sought to incorporate its development as a means to strengthen communities both within Australia (Nicholson & Hoye, 2008; Tittensor, 2007) and abroad (Adams, 2014; Culum & Forcic, 2008).

Through volunteering social capital can develop or reinforce social ties between known groups or individuals (bonding capital). This acts to reinforce the values and attitudes of the known group, and contributes to the fact that 61.8 per cent of volunteers have immediate family members who volunteer. Australian volunteers often return back to the same known VIO or group for future volunteer activities, where these tend to be relatively homogenous groups such as families and dense, or tight-knit networks.

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Alternately volunteering can assist with bridging social capital – relating to wider ties across heterogeneous groups which may be different in ethnicity or religion (Blackshaw & Long, 2005; Onyx & Bullen, 2000). This can occur when different VIO groups work together in times of crisis, or celebration at festivals or sporting events. While there is evidence that volunteering can contribute to both, there is a strong tendency for volunteers to work with known VIO'S, groups and individuals (Mackellar & Jamieson, 2014).

While the mutual benefit for both volunteers and recipients is clear, 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, which in some cases may 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 exclusive and inequitable. 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

**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.

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 many VIO hierarchies, which in turn are replete in volunteering. For older Australians as retirees, volunteering in

**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).**

In the context of this report, certain voluntary occupations bring with them a heightened social profile and identity (Bradley, 1999). 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 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

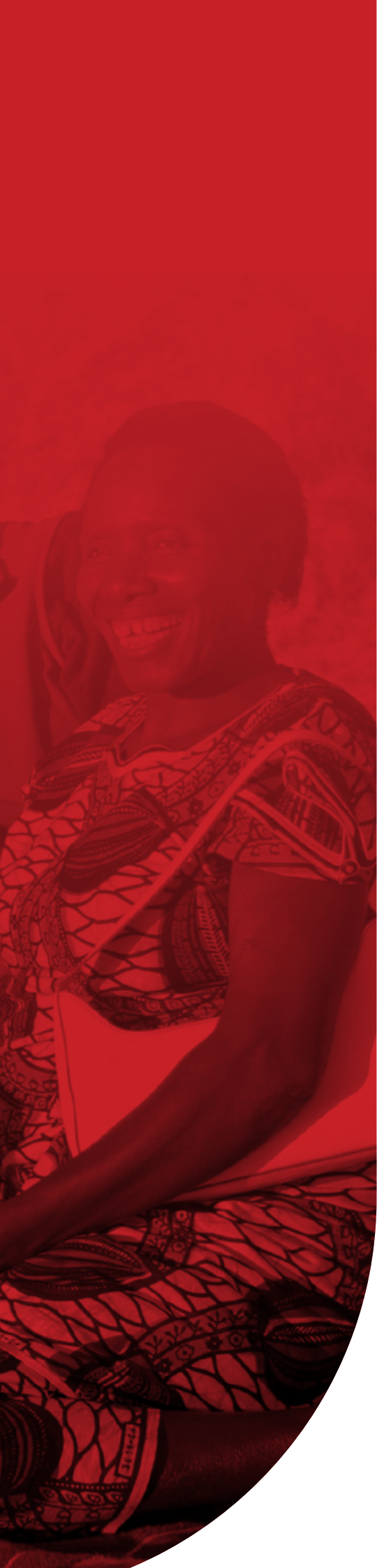
new organisations can assist in defining their new identity, and provide activities to reflect their new status in the community (Bradley, 1999). Indeed, the talismanic quality of symbolic capital – the factor that inspires others to emulate their heroes – requires a degree of proximity to be effective (Bandura, 1971; Payne, Reynolds, Brown, & Fleming, 2003).

Thus, the catalytic potential symbolic capital to volunteering 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 Western Australia 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 Western Australia enabled at least \$39.0 billion worth of such benefits across the community.

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## CIVIC BENEFITS



**The cost of replacing volunteers is conservatively estimated to be \$17.8 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 Western Australia is also estimated to have enabled in the order of over 26,000 full-time and part-time jobs to the value of \$1 billion, and taxation revenue to all tiers of government of \$410 million.

Beyond this \$19.2 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.

