The Economic Value of Volunteering in Tasmania

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EXECUTIVE SUMMARY

Volunteering is Tasmania’s eighth largest industry. It ‘employs’ more people than the hospitality, arts and recreation sectors put together; as well as being bigger than all of the agriculture, forestry, fishing and mining industries combined.

Importantly, because volunteers donate their labour in this way, every adult Tasmanian effectively ‘saves’ $1,710 per annum. In other words, if it were not for over one-third of all adult Tasmanians each giving (on average) nearly three-and-a-half working weeks of their time to various public organisations, then everyone would have pay this much in taxes or other contributions to enjoy the benefits enabled by volunteers.

In fact, volunteers made an effective contribution of $638.1 million to the Tasmanian economy in 2013. Relative to the volunteering output of the other Australian States and Territories, Tasmanian volunteers also made the largest contribution to their State in terms of both GSP and the total compensation (wages) of employees.

Yet this is only the tip of the iceberg.

This study only narrowly considers Tasmanians over 18 years of age who volunteer in organisational settings. It conservatively applies very basic estimates of the market replacement cost of these volunteers with fulltime equivalent employees. A wide range of social benefits are overlooked, and perhaps more importantly, this study does not consider the costs incurred by the community in the achievement of these benefits.

It is argued here that only when a comprehensive cost-benefit analysis of the socio-economic impacts of volunteering to Tasmania as a whole is completed can the true value of volunteering be understood, and robust decision-making be fully informed.
**INTRODUCTION**

The Social Inclusion Unit was established in March 2008 to progress the Tasmanian Government’s social inclusion agenda. In support of one its key objectives – to provide quality policy advice and support to the Premier, Cabinet, and the Parliamentary Secretary – the Unit regularly undertakes research and analyses data to develop evidence-based policy responses to complex social issues (Tasmanian Government, 2013).

At the invitation of the Social Inclusion Unit, MMC Link has undertaken research and analysis into the economic value of volunteering in Tasmania using a methodology and format consistent with equivalent reports done in other Australian jurisdictions. This has allowed high-level comparisons between Tasmania and other Australian regions on the recent state of volunteering. A substantive critique of the methodology is also advanced, highlighting its limitations for public policy, as well as pointing to opportunities for future research.

**METHODOLOGY**

This is an independent report commissioned by the Tasmanian Government’s Social Inclusion Unit. The analysis and opinion within should not be taken to represent the position – official or otherwise – of anyone other than its authors.

The methodology applied in this study involved the non-exhaustive integration of:

- Socio-economic data collected by the Australian Bureau of Statistics (ABS), including:
  - 4441.0 Voluntary Work Australia 2006 (ABS, 2006a)
  - 4441.0 Voluntary Work Australia 2010 (ABS, 2010)
  - 5220.0 Australian National Accounts: State Accounts (ABS, 2006b)
  - 3105.0.65.001 Australian Historical Population Statistics, 2008 (ABS, 2008)
  - 6345.0 Wage Price Index, Australia (ABS, 2013b)
- Academic literature reviews
- Reviews of relevant reports produced by third parties
- Media scanning, interpretation and analysis, and
- The collective expertise of the MMC Link team of social, business and economic analysts.

Resource constraints prevented this study from conducting any primary research and/or stakeholder consultation. It is acknowledged that this gap theoretically limits our findings; an issue that it is recommended be addressed in subsequent work.
THE ECONOMIC VALUE OF VOLUNTEERING IN TASMANIA

In recent years, a number of studies have presented various perspectives on the volunteering landscape in Tasmania. The most important works in this regard have been the State of Volunteering Tasmania reports (Volunteering Tasmania, 2010, 2012b). These reports, like many others of their ilk, assume that volunteering delivers social benefits to the region and that these benefits should be preserved and enlarged where possible (through more volunteering).

Although it is rarely disputed that volunteering is a social good, the extent to which it enables an economic benefit to the community is less understood. This is not to suggest that volunteering delivers no economic benefits at all; more so, it is a shortcoming of the neo-classical economic sciences which largely define ‘value’ in terms of market-based financial transactions, one of the most significant of which is wages.

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

Despite this, Ironmonger acknowledges in these reports that the significant inconsistencies in the way the ABS has collected volunteering data over the last 20 years have limited the longitudinal reliability of his findings. Indeed, the ABS concedes the same (ABS, 2012); and in that respect, we share Ironmonger’s frustration. Consequently, Ironmonger largely refers to the Voluntary Work Australia 2006 (ABS, 2006a) data to inform his final position.

