The Economic Value of Volunteered Time to Organizations

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Abstract

Does the replacement cost accurately measure the economic value of volunteered time to an organization? This paper provides both a theoretical argument and empirical evidence that it does not. The cost of recruiting, training and coordinating volunteers is a better measure of the economic value of volunteered time. A paradox is observed in some organizations: on the one hand, individuals are generally perceived as adding value, and if all of them quit, the quantity and quality of charitable activity would suffer, but on the other hand, if they all quit, it is unlikely that organizations would hire to replace them. Seeing volunteers as complements to, not substitutes for, paid labor resolves the paradox. A case study illustrates the difference.
Introduction

In the U.S. one-fourth of men and one-third of women volunteer (U.S. Department of Labor 2005). Four in five charities use volunteers and one in three congregations run social service programs and manage volunteers (Hager 2004). Volunteers are obviously an important part of the U.S. economy. In the 35 countries monitored by the Johns Hopkins Center for Civil Society Studies, an average of 190 million people volunteered over a three-year period ending in 1998 (Salamon, Sokolowski & List 2003), equivalent to 12.6 million full-time workers or 4.4 percent of the paid workforce.

Estimating the economic value of volunteered time, therefore, is a worthwhile project, but it is fraught with difficulties, principally ambiguity. The economic value of one hour of hired labor is its market wage rate, which is independent of an observer’s perspective because it is established by an objectively observable exchange transaction. But, volunteering is a one-way transaction. Volunteers might place a different value on their time than the organizations they are helping ascribe to it.

Opportunity cost measures economic value from a volunteer’s point of view. It is the same as the value of her most desirable foregone opportunity, generally assumed to be earnings from an equal number of hours of gainful employment. The replacement cost method looks at the problem from an organization’s point of view. It assumes volunteers and paid staff are perfectly interchangeable hour-for-hour. From this perspective, the economic value of a volunteer is the same as the estimated cost of hiring someone to do the same work (Blair, Cheplick & Jones 2003; Quarter, Mook & Richmond, 2003a, 2003b; Mook, Sousa, Elgie & Quarter, 2005). In terms of the supply and demand of volunteer
labor, opportunity cost is the supply price of labor, while replacement cost is its demand price.

The Independent Sector (2006) produces the best-known estimate of economic value of volunteer labor for the U.S. as a whole, which it calculates by multiplying an estimate of the number of volunteer hours by the average wage of all non-managerial workers outside of the agricultural sector. Statistics Canada (2005) and the British Institute for Volunteering Research (Gaskin 1999) also use this method. Arguably it measures value from three points of view simultaneously – the volunteers, the organizations they serve, and society.

However, given that no market mechanism mediates transactions between volunteers and organizations, it is incredible that the value of time is the same regardless of the frame of reference of the observer. Flaws in the opportunity cost method, which has been more thoroughly studied than replacement cost, should be sufficient to cast doubt on a three-way equality.

- Opportunity cost theory predicts that the prevalence of volunteering should decrease as opportunity cost increases, but in fact we observe the opposite – poor people and retired people, who have low opportunity costs, volunteer at lower rates than middle and upper income persons in their peak earning years (Freeman 1997).

- The skills necessary to perform volunteer work are not comparable with the skills volunteers use in paid employment, and income taxes distort the tradeoff between work and leisure. Therefore opportunity cost “overstates that value of volunteering to the recipients of volunteer-assisted services but understates the overall value of
volunteering when the gains accruing to the volunteers themselves are included.”

(Brown 1999, 3)

- Handy & Srinivasan (2004) found that reasonable compensation chosen by volunteers as an alternative to their leisure activities was $14.28, which was well below their labor market earnings.

The replacement cost method, the focus of this paper, has been less subject to critique. It deserves more scrutiny because it is the dominant paradigm for measuring the value of volunteered time to an organization. Goulbourne & Embuldeniya (2002) identify eight economic valuation methods and Anderson & Zimmerer (2004) identify five, all of which are functionally equivalent to the replacement cost method. The main difference among them is the supply price of one hour of volunteered labor. Quarter, Mook & Richmond (2003a, 2003b) and Mook, Sousa, Elgie & Quarter (2005) use replacement cost in their work expanding the accounting paradigm. Alternative views of the replacement cost concept include Handy & Srinivasan (2004) and Handy, Mook and Quarter (2006) who suggest the value of volunteered time to an organization is the amount of monetary donations its leaders would be willing to sacrifice for one additional hour of volunteered time. They find this to be CA$35.33 for Canadian nonprofits.