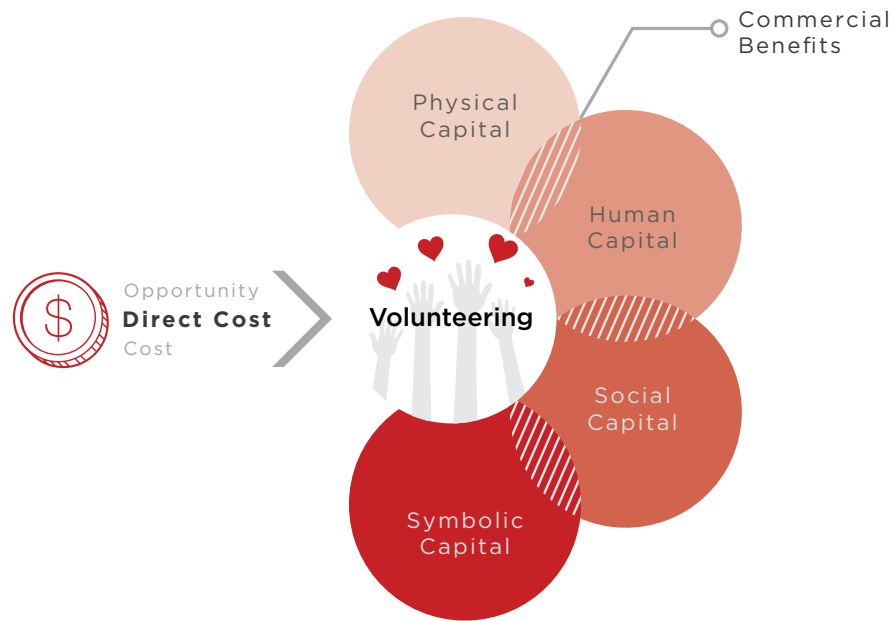
## INDIVIDUAL BENEFITS

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 \$9.9 billion attributable to volunteering in Western Australia.

**THIS STUDY UNIQUELY IDENTIFIES  
HERE A 2014 WELL-BEING  
SURPLUS OF \$9.9 BILLION**

# 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 \$2.3 billion brought about by the volunteering expenditure of consumers (Direct Costs) increases output in the Western Australian economy by \$3.5 billion. The increase in wages, rents, profits and taxes associated with the increase in production motivated by volunteering in Western Australia is estimated to have delivered \$441.6 million of additional value, or profit, to all Western Australian producers (compared to an alternative case in which all the expenditure enabled by volunteering ceased).

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 percent.

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 \$9.4 billion 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 Western Australia in 2014 was estimated to be \$9.8 billion.

**THE SUM OF BENEFITS RETURNED TO BUSINESSES WAS ESTIMATED TO BE \$9.8 BILLION**

# INPUT/OUTPUT MODELLING

The value of expenditure associated with volunteering in Western Australia 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 Western Australian 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.





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The same 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 ABS 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:

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

$LV_E$  = vector of volunteering expenditure

$\Delta O$  = change in total output

$X$  = transaction table of intermediate demand

$C$  = table of induced consumption demand

As previously noted, the producers of volunteering in Western Australia spent a combined amount of \$1.9 billion 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 Western Australia has an economic impact that includes a combination of increased output by industries directly 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 Western Australian Regional Input-Output Matrix (RIOM) model. This model is derived from the 2008-09 Western Australian 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 Western Australia 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 Western Australian economy (the government sector is not closed).
- Where demand results in importation of goods or services from outside of Western Australia (interstate or overseas), no further impact is assumed on the economy.

The estimated economic impact of direct volunteering in Western Australia 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 \$1,939.8 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 Western Australian 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 Western Australian economy is therefore \$351.1 million, or 1.3 per cent of Western Australia's Gross Domestic Product (GDP) of \$27.2 billion (ABS, 2014c).

**Table 3:** The economic impact of volunteering in Western Australia, 2014 (\$million) part 1

	Demand Expenditure (A)	Output Impact (B)	Gross Value Added (C)	Producers' Surplus (D)
H1	\$168.8	\$335.5	\$138.8	\$38.1
J1	\$116.6	\$164.6	\$91.2	\$54.6
Q1	\$694.8	\$1,327.5	\$755.6	\$66.3
G1	\$286.1	\$551.8	\$281.2	\$68.5
I1	\$673.6	\$1,182.6	\$616.5	\$214.2
<b>TOTAL</b>	<b>\$1,939.8</b>	<b>\$3,562.0</b>	<b>\$1,883.4</b>	<b>\$441.6</b>

Western Australian 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 \$441.6 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 \$441.6 million is distributed amongst all Western Australian firms who contribute intermediate or final goods and/or services that are consumed as a result of volunteering in Western Australia, 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 Western Australia are identified.