In this report, we selectively apply Ironmonger’s methodology to estimate the current economic value of volunteering in all States and Territories of Australia. We follow this with a detailed dive into the Tasmanian relevant data. Where appropriate, we also update the Voluntary Work Australia 2006 figures in the light of subsequent ABS advice on population; and, to aid comparative utility, index price estimates to present values.

To that end, this report complements that which has gone before it in other jurisdictions. We nonetheless close by critically reflecting upon the civic relevance of such statements of economic value, and propose a number of ways this important course of research might be enlarged and enhanced.

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1 A summary explanation of the methodological differences between this report and Ironmonger’s work can be found in the Appendix.
Volunteering in Australia

The ABS General Social Survey, which is the source for much of the data analysed in this report, defines a volunteer as “someone who, in the previous 12 months, willingly gave unpaid help, in the form of time, service or skills, through an organisation or group (ABS, 2010).” This definition excludes unpaid work done for employment (including ‘work for the dole’ programs) or as a part of study commitments. It also fails to capture ‘unorganised’ or informal volunteering in the community. Already then, we must qualify the following findings with the caveat that they are likely to represent a significant underestimate of the total economic impact of volunteering in the community.

Table 1 shows, for each state and territory in Australia, the 2006 rates of adult\(^2\) volunteering, the number of adult volunteers, the average number of hours they each volunteered for, the total hours contributed across each jurisdiction, and the number of fulltime equivalent jobs this equates to. As it can be seen, volunteers make a significant contribution to the community, nationally donating the equivalent of more than 450,000 fulltime jobs. This is due to the contributions of over one-third of all adult Australians each giving nearly three-and-a-half working weeks of their time to various public organisations.

Table 1: Volunteering in Australia, 2006

<table>
<thead>
<tr>
<th></th>
<th>Volunteer Rate</th>
<th>Number of Volunteers</th>
<th>Average Hours Donated</th>
<th>Total Hours (millions)</th>
<th>Fulltime Equivalent Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tasmania</strong></td>
<td>36.0%</td>
<td>134,323</td>
<td>134.9</td>
<td>18.1</td>
<td>11,185</td>
</tr>
<tr>
<td><strong>New South Wales</strong></td>
<td>32.7%</td>
<td>1,703,109</td>
<td>140.3</td>
<td>238.9</td>
<td>147,498</td>
</tr>
<tr>
<td><strong>Victoria</strong></td>
<td>32.7%</td>
<td>1,289,453</td>
<td>137.7</td>
<td>177.6</td>
<td>109,604</td>
</tr>
<tr>
<td><strong>Queensland</strong></td>
<td>37.8%</td>
<td>1,166,551</td>
<td>137.6</td>
<td>160.5</td>
<td>99,085</td>
</tr>
<tr>
<td><strong>South Australia</strong></td>
<td>31.4%</td>
<td>382,367</td>
<td>126.3</td>
<td>48.3</td>
<td>29,810</td>
</tr>
<tr>
<td><strong>Western Australia</strong></td>
<td>36.3%</td>
<td>566,851</td>
<td>130.5</td>
<td>74.0</td>
<td>45,663</td>
</tr>
<tr>
<td><strong>Northern Territory</strong></td>
<td>35.8%</td>
<td>53,622</td>
<td>151.6</td>
<td>8.1</td>
<td>5,018</td>
</tr>
<tr>
<td><strong>Australian Capital Territory</strong></td>
<td>38.4%</td>
<td>98,566</td>
<td>106.8</td>
<td>10.5</td>
<td>6,498</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td>34.1%</td>
<td>5,394,842</td>
<td>136.4</td>
<td>736.1</td>
<td>454,361</td>
</tr>
</tbody>
</table>

\(^2\) An adult is defined here as a person aged 18 years and over.
On a state-by-state basis, Figures 1 and 2 show that Tasmania performs slightly better than the national average rate of volunteering, and slightly worse in respect of the hours donated; however, these variances are unlikely to be statistically significant. The outliers in respect of these two figures are the two Australian Territories, with the ACT in particular punching well above its weight in terms of the rate of volunteering, but markedly below in volume of hours.