Our research question is: *Does replacement cost accurately measure the economic value of volunteered time to an organization?* It is worth stressing that this paper considers only the economic dimension of volunteering. Measuring the value of volunteered time along other dimensions would require different methods. It is quite possible that organizations may assign a low economic value to volunteers, but value them greatly in
other respects or vice versa. The sections following describe experimental evidence based on (1) a survey of a random sample of U.S. volunteer coordinators, and (2) a case study.

**The Experiment**

Economic value is not an absolute concept. A thing’s value is always measured in terms of something else, which may or may not be money. Intermediate economics textbooks prove that it is optimal for an organization to increase utilization of a resource until the additional revenue it receives from selling the output produced by the last unit of that resource (marginal revenue product) equals its cost (marginal resource cost). The marginal labor cost is its wage rate, whereas the marginal volunteer cost is the cost of recruiting, training, coordinating, and retaining one more volunteer (Handy & Srinivasan 2005, Steinberg 1990). It is a popular misconception that such costs are negligible. Actually, they are likely to be significant (Hager and Brudney 2005, Handy & Srinivasan 2005, Duncombe & Brudney 1995, Brudney & Duncombe 1992, Steinberg 1990).

Volunteers are not paid, but organizations consume real resources to recruit, train, coordinate, and keep them happy. The value of these resources expended on an additional volunteer is his or her “shadow wage,” which is not automatically the same as the wage of paid labor. An exception is when the production technology cannot distinguish between volunteer labor and paid labor. In other words, whenever they are (in the language of economics) perfect one-for-one substitutes.

If volunteers and paid staff are one-for-one perfect substitutes, one would expect that volunteers would be “hired,” “fired” and managed like paid staff. And, like paid staff, they would work on a more-or-less regular schedule doing the same or similar tasks each time. A replacement usually would be recruited whenever a volunteer quits, and if all
volunteers quit, either the organization would hire paid staff for an equivalent number of hours, or it would cut services, service quality would suffer, or some combination. If individual volunteers had no economic value to an organization, it would not recruit a replacement whenever one quit.

For purposes of this research, I classify volunteers into four types. The first three are: (1) those persons who help out only once or twice a year for specific events, (2) persons who volunteer frequently but do not have regular assignments – they do whatever is most needed at the time – and (3) persons who make a regular time commitment and do the same or similar tasks each time. The latter are the type of volunteers that are most likely to be substitutes for paid staff. The term for these volunteers is traditional volunteers. More precisely for purposes of this research, a traditional volunteer as one who volunteers more than once every three months and does the same or similar task each time, excluding board members acting in their roles as board members. Board members are the fourth type. It is tempting to consider them to be a special case of traditional volunteers, but they cannot be replaced by paid labor, so they belong in a category by themselves. However, if board members regularly volunteer for other roles, they fall under the definition of traditional volunteers.

The universe for this research is all operating public charities in the 2004 IRS Business Master file of 501(c)(3) organizations from the National Center on Charitable Statistics. After eliminating the non-operating charities and supporting organizations, there remained approximately 750 thousand entities in the file. I sent a pretest to a random sample (N = 350) drawn using the random sampling algorithm in SPSS. Thirty-three (33)
were undeliverable and 64 returned useable surveys. The response rate was 18 percent overall and a 20 percent for delivered surveys.

The pretest sampled organizations of all sizes and analysis of the results revealed that half had no more than one paid employee, and only 10 percent had no more than one volunteer. Since the purpose of the research is to determine whether volunteers and paid labor are substitutable, I restricted the subsequent sample on which this research is based (N = 2,000) to organizations that had at least $100,000 of income in 2004. The threshold was arbitrary, but it had to be high enough that managers might plausibly consider hiring an additional employee if it could not recruit enough volunteers. This sampling decision reduced the universe of organizations to 154 thousand. There were 166 undeliverable surveys and the number of useable responses was 459. The response rate was 23 percent overall and 25 percent for delivered surveys. I attribute the higher response rate to the revenue threshold. Organizations with revenues in excess $100,000 are likely to have a person assigned to process mail.