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 Western Australia are identified.

The first is a traditional measure of input productivity. This is the financial return to producers that volunteering in Western Australia generates on the investments of capital, labour, energy, materials and services. It is estimated in the previous section that this was equal to \$441.6 million in 2014, or a return of 9.4 percent of the \$6.7 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 Western Australia 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.

**THUS THE EXTENT TO WHICH ATTENDANCE VOLUNTEERING IN WESTERN AUSTRALIA IMPROVED THE PRODUCTIVITY OF INDIVIDUALS IN 2014 (A BENEFIT ENJOYED BY THEIR EMPLOYERS) IS ESTIMATED TO BE \$9.4 BILLION.**

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 Western Australia 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.



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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 45.0 per cent positive impact on their productivity, whereas 3.7 per cent felt that it had an average 29.0 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 Western Australia improved the productivity of individuals in 2014 (a benefit enjoyed by their employers) is estimated to be \$9.4 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.

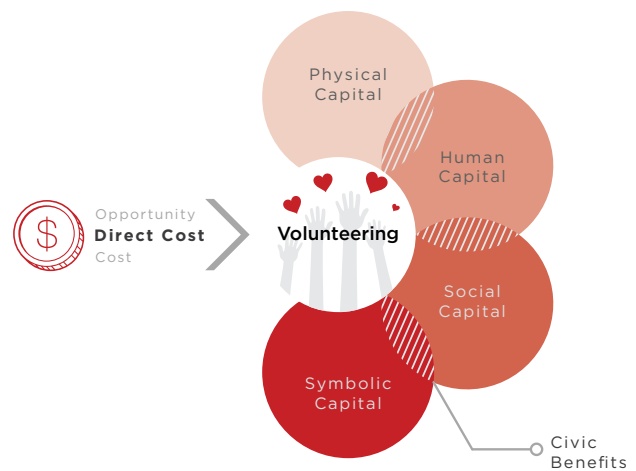
# CIVIC BENEFITS

For the purposes of this study, a civic benefit is a contribution made by having volunteering in Western Australia 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 Western Australia is estimated to generate in the order of 26,359 jobs, of which 16,792 are full-time. This realises a wage benefit of \$1.0 billion 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 \$409.1 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 \$17.7 billion, meaning that Western Australia enjoys at least \$19.2 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 Western Australia, as well as the costs potentially avoided by our civil systems of health, criminal and social justice.



**WESTERN AUSTRALIA ENJOYS AT LEAST \$19.2 BILLION IN CIVIC BENEFITS FROM VOLUNTEERING IN THE STATE.**

In Table 4, the expenditure associated with volunteering is estimated to generate in the order of 26,359 jobs, 16,792 of which are full-time. This is a wage-equivalent benefit of \$1 billion (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 \$409.1 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 Western Australia, 2014 (\$million) part 2

	FT Employment (E)	PT Employment (F)	Wages Impact (G)	Taxes Impact (H)
H1	2403	1301	\$69.0	\$31.8
J1	561	409	\$26.0	\$10.7
Q1	12738	8329	\$504.4	\$184.9
G1	4898	2531	\$152.5	\$60.2
I1	5759	4223	\$280.8	\$121.5
<b>TOTAL</b>	<b>26359</b>	<b>16792</b>	<b>\$1,032.7</b>	<b>\$409.1</b>



# 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 315 million hours to Western Australia 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 1,002 Western Australian residents, not one respondent volunteered in a single sector as a full-time equivalent employee. It is thus wholly inappropriate to price volunteers' labour

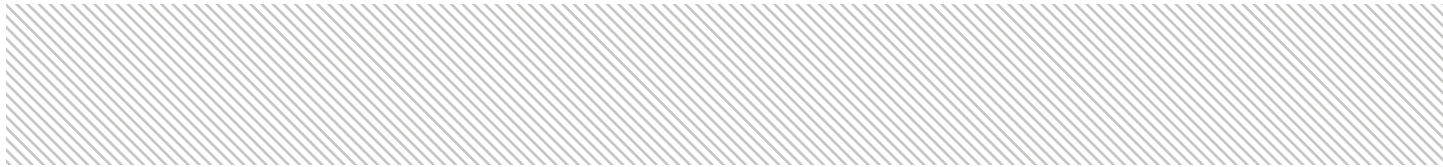


at the full-time market wage; for even if the sum of volunteer work could be levelled into full-time work, the unique capital every volunteer brings cannot be so trivially reduced.

