Can Tailored Communications Motivate Volunteers? A Field Experiment

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Discussion Paper
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Abstract

Over 25% of the US population volunteers. Clary et al. (1998) devised a survey that identifies a volunteer’s primary motive for volunteering. We investigate the effect of tailoring the communications that volunteers receive from their organizations (e.g., printed newsletters, update emails) to each volunteer’s stated motive for volunteering affects volunteer performance. We find that in general, such tailoring has no effect, but that for volunteers who are motivated primarily by the pursuit of career-related benefits, such tailoring can have a substantial, positive effect on hours volunteered. We also find that the (in)effectiveness of this tailoring does not depend upon the volunteers’ knowledge of the tailoring.

The tailoring of communications does not involve the explicit manipulation of material incentives. This renders it particularly attractive given the emergence of evidence on how extrinsic incentives can crowd out intrinsic incentives, especially in the domain of charitable contributions.

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1 We wish to thank Alexandra Mislin and Margaret McConnell for helpful comments. Corresponding author: Omar Al-Ubaydli, Department of Economics, George Mason University, MSN 3G4, 4400 University Dr., Fairfax VA, 22030. Tel: 703-993-4538, Fax: 703-993-1133. Affiliations: Al-Ubaydli: Department of Economics and Mercatus Center, George Mason University. Lee: Kenneth and Anne Griffin Foundation.
1. Introduction

In 1990, volunteer labor accounted for almost 7% of employment in the US (Frey and Goette 1999). Over 25% of the US population volunteers (BLS 2010). Given its importance to aggregate economic activity, there is much to be gained from understanding the determinants of volunteer performance.

Clary et al. (1998) find six possible motives for volunteering, and they devise a survey that assesses an individual volunteer’s principal motive. They demonstrate that various measures of volunteer happiness are increasing in the extent to which a volunteer’s tasks satisfy the volunteer’s stated motivations. For example, if a volunteer declares that she volunteers primarily to obtain career-relevant skills, and she regards her volunteer work as being a poor source of career-relevant skills, she will express dissatisfaction and will be less likely to continue volunteering there. We seek to extend the work of Clary et al. (1998).

Non-profit organizations (and other organizations that rely on volunteers) communicate with their volunteers using a variety of media, including newsletters, emails, ‘thank you’ notes, etc. This paper is a natural field experiment investigating whether tailoring the content of these communications to the stated motivations of a volunteer has a positive effect on the number of hours she volunteers and upon the probability of retaining her services.

To illustrate this, consider two volunteers, Alex and Robin, performing the same task for a humanitarian charity. Alex is motivated primarily by an altruistic desire to help others, while Robin is motivated primarily by a desire to acquire career-relevant skills. Both receive a monthly newsletter reporting the charity’s latest activities. If, rather than sending them both the same newsletter, we send Alex a newsletter emphasizing the positive humanitarian consequences of volunteering, and we send Robin a newsletter emphasizing the career benefits of volunteering, will they both work harder?

For the organization with whom we cooperated for this field experiment, we find that in general, this kind of tailoring has no effect on the hours volunteered or retention. However we find that for volunteers who are primarily motivated by career concerns, there is a substantial, positive effect on the number of hours volunteered of tailoring communications to their stated preferences.

If an organization that requires volunteers tailors communications in this manner over an extended period of time, the act of tailoring (or at least differential treatment of volunteers) is likely to come to the attention of the volunteers. In general, manipulating stimuli in an attempt to influence behavior while the target of the stimuli is aware of this can have contrast effects (e.g., see Mussweiler and Strack 1999). We therefore investigated whether telling volunteers that the tailoring was going to occur interacted with the treatment effect of tailoring materials. We found no evidence of an interaction.

Our paper has several contributions. First, there is growing evidence that in the domain of philanthropy, extrinsic (financial) incentives can crowd out intrinsic incentives (see Deci et al. 1999 and Benabou and Tirole 2003, 2006). Our intervention is novel, does not suffer from this potential pitfall, and has the added advantage of being extremely inexpensive (which is especially important during a time when non-profits are suffering heavily from the worldwide recession).
Second, we are able to reliably identify the causal effect by using randomized control; Clary et al. (1998) relied on endogenous variation in the main treatment variable when investigating volunteers’ satisfaction and commitment to their current organization.

Third, the benefits of randomized control do not come at the expense of estimating causal effects in an abstract environment. The outcome measures in which we are interested (hours volunteered over multiple weeks, continued year-on-year volunteering) cannot be exactly replicated in short, laboratory sessions, and using hypothetical analogues raises concerns about hypothetical bias (Cummings et al. 1997). In light of this, using a natural environment has major advantages for deriving policy recommendations.