**Characteristics of organizations that use volunteers**

For this research several screening questions further reduced the useable sample size. I eliminated 94 organizations with two or fewer traditional volunteers because a respondent might find it difficult to assess the value of one or two people who assist only a few times a year. I eliminated all 37 organizations that bargain collectively because unionized organizations might find it difficult to utilize traditional volunteers, depending of course on the union (Gazely & Brudney 2005). This probably purged the sample of all major symphony orchestras, hospitals, nursing homes, colleges and universities. Finally, I eliminated 31 national headquarters from the analysis because it is plausible that national
headquarters would have a more professionalized mode of operation than local organizations, leading them to rely less on volunteers. Very few organizations fell into two or more of these categories, so the cumulative effect of applying these screens is a screened sample of 308 local organizations with few institutional constraints on utilization of traditional volunteers.6

Table 1 shows the characteristics of the full sample and a screened sample with these three screens applied. The types of organizations in each are similar to the composition of the IRS Business Master File (U.S.) except for overrepresentation of human services, which I attribute to the breadth of this category in ordinary discourse. The National Taxonomy of Exempt Entities (NTEE) was the basis for classifying the sample, but respondents self-reported their category. Ordinary definitions of arts, education and health are likely to be closer to the NTEE categories of the same names. Self-reported human service organizations are more likely to be in closely related NTEE categories. Nearly all organizations remaining in the smaller sample have been in business more than 5 years, perhaps a consequence of restricting the survey sample to organizations that have at least $100,000 of income. Shrinking the sample significantly increased the proportion of faith-based organizations from 21 percent to 25 percent (p = 0.01).

Nineteen (19) percent of screened respondents has a full-time paid volunteer coordinator. Consistent with research by Handy, Mook and Quarter (2006), the results are skewed towards larger organizations. Forty-one (41) percent of organizations with more than 300 employees has a full-time, paid volunteer coordinator, while only 7 percent of organizations with one or 2 paid employees has a full-time volunteer coordinator. Seven
(7) percent may seem small but it is large considering the miniscule number of paid employees that defines this size category (two or less).

Nineteen (19) percent has a waiting list of persons desirous of being traditional volunteers. However, large organizations are more likely to have a waiting list. Only 9 percent of organizations with 0-2 employees has a waiting list, and the percentage increases with organization size. Of organizations with more than 300 employees, 29 percent has a waiting list. Apparently volunteers find large organizations more desirable. This may be because they have recognized brand names or because large organizations are disproportionately faith-based, giving them an advantage. The median number of traditional volunteers is approximately 30. Only 10 percent of organizations manage more than 300 traditional volunteers. Most traditional volunteers perform multiple roles: general administration, fundraising and mission related. Sixty (60) percent of those who spend more than half of their time providing one service provide a mission related service, 14 percent perform general administration, and only 8 percent do fundraising.

Data Analysis

The replacement cost hypothesis is that the economic value of traditional volunteers is the same as their replacement cost. This paper tests this hypothesis on two levels: at the level of the individual volunteer and at the level of the group. If individual traditional volunteers provided economically valuable services like paid employees, an organization would have a strong incentive to fill a vacancy whenever one quit. The first test question is: When a “traditional volunteer” quits, how often does your organization try to find someone to assume his or her duties? (See table 2.) Five response categories range between “very often, to always” and “very infrequently, to never.” If the replacement cost
hypothesis is true, answers should cluster near “very often, to always.” The mean response (3.76) indicated recruitment with intent to replace occurred more than half the time. Overall, 39 percent answered “very often, to always.” Another 28 percent answered “often.” Combined, these two responses account for 67 percent of organizations. Although the result clearly indicates that organizations assign an economic value to individual volunteers, a remarkable proportion of organizations (22 percent) answered “very infrequently, to never” or “infrequently,” indicating that they place a very low economic value on them.

Caution is in order when evaluating responses to this question because 19 percent of organizations in the sample are fortunate to have waiting lists. They will find it far less costly in terms of money and time to recruit, and therefore can be expected to be more likely to recruit, whatever the perceived value of individual volunteers. Therefore, Table 2 divides responses to this question into those given by organizations without a waiting list and those organizations with one. Although the mean response was higher for organizations with a waiting list, the difference was not significant (p=0.05, one-tail test).