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 Western Australia, 2014

	Average Hours / year	Population WA	Volunteering in WA	Replacement cost / hour	Total \$'m
15-24	121.9	344,648	99.5%	\$23.04	\$962.4
25-34	175.3	416,131	99.5%	\$41.24	\$2,990.0
35-44	176.5	362,519	99.5%	\$49.84	\$3,171.0
45-54	197.7	339,542	99.5%	\$50.07	\$3,343.1
55-64	226.7	280,824	99.5%	52.54	\$3,326.5
65-74	262.6	188,918	99.5%	\$41.24	\$2,034.7
75+	268.6	140,412	99.5%	\$41.24	\$1,547.1

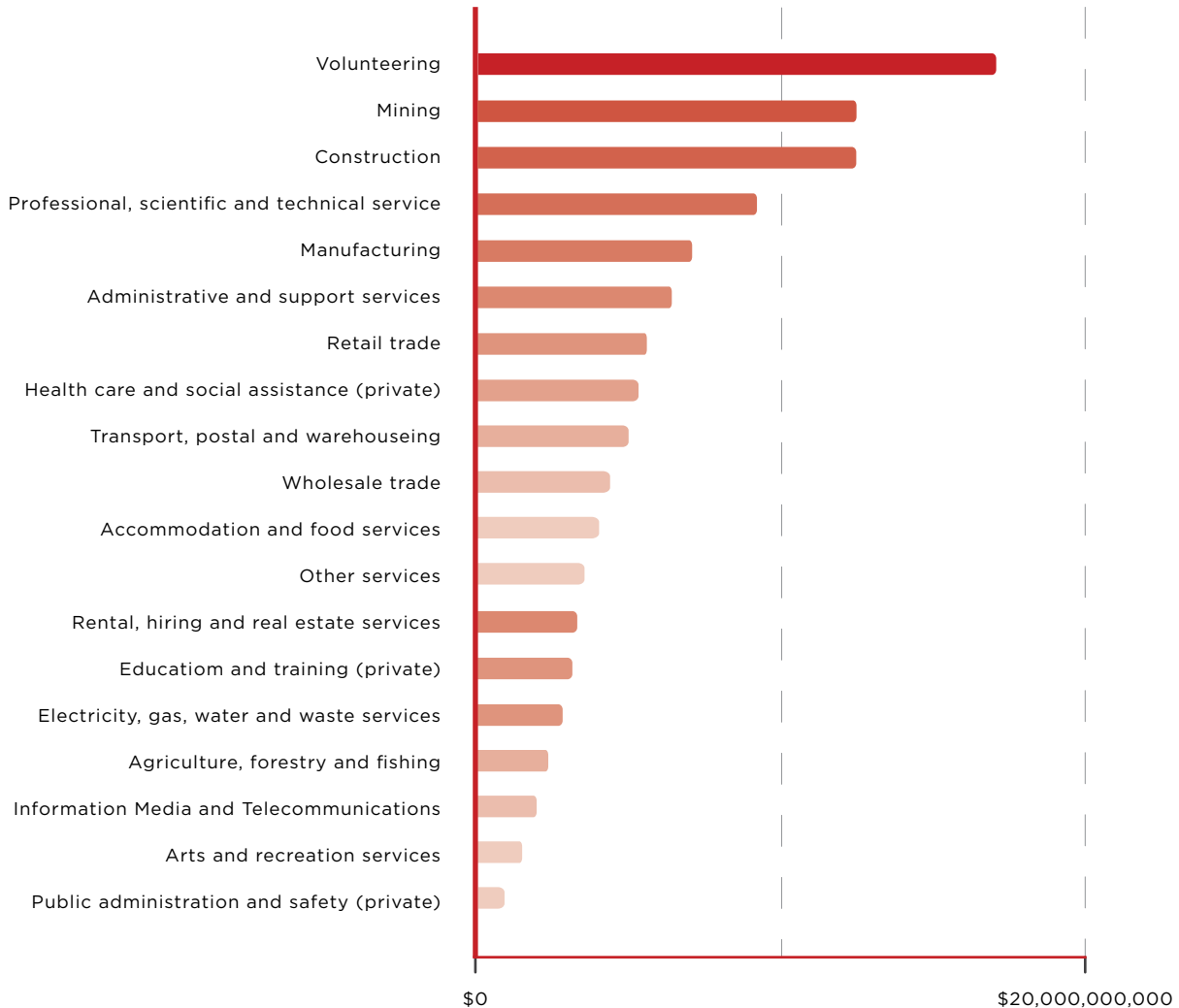


Using median wage data for each age cohort; allowing an additional 20.0 per cent for superannuation, payroll and administration costs; and, discounting for volunteering that occurs outside Western Australia, it is found that the cost to the community of replacing volunteers' labour in Western Australia would be \$17.4 billion. Add to this the direct costs of \$382.1 million that VIOs incur in the pursuit of their volunteering, and this figure blows out to \$17.8 billion.

This amount is equal to 62.0 per cent of the Western Australian state government's entire budget for

2014 (Department of Treasury and Finance, 2014). Salamon, Sokolowski, and Haddock (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 Western Australian employees by industry (ABS, 2014b), using the ABS method it can be seen in Figure 10 that on a labour cost replacement basis, volunteering is Western Australia's largest industry.