It is noted that a more recent study using the same methodology updated information on volunteering rates (ABS, 2010). Those updates are cast in shadow in Figure 1. It is noted there that a number of jurisdictions – including Tasmania – recorded significant upswings in the per head of population rates of volunteering.

We nevertheless counsel caution in the use of the 2010 data for three key reasons. Firstly, two seasons do not make a statistical trend, and conclusions (let alone forecasts) should not be drawn until more longitudinally aligned information becomes available. Secondly, volunteering data from the ABS surveys of Time Use are not compatible with those from the General Social Surveys, and should not be conflated.

More importantly for our purposes, however, the absence of 2010 data on the volume of volunteering hours confounds the possibility of making reliable estimates of economic impact. This is because we our reckoning of value depends upon multiplying out total hours by their replacement cost. As it turns out, this may be of no consequence, as the 2010 study does not advance hypotheses for the changes in estimates of volunteering rates, and notes that the change in the national average at least is not statistically significant (ABS, 2010). Nevertheless, in the interests of rigour, we hereafter defer to the 2006 figures in this report.

Figure 1: Volunteering Rates of Participation, 2006 & 2010
Ironmonger’s forementioned reports on the economic value of volunteering consistently price the 2006 “gross opportunity cost wage” of volunteering at $24.09 per hour. This figure is reasonably justified “because if the services provided by volunteers were to be provided instead by paid employees, the costs incurred by organisations and households would need to cover gross wages including income taxes and other charges such as contributions to superannuation schemes (Ironmonger, 2012).”

A loading of 12.7 per cent is applied to this figure to compensate volunteers for the use of their own resources – most notably motor vehicles – in pursuit of their participation in their volunteering activity (Ironmonger, 2012). From 2006 to today, there have also been significant movements in price of wages: they have grown by 29.7 per cent nationally.

In Table 2 we therefore show the impact of these loadings on what is effectively the replacement cost (in fulltime equivalent terms) of volunteers in Australia. In the interests of consistency, we adopt this 2013 hourly wage equivalent – $35.21 – when continuing the discussion of the economic impact of volunteering in Tasmania and the rest of Australia.

Table 2: The Economic Impact of Volunteers in Australia by Jurisdiction, 2006 ($ billions)

<table>
<thead>
<tr>
<th></th>
<th>TAS</th>
<th>NSW</th>
<th>VIC</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>NT</th>
<th>ACT</th>
<th>AUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$ 0.5b</td>
<td>$ 6.5b</td>
<td>$ 4.8b</td>
<td>$ 4.4b</td>
<td>$ 1.3b</td>
<td>$ 2.0b</td>
<td>$ 0.2b</td>
<td>$ 0.3b</td>
<td>$ 20.0b</td>
</tr>
<tr>
<td>Current prices³</td>
<td>$ 0.6b</td>
<td>$ 8.4b</td>
<td>$ 6.3b</td>
<td>$ 5.7b</td>
<td>$ 1.7b</td>
<td>$ 2.6b</td>
<td>$ 0.3b</td>
<td>$ 0.4b</td>
<td>$ 25.9b</td>
</tr>
</tbody>
</table>

³ As at September 30, 2013 (ABS, 2013b).
Tasmanian Impact

An effective contribution by volunteers of $638.1 million to the Tasmanian economy in 2013 is significant when compared to the Gross State Product of the same period. Figure 3 shows that, relative to the output of other local economies, Tasmanian volunteers made the most salient contribution to their State in terms of both GSP and the total compensation (wages) of employees. Australia-wide, volunteers made a contribution effective to 1.6 per cent of Gross Domestic Product and 4.3 per cent of the total labour bill (ABS, 2006b).

Figure 3: Volunteer Impact as a Percentage of GSP & Total Employee Wages in Australia, 2006

[Diagram showing relative contributions of different states to GSP and wages]

Figure 4 puts this into perspective. Using labour inputs as the standard (ABS, 2013a), if volunteering were an industry in its own right, in 2013 it would have been Tasmania’s eighth largest employer. It ‘employs’ more people than the hospitality, arts and recreation sectors put together; as well as being bigger than all of the agriculture, forestry, fishing and mining industries combined. Importantly, because volunteers donate their labour in this way, every adult Tasmanian effectively ‘saves’ $1,710 per annum in their enjoyment of volunteering’s benefits.