If the replacement cost hypothesis is true at the group level, an organization would be likely to replace lost volunteer hours with an equivalent number of paid hours. The test questions are: Assume all “traditional volunteers” quit at the same time and none are replaced with other volunteers, how many of the lost hours would your organization replace with paid employees hired for this purpose? Five response options range between “hardly any, to none” and “nearly all, to total replacement.” A response of “nearly all, to total replacement” would indicate a high degree of substitutability, implying that a cadre of volunteers has an economic value approaching replacement cost. But, half (53 percent)
answered “hardly any to none” and another quarter (26 percent) answered “a few” (Table 2). Combined, these categories accounted for 79 percent of responses. The data do not support the replacement cost hypothesis for cadres of volunteers.

Since volunteers as a group are not likely to be replaced, the question arises what would be the economic consequences of all volunteers quitting at the same time and not being replaced? The test questions are: (1) Assuming all “traditional volunteers” quit at the same time and none are replaced with other volunteers, how likely is it that your organization would operate at a lower level of activity, such as shorter hours, serving fewer clients, or having fewer events? and, under the same assumptions, and (2) How likely is it that the quality of your organization’s activity also would be lower in addition to any changes in the level of activity that might result? Five response categories are possible for the latter two questions ranging from “very unlikely” to “very likely.”

There appears to be broad agreement that a reduction in quantity and quality of activity would occur. The frequency distributions of responses were nearly identical and, Cronbach’s alpha is 0.80, well above the acceptable level of 0.70. The median response lies almost precisely on the boundary between “likely” and “very likely.” On Tables 2 and 3 responses to these questions were averaged and rounded up. To simplify presentation, “likely” and “very likely” responses are referred to collectively as a “potential adverse impact on output.” Smaller organizations are more likely to anticipate a potential adverse impact on their output from losing all of their traditional volunteers. Seventy-eight (78) percent of organizations with 0-2 employees is in this category. The proportion declines as size of organization increases until it reaches its nadir of 48 percent between 101 and 300 employees.
A Paradox and Its Resolution

Presumably nonprofit organizations would not like to see the quantity or quality of their services to decline. So, why would they not hire people to take the place of the volunteers who quit? An obvious reason is that they cannot afford it. If so, there should be a difference in the willingness of large and small organizations to hire replacements. Presumably large organizations have a more robust cash flow and would be in a better position to afford to hire replacements. Although large organizations are underrepresented in the sample because they are more likely to be unionized and were screened out, those remaining are more likely than small organizations to say they would replace most of the lost hours volunteer hours with paid staff (Table 3). Of organizations with two or fewer paid staff (including none), 14 percent would pay to replace most lost volunteer hours, whereas 29 percent of organizations with 300 or more employees would do so. This contrasts with the findings of Handy, Mook and Quarter (2006).

Perhaps volunteers and paid employees are not substitutes as assumed by the replacement cost method of valuation. Perhaps they are complements. Preston (2006) is one of the few researchers to consider this possibility. In economic parlance, two resources are substitutes if the demand for one increases (alternatively, decreases) when the wage of the other service increases (decreases). A complementary service is the opposite: two services are complements if the demand for one increases (decreases) when the wage of the other service decreases (increases). Complementary resources, in effect, produce different outputs, which are inextricably bundled together from a client’s perspective.
Since complementarity is between volunteers and paid labor has received scant attention in the literature, a case study, will help give it substance. Field research for this case study took place at an Australian nonprofit that provided health care in a multi-facility residential care organization serving aged persons with varying degrees of infirmities. To preserve its anonymity, I will call it Caring for Australia (CFA). In late November and early December of 2002 I visited each of the CFA sites having full-time staff and interviewed 20 key informants at all levels – board members, senior administrators, and staff, including nursing supervisors, “diversional” therapists, and pastoral care personnel – about the role and significance of volunteers in the organization. CFA utilizes approximately 200 traditional volunteers at all sites to perform such tasks as pastoral care, escorting residents to doctor appointments, teaching computer skills to residents, entertaining them, reading to them, and giving one-on-one assistance during group activities. Estimates of the number of traditional volunteer hours are conjectural at best.