**Figure 10:** The compensation of Western Australian 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 Western Australia 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 7,891 tourists visited Western Australia for the purpose of volunteering. Their average stay of 40.2 nights was significantly higher than the average visitor stay of 7.7 nights

(Tourism Western Australia, 2014). On this basis, volunteer tourism represents further potential for the State.

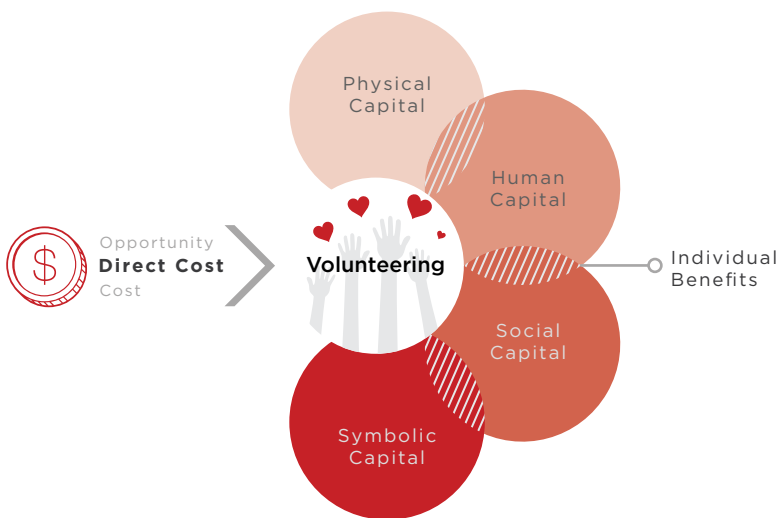
Philosophers from Aristotle to Dworkin (2006) have also argued that a robust democracy depends on the active participation of its citizens. The logic has been that for a government to be truly representative, as many constituents as possible must be connected and contributing to the social discourse. 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 recommended as a direction for future research.

**IN THE LAST 12 MONTHS APPROXIMATELY 7,891 TOURISTS VISITED WESTERN AUSTRALIA FOR THE PURPOSE OF VOLUNTEERING.**

# 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 volunteering?



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 \$1.2 billion 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?