Therefore if media impressions are anything to go by, volunteering is a significantly under-appreciated contributor to the Tasmanian economy. Yet as the next section discusses, using the replacement cost of labour in isolation to describe the value of volunteering to the community is likely to significantly under-value the economic contribution of the sector.
Figure 4: The Compensation of Tasmanian Employees by Industry, 2013

- Health care and social assistance (Q)
- Education and training (P)
- Public administration and safety (O)
- Manufacturing (C)
- Retail trade (G)
- Transport, postal and warehousing (I)
- Construction (E)
- VOLUNTEERING
- Financial and insurance services (K)
- Professional, scientific and technical services (M)
- Wholesale trade (F)
- Accommodation and food services (H)
- Electricity, gas, water and waste services (D)
- Administrative and support services (N)
- Other services (S)
- Information media and telecommunications (J)
- Agriculture, forestry and fishing (A)
- Mining (B)
- Rental, hiring and real estate services (L)
- Arts and recreation services (R)

MILLIONS

$0  $500  $1,000  $1,500  $2,000
Directions for Future Research

As impressive as these figures are, the quality of the data used and method applied significantly constrain the ability of private and public decision makers to leverage and optimise volunteering value. Indeed, knowing that in Tasmania the replacement cost of voluntary labour to organisations is $638.1 million begs the question: so what? On what basis should we invest more (or less) time and/or money into it? However, even before those questions can be answered, can we be certain that our findings here are accurate?

It has already been noted that the ABS definition of volunteering that underpins our estimates of participation excludes volunteering that occurs outside organisational settings. This is inconsistent with more widely accepted definitions of volunteering, which propose that there are only three criteria that must be met in order for an act to be considered volunteering: **free will**, **non-pecuniary motivation**, and **benefit to others** (Leigh, 2011; Volunteering Tasmania, 2012a). And what, too, of volunteers under the age of 18 years, for whom no data is available? If unknown – and potentially significant – segments of the labour-force are unrepresented by the data; it stands to reason that our quantification grossly under-values the voluntary labour market.

Nonetheless, for all its limitations, the ABS data does give us some insight into the demographic composition of volunteerism in Australia. Tables 3 and 4 replicate Ironmonger’s approach to valuing these cohorts in Tasmania.

Table 3: Volunteering in Tasmania by Age and Gender, 2006 (Current Prices)

<table>
<thead>
<tr>
<th></th>
<th>Volunteer Rate</th>
<th>Fulltime Equivalent Jobs</th>
<th>Hourly Replacement</th>
<th>Total Value ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>25.9%</td>
<td>394</td>
<td>$35.21</td>
<td>$22.5m</td>
</tr>
<tr>
<td>25-34</td>
<td>37.9%</td>
<td>765</td>
<td>$35.21</td>
<td>$43.6m</td>
</tr>
<tr>
<td>35-44</td>
<td>46.2%</td>
<td>1,114</td>
<td>$35.21</td>
<td>$63.6m</td>
</tr>
<tr>
<td>45-54</td>
<td>44.5%</td>
<td>1,109</td>
<td>$35.21</td>
<td>$63.2m</td>
</tr>
<tr>
<td>55-64</td>
<td>36.4%</td>
<td>748</td>
<td>$35.21</td>
<td>$42.7m</td>
</tr>
<tr>
<td>65+</td>
<td>36.7%</td>
<td>997</td>
<td>$35.21</td>
<td>$56.9m</td>
</tr>
<tr>
<td>Total</td>
<td><strong>38.9%</strong></td>
<td><strong>5,141</strong></td>
<td><strong>$35.21</strong></td>
<td><strong>$293.3m</strong></td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>42.9%</td>
<td>979</td>
<td>$35.21</td>
<td>$55.8m</td>
</tr>
<tr>
<td>25-34</td>
<td>29.7%</td>
<td>843</td>
<td>$35.21</td>
<td>$48.1m</td>
</tr>
<tr>
<td>35-44</td>
<td>30.4%</td>
<td>1,034</td>
<td>$35.21</td>
<td>$59.0m</td>
</tr>
<tr>
<td>45-54</td>
<td>30.3%</td>
<td>1,077</td>
<td>$35.21</td>
<td>$61.4m</td>
</tr>
<tr>
<td>55-64</td>
<td>37.6%</td>
<td>1,126</td>
<td>$35.21</td>
<td>$64.2m</td>
</tr>
<tr>
<td>65+</td>
<td>30.7%</td>
<td>992</td>
<td>$35.21</td>
<td>$56.6m</td>
</tr>
<tr>
<td>Total</td>
<td><strong>33.1%</strong></td>
<td><strong>6,058</strong></td>
<td><strong>$35.21</strong></td>
<td><strong>$345.6m</strong></td>
</tr>
</tbody>
</table>
Figure 5: Volunteering in Tasmania by Age and Gender, 2006