Traditional volunteers are ambassadors to the outside community. (From here on, I drop the adjective “traditional.”) One administrator describes them as “very, very important” to the organization’s reputation in the community, “If a volunteer is happy and fulfilled, he won’t be quiet about it. Families notice, too.” A staff member says, “It’s good for people outside to interact with residents to see what aged care facilities are like; to show them that they are not impersonal institutions.” As another staff member succinctly stated, “Being able to attract volunteers speaks well for the organization, especially as CFA grows larger.” An administrator spoke of volunteers as “an opportunity to market CFA.”

Board members, administrators and staff agree that volunteers generally perform different functions from paid staff, except for escorting residents on excursions. CFA
policy requires at least two persons accompany residents on excursions. An effort is made
to have one staff member and one volunteer escort every excursion. If volunteers were
unavailable, and CFA had to pay staff for this task, key informants agreed there would be
fewer excursions.

One paid employee explains how volunteers and staff work together, “They help
me a lot on my unit. I can’t be in two places at one time. They allow me to stay on the
unit while some residents go out. If I have to do therapy, a volunteer can sit around and
chat with residents. Residents love the volunteers.” Another staff member added,
“Families should be doing these things, but they don’t.” Still another said, “This is meant
to be a resident’s home. Having volunteers makes it more like a home. Volunteers
integrate this place with the community.” And, still another said volunteers are “very
important to the way CFA provides service. The one-on-one attention is important to the
residents. It has a special value to them.”

The picture key informants paint is one of volunteers as family surrogates. They
may be inferior to paid staff insofar as performing duties that are part of the staff’s
portfolio because they lack both the formal training and the experience of paid employees,
but it is also true that paid staff is inferior to volunteers for giving the kind of service that
family members ordinarily provide. Volunteers and paid staff each bring something
unique to the total life experience of CFA residents.

When asked to speculate on management’s response to volunteers being
unavailable, a board member said, “Since the government provides funding, there would
be no additional dollars to provide additional staff. Things just wouldn’t get done.” A
staff member agreed, “We couldn’t continue providing all of the services we now provide
with paid staff. It’s good for residents to come into contact with people other than paid staff. It gives them a sense of normality.” The consensus was that quality of service would suffer. “Volunteers do nails and hair. They walk and talk with residents. They escort them to services. They help throughout the activities room, assisting residents individually.

Without them [volunteers], we could not do as much individual work, which is a big thing. It would be really hard on me [as a staff member].” Another staff member predicted, “We would not have activities as often. There would be fewer outings. I would have to be escorting [to doctor appointments] and couldn’t be here as often.” In sum, volunteers as a group are highly desirable because they perform tasks normally undertaken by family members, and nearly everyone believes they enhance the organization’s reputation in the community.

By contrast, CFA acts as if individually volunteers have negligible economic value to the organization. One would expect that if volunteers performed a valuable service, CFA would have job descriptions, training, and supervision, but there is none of these. Further, when a staff member quits, he or she is replaced, but when a volunteer quits, CFA rarely recruits another to take his or her place. This disparity suggests that individual staff is economically valuable, while additional volunteers add little economic value. No one suggested that fewer volunteers would result in more staff being hired. If all volunteers quit at once, according to one administrator, “it wouldn’t have an effect on the organization, but it would affect the residents.” This comment is further evidence that volunteers are family surrogates.
There was one instructive exception where individual volunteers added economic value. One of the residential campuses operated a tearoom, called a kiosk. Six days a week, 15 volunteers prepare food in their own homes, transport it to the kiosk, serve it, and clean up. They receive no remuneration but are reimbursed out-of-pocket expenses from kiosk funds upon request. Many do not ask for reimbursement. Each volunteer has specific duties, and when one quits, remaining volunteers fill in until they can recruit a replacement, which is a task they share. A board member serves as volunteer bookkeeper for the kiosk to maintain internal control, and the board would replace this person should he quit. Their combined efforts contribute about AU$25,000 a year (net) to CFA, or AU$1,700 per volunteer, which is probably more than any of them could afford to give personally. ¹¹ The money buys special equipment for the direct benefit of residents.