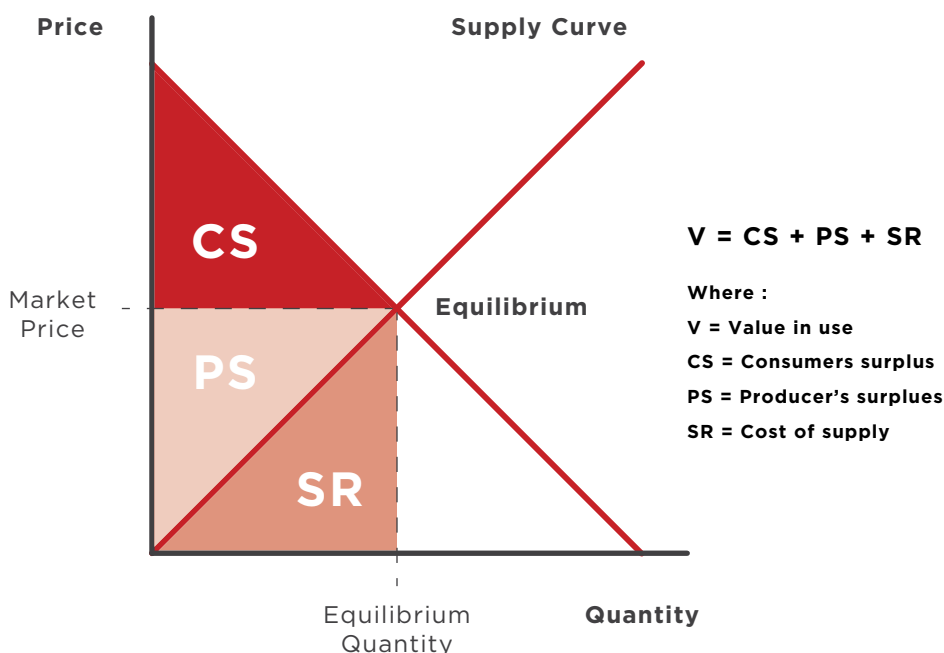
Determining the benefits to individuals associated with their engagement involves adding their revealed preferences to the contingent value of their volunteering consumption. In this section it is found that Western Australians recognise a well-being surplus of \$9.9 billion that was directly attributable 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 11:** Use value



It is known from the survey of volunteers that the market price for volunteering-related goods and services consumed in Western Australia by individuals (households) in 2014 was \$1.2 billion. Figure 11 shows that this market price is the sum of the producer's surplus and the cost of supply.

income. 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

**THE VALUE OF VOLUNTEERING TO INDIVIDUALS IN WESTERN AUSTRALIA, BEING THE SUM OF MARKET PRICE AND CONSUMER SURPLUS ACROSS USERS AND NON-USERS, IS THEREFORE ESTIMATED TO BE \$8.3 BILLION.**

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.

estimate of average WTP for volunteers of \$3,982.50 in 2014, or approximately \$76 per week. With a standard error of \$216.50, there is a 95.0 per cent probability that the true average WTP lies in the interval \$3,558.20 to \$4406.80. Among the 79.5 per cent of the population who volunteered in Western Australia in 2014, this allows for a gross consumer surplus of \$6.7 billion.

Overall, 90.3 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 Western Australia in this way.

Beyond this, the 88.1 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 \$1.6 billion.

However, there was evidence to suggest some people exaggerated their preferences in reporting their WTP. Of the 1,002 survey respondents, 312 people (or 31.1 percent of our sample) reported a WTP greater than 10.0 per cent of their income, a significant deviation from the norm. Therefore to control for respondents possibly attempting to influence results, WTP was capped at 10% of

The value of volunteering to individuals in Western Australia, being the sum of market price and consumer surplus across users and non-users, is therefore estimated to be \$8.3 billion.

### So what?

The particular benefits that individuals and the community receive from volunteering in Western Australia 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 Western Australia'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 Western Australia. 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.



A photograph of a woman on the left and a man on the right, both laughing heartily. The woman is wearing a dark polo shirt with a logo. The man is wearing a firefighter's uniform with a name tag that reads "SIEVE" and "SANDAN UNIT". The background is slightly blurred, showing some foliage. The entire image is overlaid with a semi-transparent red filter.

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# VALUE OF VOLUNTEERING TO WESTERN AUSTRALIA





The value of volunteering to Western Australia across the entire community is the sum of the benefits enabled. This study estimates these to be worth \$39 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 analytic techniques.

**Table 6:** The Value of Volunteering in Western Australia, 2014 (\$million)

### Cost

Direct		\$	1,939.8		
Opportunity		\$	6,734.5	\$	8,674.3

### Benefits

#### Commercial

Producers' Surplus	\$	441.6		
Productivity Premium	\$	9,426.6	\$	9,868.3

#### Civic

Employment	\$	1,032.7		
Taxation Revenue	\$	409.1		
Labour	\$	17,756.9	\$	19,198.7

#### Individual

Volunteers	\$	8,279.7		
Others	\$	1,654.2	\$	9,933.9
			\$	39,000.8

Net Benefit				\$	30,326.6
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**Benefit : cost ratio** 4.5 : 1

On its own, \$39.0 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 Western Australia with the cost of inputs. It can be seen that for every dollar invested by the community, approximately \$4.50 is returned.