Table 4: Volunteering in Tasmania by Location, 2006 (Current Prices)

<table>
<thead>
<tr>
<th>Location</th>
<th>Volunteer Rate</th>
<th>Fulltime Equivalent Jobs</th>
<th>Hourly Replacement</th>
<th>Total Value ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hobart</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>36.5%</td>
<td>1,807</td>
<td>$ 35.21</td>
<td>$ 103.1m</td>
</tr>
<tr>
<td>Men</td>
<td>31.8%</td>
<td>2,851</td>
<td>$ 35.21</td>
<td>$ 162.6m</td>
</tr>
<tr>
<td>Total</td>
<td>34.2%</td>
<td>4,647</td>
<td>$ 35.21</td>
<td>$ 265.1m</td>
</tr>
<tr>
<td><strong>Outside Hobart</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>40.7%</td>
<td>3,272</td>
<td>$ 35.21</td>
<td>$ 186.6m</td>
</tr>
<tr>
<td>Men</td>
<td>34.0%</td>
<td>3,281</td>
<td>$ 35.21</td>
<td>$ 187.1m</td>
</tr>
<tr>
<td>Total</td>
<td>37.4%</td>
<td>6,555</td>
<td>$ 35.21</td>
<td>$ 373.9m</td>
</tr>
</tbody>
</table>
Unfortunately, this method stops short of revealing the true potential of the data. Firstly, by holding the “gross opportunity cost” of wages constant at $35.21 for each cohort, the distinct market value of each demographic is glossed over. Understanding the different value that each group can bring may in fact be of critical interest in a volunteering environment that is vulnerable on both the supply and demand side to changing population dynamics.

From the Tasmanian perspective, it may also be useful to understand in more detail how volunteers behave by region (for example, the North, North-West and South) as well as by urban versus rural centre (as opposed to such simplistic divisions as Hobart versus the rest of the State). Local variants to wages and the resource inputs of volunteers themselves may also be significant.

Secondly, the assumption that voluntary labour can be replaced with fulltime equivalent employees is flawed. Indeed, volunteering in a number of industries is event based, with volunteers clustering around occasional or peak seasonal needs. It is argued here that a single paid employee working a 36 hour week cannot do the work of six volunteers working six hours each at a junior soccer carnival. Given that casual labour is significantly more expensive than its fulltime equivalent, the estimates of value herein are perhaps overly conservative.

Finally, the opportunity cost of a person or group of people’s time is not the same as their replacement cost. Crudely put, opportunity cost is what the individual forgoes (a theoretical loss); whereas the replacement cost avoided is what the organisation gains (a theoretical profit). This somewhat nuanced distinction is an important one, because it leads us to consider more holistically what the value of volunteering is, and how it is arrived at.

Conceptually, value is the sum of the benefits attributable to an activity (or group of activities). This report – like its forebears – answers in a limited way the question of what is one economic value of volunteering in Tasmania to organisations. The more important question is: what is the economic value of volunteering to Tasmania? In other words, what is the sum of social benefits? And perhaps even more importantly, how much do these benefits cost us?

Beneficiaries who value volunteering are likely to include individuals and households, businesses and government. Benefits may accrue as various forms of human and institutional capital, and may be realised as productivity gains, health and well-being outcomes, commercial profit, and otherwise avoided (civic or personal) costs. Locating and describing a narrow set of organisation savings, as this paper does, only tells part of what is potentially a much larger story. It is for these and other reasons that economic impact analyses alone usually fail to influence mature policy decisions (Department of Treasury and Finance, 2005).

Currently, cost-benefit analysis is the Australian government preferred approach to evaluating policy choices (Office of Best Practice Regulation, 2005). This methodology best identifies the real and opportunity costs associated with expenditure, as well as the benefits that flow, including economic impacts, preferences and avoided costs. The cost-benefit approach also demands particular attention to identification of the recipients of benefits and the bearers of costs.
If applied to the valuation of volunteering, it has the potential to assist relevant decision makers by:

- quantifying the discrete social, economic and cultural contributions that volunteering makes to a defined community
- delivering robust social and economic information and advice to assist stakeholders in making strategic decisions about future resource allocation
- providing an opportunity to benchmark volunteering outcomes to measure future performance and the impact of any strategic changes
- enabling a basis to make representations to State, Federal and other community stakeholders for resource partnerships, and
- providing evidenced based data for future marketing and public relations.