Kiosk volunteers are the only ones that senior administrators speculated that they would replace with hired staff if they all quit. The likely reason is that they have a measurable impact on CFA’s net revenues. The government prohibits CFA from charging residents, so it cannot raise its rates to reflect the increased quality of life that family surrogate volunteers provide. Were it not for the kiosk money and a few small gifts, government would be the sole source of CFA’s income. As one key informant said when asked what they would do if all volunteers (not just kiosk volunteers) quit, “Since the government provides funding, there would be no additional dollars to provide additional staff.”

Based on key informants’ statements, one can envision CFA providing two distinct services, not including kiosk food service: (1) an institutional living arrangement, including health care, nutrition, and personal hygiene, and (2) surrogate family, which
includes companionship and entertainment. Paid employees provide the first, while unpaid volunteers provide the second. Unlike most services, payment for companionship devalues it. Volunteers give CFA residences a home-like quality. Services provided in the household to other household members are not included in the national income and product accounts.

This section began with a question: why would organizations not hire people to take the place of the volunteers who quit? Obviously they cannot afford it. This case study shed light on the organization’s problem. Either (1) the services cannot be quantified and cannot be assigned a market price, or (2) the price cannot be charged because third-party payers will not reimburse. Another possibility is that the services are “public goods,” in the sense that they cannot be withheld from people who do not pay.

**Conclusions**

In practice, if a volunteer quits, organizations try to find a replacement volunteer, but if all were to quit, and new volunteers were unavailable, the same organizations would be unlikely to hire replacements. The likely result of a mass exodus of volunteers would be a reduction in the quantity and quality of service. These results are evidence that the replacement cost method is an inaccurate way of measuring the economic value of volunteered time to an organization.

Scholars need to look more closely at the assumption that volunteers and paid labor are substitutes. The Australian case study illustrates how staff and volunteers might provide complementary services. In this situation volunteers and paid staff perform different functions and do not cross over whenever a deficit of the other service occurs. In effect, volunteers and paid labor provide different services. Statistical results suggest that
this may be quite common. Sixty (60) percent of volunteers who spend more than half of their time providing a single type of service provide a mission related service, whereas only 14 percent perform general administration, and only 8 percent do fundraising. General administration and fundraising are areas where it would be immaterial to clients if the work was performed by volunteers or paid labor.

Kiosk volunteers within the same organization provide a useful contrast within the same institutional setting where volunteers perform tasks that paid staff could perform without changing the quality of life for the residents. CFA officials say they would probably hire replacements if no volunteers were available for kiosk duty.

Measuring the value of volunteers to an organization using the cost of recruiting, training, coordinating, and retaining one more volunteer would be more robust and would be appropriate whether volunteers and paid labor were substitutes or complements.
References


Statistics Canada (2004). *Non-profit institutions and volunteering: Economic contribution.* (Ottawa: author) Retrieved from


Endnotes

1 The author thanks the staff and volunteers of the anonymous organization used in the case study for their support and cooperation. He also thanks his colleague Joe Ferrari for arranging the visit and Maureen Scott for consulting on survey methods.


3 The IS figure compares favorably with an estimate that the median organization gave when asked in a survey to estimate the value of one hour of volunteered time. IS calculated $16.54, while the median organization estimated $20 (Hager 2004). The power of suggestion may be at work here. The IS figure is well publicized and persons responding to the survey may have been recollecting it.

4 Optimal in the sense of maximizing an organization’s net gains (or surplus), which may be inappropriate for a charitable nonprofit. See Steinberg (2004) and Brooks (2005).

5 The survey was sent out shortly after Hurricane Katrina had devastated New Orleans. I did not mail five surveys with New Orleans addresses. The actual mailing consisted of 1,995 surveys.
459 (useable surveys) – 162 (sum of eliminated organizations) = 297. This compares with 308 in the reduced sample, which implies very little overlap (11 organizations) among the eliminated categories.

7 The scale on the survey instrument is inverted relative to the table.

8 A diversional therapist in Australia would be called an activity therapist in the U.S..

9 There is a government-run community visitor program that pays a stipend to persons who visit elderly and disabled persons confined to their place of residence. Approximately six CFA residents have community visitors. Visitors are not included in the volunteer data reported here, but they are clearly insignificant compared to the 200 volunteers that serve the same organization.

10 One dissenter felt that volunteers are “not high-profile enough” in the community to make much of a difference to the organization’s reputation, but this was a minority opinion.