**EVERY DOLLAR INVESTED BY THE COMMUNITY, APPROXIMATELY \$4.50 IS RETURNED.**





# 10 CONCLUSION



The findings of this study largely speak for themselves. If you could absolutely guarantee an annual return of 450 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.



# CONCLUSION

**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 percent of Western Australians 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 Western Australia’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 Western Australia. 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 Western Australia. Future research is therefore encouraged in the following areas:

- Further, detailed analysis of volunteering in Western Australia 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 Western Australian 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 Western Australia 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 Western Australia.



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# APPENDIX





[Appendix 1 - Telephone Survey](#)

[Appendix 2 - Input/Output Models](#)



## APPENDIX I: TELEPHONE SURVEY OF WESTERN AUSTRALIAN RESIDENTS

### Volunteering Western Australia - Telephone Survey

To make sure that we have a good cross section of the community, I would firstly like to ask you a couple questions about yourself.

**Gender** Male 1 Female 2

**What is your age - are you** (read out)

<b>15 to 24</b>	1	<b>55 to 64</b>	5
<b>25 to 34</b>	2	<b>65 to 74</b>	6
<b>35 to 44</b>	3	<b>75+</b>	7
<b>45 to 54</b>	4	declined	7

**And over the last 12 months, was your approximate annual household income -** (read out)

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

**Region** Greater Perth 1 Other 2

### Survey

**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?**

Interviewer note: 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. How many hours did this involve in the last 12 months?** ..... hours

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

Interviewer note: 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 (included). 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.

nfp	A not-for-profit organisation, such as a sporting club, political party, church or charity?	yes/no
gov	For a government sponsored organisations; such as schools, hospitals, emergency services, land care groups and the like?	yes/no
com	For a private / commercial organisation; such as an aged care facility, festival or event?	yes/no
inf	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/no

If no to all of Q3a, only ask subsequent questions highlighted in blue

**3b. (if yes) Including travel time, actual volunteering, administration, and any online or other activities - on average, how many hours per month did you volunteer?**

nfp	A not-for-profit organisation, such as a sporting club, political party, church or charity?	.....hours
gov	For a government sponsored organisations; such as schools, hospitals, emergency services, land care groups and the like?	.....hours
com	For a private / commercial organisation; such as an aged care facility, festival or event?	.....hours
inf	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	.....hours

**3c. And in the last 12 months, what percentage of your volunteering was done...**

Online or from home	%
Within 50km of home	%
Somewhere else in WA	%
Somewhere else in Australia	%
In a developing country	%
In the rest of world	%

Interviewer note: 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.**

	<b>\$ spend</b>
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
* <i>details of other expenses</i>	

.....

**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?** \$.....

**5a. Have you made any donations of money to volunteer involving organisations in the last 12 months?**

**5b. (if yes) Approximately how much in total?** \$.....

**6a. So why do you volunteer?** *(unprompted)*

.....

.....

.....

**6b. How do you think volunteering benefits your community?** *(unprompted)*

.....

.....

.....

**7. What would you say are the things that prevent you giving (more) time as a volunteer?**  
*(unprompted - cap at 5 responses)*

- Limited time
- Work commitments
- Family commitments

- Travel
- Never been asked
- Lack of communication / information about volunteering
- No perceived benefit
- Lack of interest / don't want to
- Concern about level of commitment / work involved
- Too shy
- General health
- Age
- Disability
- Bad experiences with volunteering
- Perceived lack of skills or ability
- Don't know where to go / lack of information
- Worries about legal liability
- Employers discourage participation
- Poor facilities
- Preference for paid work
- No available volunteering
- Policies and practices of volunteering involving organisations
- Lack of appreciation
- Other
- No response

**8a.** *(Only ask Q8 if currently employed - otherwise go to Q9)*

**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 Q8)*

**8b. And to what extent is that - just an approximate percentage? .....** %

**9a. So do you value the benefits of volunteering?**

Y/N

**9b.** *(Only ask 9b if currently volunteering - otherwise go to Q9c)*

**Is the value of those benefits more than what you currently spend on your volunteering?**

Y/N

**9c. Ok, by how much? In other words - and this is entirely hypothetical - what might you be willing to pay over twelve months in order to keep receiving those benefits (whether they were gained through volunteering or some other activity)?**

Interviewer note: We are asking this to try and understand the extent to which people value the benefits of volunteering in the community above and beyond what they already give.