For even though not everything can or should be determined by market prices, the failure to price for comparative purposes the vast suite of volunteering’s benefits risks marginalising the sector and its contribution to the community.

To that end, it is recommended that organisations and institutions looking to ‘value’ volunteering at the project, program and community level extend the estimation of economic impact(s) to capture to the fullest extent possible all potential beneficiaries. It is equally important that the costs incurred in arriving at these benefits are also weighed, so that optimal investment scenarios can be forecast with confidence.

This is not to dismiss the relevance of economic impact analyses, such as this one; even on the limited findings of this report it can be seen that the contribution of volunteering to society is significant and, as seen from the discussion, most likely under-rated. Comprehensive analyses of benefits and costs are also much more complex, and necessarily incur much higher expenses of their own. Nevertheless, the benefits that such studies can enable go far beyond a few headlines, and have the potential to radically transform the way communities view and approach the practice of volunteering.
REFERENCES


APPENDIX

Volunteers donate their time to a wide variety of organisations. Of the volunteers surveyed by the ABS in 2010, a significant number donated time to more than one organisational category. For that reason, even though 35.6 per cent of all volunteers in Tasmania gave their time to sport and physical recreation groups, this does not mean that 35.6 per cent of all volunteering in Tasmania was to sport and physical recreation (Figure 6). Indeed, 42.1 per cent of Australians volunteered for two, three or more organisations in the year of survey, which explains why the sum of contributions in Figure 6 is equal to 177 per cent (ABS, 2010).

Unfortunately, neither the 2006 nor 2010 surveys breakdown organisational participation by time. This prevents us from quantifying the economic contribution (as it is defined in this report) of volunteering to the relevant categories. Another limiting feature of the data is its taxonomical inconsistency with the Australian and New Zealand Standard Industrial Classification (ANZSIC) which is the framework for the majority of the ABS’s econometric analyses (see Figure 4).

For that reason, Figure 6 is presented here for information only. Reconciling the inconsistencies highlighted in this Appendix is recommended as another direction for future research.

Figure A1: Tasmanian Volunteers Aged 18+ by Type of Organisation Volunteered For, 2010
Table A1: Comparison of the Ironmonger Methodology to this Report (Muller)

<table>
<thead>
<tr>
<th>Ironmonger Methodology</th>
<th>Muller Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time series analysis 1992-2006, with commentary on 2010 and 2011 data</td>
<td>2006 analysis, with commentary on the other data</td>
</tr>
<tr>
<td>The value of volunteering in Queensland, South Australia, Western Australia and Victoria separately estimated</td>
<td>The value of volunteering in all Australian States and Territories estimated in single report</td>
</tr>
<tr>
<td>2006 prices used to quantify value</td>
<td>2013 (current) prices used to quantify value, inflated using the ABS wage price index</td>
</tr>
<tr>
<td>Resources consumed by volunteers quantified and added to estimates of value</td>
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<tr>
<td>Travel time of volunteers quantified and added to estimates of value</td>
<td>Inasmuch as the opportunity cost of travel time is usually included in market wages, we have preferred this orthodox approach</td>
</tr>
<tr>
<td>Volunteer impact as a Percentage of Gross State Product and total employee wages estimated</td>
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<tr>
<td>Volunteering defined as an ‘industry’ and inter-industry comparisons made for Tasmania.</td>
<td>Critical reflection upon the limitations of the methodology and directions for future research recommended.</td>
</tr>
</tbody>
</table>
ABOUT US

The MMC Link team specialises in providing economic and social research, strategic planning and continuous improvement support. Our service profile includes industry, government, and the not-for-profit sector.

Lead author: Paul Muller

Contributing authors: Ian McMahon

Business name: MMC Link Pty Ltd

ABN: 58 137 685 020

Address: Level 6 Reserve Bank Building 111 Macquarie Street Hobart Tasmania 7000

Telephone: +61 3 6108 9038

Email enquiries: info@link.edu.au

Website: http://link.edu.au