11 Other sites within the CFA system have kiosks, but only one makes money because it has a large outside clientele. Many civil servants from a nearby government agency favor it for lunch and coffee breaks.
Table 1

Characteristics of the Full and Reduced Samples
(in percent)

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<th>Type</th>
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<th>with 4 screens** (N=241)</th>
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<tr>
<td>None more than 50% time</td>
<td>14</td>
<td>18</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Missing data</td>
<td>22</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Volunteer Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% with more than 30 vols.</td>
<td>43</td>
<td>52</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>% with more than 300 vols.</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Full-time, paid coordinator</td>
<td>19</td>
<td>19</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Waiting list</td>
<td>15</td>
<td>19</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Actively recruiting now</td>
<td>63</td>
<td>78</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

* Sample excluding national headquarters, organizations that bargain collectively, and those with fewer than three regular volunteers.

**Sample additionally excludes organizations with waiting lists.
Table 2
Responses to Questions on Replacement, Hiring and Change in Quantity or Quality of Service
(Sample based on 3 screens.)

<table>
<thead>
<tr>
<th>Questions (paraphrase) &amp; Responses</th>
<th>sample with 3 screens</th>
<th>without wait list</th>
<th>with wait list</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do you recruit to replace a TrVol?</td>
<td>( N = 308 )</td>
<td>( 242 )</td>
<td>( 58 )</td>
</tr>
<tr>
<td>( mean^* = 3.76 )</td>
<td>( 3.72 )</td>
<td>( 3.98 )</td>
<td></td>
</tr>
<tr>
<td>1. Very infrequently to never</td>
<td>10%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>2. Infrequently</td>
<td>12%</td>
<td>11%</td>
<td>12%</td>
</tr>
<tr>
<td>3. About half the time</td>
<td>11%</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>4. Often</td>
<td>28%</td>
<td>31%</td>
<td>14%</td>
</tr>
<tr>
<td>5. Very often to always</td>
<td>39%</td>
<td>35%</td>
<td>57%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How many lost Tr Vol hours would you replace with paid staff?</th>
<th>( N = 291 )</th>
<th>( mean = 4.20 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nearly all to total replacement</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>2. Most</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>3. About Half</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>4. A few</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>5. Hardly any to none</td>
<td>53%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average of reduce activities if all Tr Vols quit &amp; reduce quality of service if all Tr Vols quit?</th>
<th>( N = 305 )</th>
<th>( mean = 3.97 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Very unlikely</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>2. Unlikely</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>3. Maybe</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>4. Likely</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>5. Very likely</td>
<td>48%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Tr Vol stands for "traditional volunteers." Totals may not add to 100% because of rounding.

* Difference of means is NOT significant at the .05 level, one-tail test.

6/19/06
### Table 3

Effects of Organization Size
(Percent of organizations in size category; sample based on 3 screens.)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Overall</th>
<th>0 to 2 (N=68)</th>
<th>3 to 30 (N=158)</th>
<th>31 to 100 (N=34)</th>
<th>101 to 300 (N=21)</th>
<th>Over 300 (N=27)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a full-time, paid volunteer coordinator</td>
<td>308</td>
<td>19</td>
<td>7</td>
<td>18</td>
<td>24</td>
<td>29</td>
<td>41</td>
</tr>
<tr>
<td>Potential adverse impact on output*</td>
<td>303</td>
<td>70</td>
<td>78</td>
<td>71</td>
<td>64</td>
<td>48</td>
<td>65</td>
</tr>
<tr>
<td>Would replace most lost Tr Vol hours with paid staff</td>
<td>291</td>
<td>10</td>
<td>14</td>
<td>21</td>
<td>27</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td>Has a waiting list</td>
<td>306</td>
<td>19</td>
<td>9</td>
<td>22</td>
<td>18</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Actively recruiting</td>
<td>305</td>
<td>79</td>
<td>82</td>
<td>75</td>
<td>85</td>
<td>91</td>
<td>77</td>
</tr>
</tbody>
</table>

**Notes:** Tr Vol means traditional volunteer. Rows do not add to 100%.

* A variable that = 1 if an organization responded that it would be "likely" or "very likely" to reduce service levels, quality of service, or both, in response to losing all of its regular volunteers without replacement, and =0 otherwise.