*If they say they can't place a price, is this because the benefits have no **value** or are **invaluable**? If no value, enter zero; if invaluable, probe harder.*

*You might use easy to price examples of other things they get a benefit from to get them started (eg a trip to the movies, a cup of coffee, an hour of their time); then get them to multiply it out from there.*

*If you still can't get them past the idea that benefits are not able to be priced, enter 9999999*

**10a. In 3 years' time, are you likely to be volunteering more, less or about the same?**

More 1      Less 2      No difference 3 (go to Q10)

**10b. And by how much - just an approximate percentage? ..... %**

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## APPENDIX 2: INPUT / OUTPUT MODELS

The principles of input-output (I/O) 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:

$$\text{Value Added}_i = \text{WSS}_i + \text{GOS}_i + \text{Indirect taxes}_i - \text{subsidies}_i$$

- So the value added by industry i is the sum of wages, salaries and supplements or compensation of employees (COE<sub>i</sub>) paid to labour, the gross operating surplus (GOS<sub>i</sub>) 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 some industries produce goods that are measured as part of another sector (for example the 'Other Industries' sector producing services 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.

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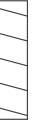
**STRUCTURE OF AUSTRALIAN INPUT-OUTPUT TABLES**

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

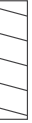
**Figure 16:** Quadrants of the transaction table

		<i>To</i>	
<i>From</i>			
	Column prefix	Row prefix	
	Agriculture Mining Manufacturing, etc. Construction Services	0101-10400 1100-1500 2101-3701 4101-4102 4501-9601	
	Intermediate uses (sub-total)		
	Compensation of employees Gross operating surplus and mixed income Taxes in products (net) Other taxes on production (net) Imports	P1 P2 P3 P4 P5	
	Primary inputs Australian production		
		<i>Intermediate Uses</i>	
		0101-0400 1100-1500 2101-3701 4101-4102 4501-9601	Agriculture, etc Mining Manufacturing, etc Construction Services
			QUADRANT 1 INTERMEDIATE USE
			QUADRANT 3 PRIMARY INPUTS TO PRODUCTION
			<i>Final Uses</i>
		Q1 Q2 Q3 Q4 Q5 Q6 Q7	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
			QUADRANT 2 FINAL USE
			QUADRANT 4 PRIMARY INPUTS TO FINAL USE
			<i>Final Uses (sub-total)</i>
			<i>Total supply (grand total)</i>

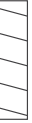
  



The shaded areas correspond to aggregates shown in the Gross Domestic Product Account.



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:

$$a_{ij} = \frac{X_{ij}}{X_i} \quad (1)$$

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:

$$x_{ij} = a_{ij}X_j \quad (2)$$

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:

$$X = AX + D \quad (3)$$

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  $D$ :

$$X - AX = D \quad (4)$$

$$X(1-A) = D \quad (5)$$

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

$$X = BD \quad (7)$$

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

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

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 10.0 per cent, 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 ( $X_i$ ) ratio for the industry in question. So the employment equation for industry 1 is found by multiplying (1) though by  $E_1/X_1$ . 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  $C$ ,  $c_{ij}$  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 we identify as  $FD$ . We describe this relationship in equation [0.1].

$$FD-D-CX$$

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

$$Y = AX + CX + FD$$

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

$$Y - AY - CY = FD$$

$$Y(1 - A - C) = FD$$

$$Y = (1 - A - C)^{-1}FD$$

$$Y = X = L \times FD$$

The solution vector  $B$  represent the output of industries as some multiple of final demand (FD) the multiple is the matrix  $(1 - A - C)^{-1} = L$ . 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 1 (Constant Returns to scale applies).
- There is no substitutability between factors of production (labour and capital).



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# GLOSSARY

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





VOLUNTEERING



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