2. Background

There is a large literature on the determinants of philanthropy (see the interdisciplinary review by Bekkers and Wiepking 2007), much of it coming from economics. Within economics, the literature on volunteering is quite small compared to the literature on financial contributions, and the literature on operationalizable techniques for motivating volunteers forms an even smaller subset, most of it focusing on the role of financial incentives.2 An emergent result is that financial incentives can have an adverse effect on philanthropy (see Deci et al. 1999 and Benabou and Tirole 2003, 2006): extrinsic incentives can crowd out intrinsic incentives.

This poses a quandary, since financial rewards are typically the bedrock of any incentive scheme proposed by an economist. With its emphasis on material returns, the neoclassical model of decision-making is ill-equipped to provide definitive policy recommendations on volunteering. However by directly studying what motivates volunteers, Clary et al. (1998) does yield policy recommendations.

The functional approach to volunteer motivation

Clary et al. (1998) classify volunteers according to the following motivations.

1. Values: expressing values related to altruistic and humanitarian concerns for others.
2. Understanding: seeking new learning experiences and an opportunity to exercise skills that are otherwise rarely deployed.
3. Social: being with friends and doing something of which friends approve.
4. Career: career-related benefits, e.g., signaling personality traits or improving contacts.
5. Protective: protecting one’s ego from the negative features of one’s self, e.g., guilt over being more fortunate than others.
6. Enhancement: a way of maintaining and enhancing positive affect, including self esteem.

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The authors devise a survey for identifying a volunteer’s primary motivation. It comprises of 30 questions that are answered using a likert scale (see the appendix). For example, on a scale of 1-to-7, please indicate how important or accurate the following was for you in your decision to volunteer at the [organization]: “I am concerned about those less fortunate than myself.” Using principal components analysis (on this and on modified forms of the survey), they confirm that motivation is well modeled by six factors, and that people’s responses are stable over time.

After devising the survey, Clary et al. (1998) validate it via several studies. In their first study, participants complete the volunteering survey and are then shown a series of advertisements seeking volunteers. Each advertisement corresponded to one of the six motivations in the survey. Participants were asked to rate the attractiveness of each advertisement. The authors found stated motivations (via the volunteering survey) to be strongly positively related to the stated attractiveness of each advertisement.

In the second and third studies, the authors administered the volunteering survey to volunteers at a local hospital. After a few weeks, the volunteers completed a follow-up survey inquiring about the nature of their work and how satisfied they were. Clary et al. found that if a factor was important to a volunteer and it was serviced by his/her work, then the volunteer would be very satisfied and would be more likely to continue volunteering there.

Let $X$ denote the factor that is most important to a volunteer, and let $X'$ denote the factor most strongly associated with a volunteer stimulus, e.g., a volunteering brochure, volunteering task etc. Finally let $Y$ denote a volunteering outcome, e.g., volunteer satisfaction, hours worked by the volunteer etc. An important policy parameter estimated by these studies is the causal effect of greater congruence between $X$ and $X'$ on $Y$.\footnote{It is clear that Clary et al. (1998) is a paper that is concerned with much more than estimating this causal effect. As policy-oriented economists, this is our primary interest. Thus we believe that our criticisms and refinement of their design stem primarily from our narrower emphasis than from their overlooking these possibilities when they conducted their study.}

In the first study above, Clary et al. randomized $X'$ and therefore identified the causal effect. However in the latter studies, $X'$ was not randomized; the congruence between $X$ and $X'$ was reported by the volunteers. Consequently the possibility of endogeneity is a concern. Despite this, the second and third studies do have an important (policy-related) advantage over the first study: the outcome involves actual volunteering behavior rather than hypothetical stated interest. The manager of a non-profit is likely more interested in knowing how to make her volunteers happy and committed than in making them express hypothetical interest in future opportunities.

Towards an experimental design

We build upon Clary et al. (1998) by estimating the causal effect of congruence on a substantial volunteering outcome while ensuring randomized control. As Clary et al. (1998) point out, the practical application of their survey would be to manipulate volunteers’ tasks so that they fit their volunteering
motives, e.g., a career type volunteer should be assigned tasks that help her build skills and generate contacts, while a social volunteer should be assigned tasks with their friends.

In practice, this is difficult to do (even setting aside the issue of randomizing volunteers into a task that they might not like), since most non-profits have a limited range of tasks that require volunteers. In other words, there are only so many dimensions with which to manipulate the congruence.

The huge literatures on stereotyping and priming offer an alternative. Similar to all decision-making scenarios, when volunteers make decisions about whether or not to volunteer, or how much time to volunteer, they are likely to activate a mental schema related to volunteering (Sherman 1996). The schema will be based on, among other things, the totality of volunteering-related stimuli experienced by the volunteer. As suggested by Clary et al. (1998), the most obvious (and likely effective) way to manipulate this schema is to manipulate the volunteering tasks.

A subtle and more practical alternative is to manipulate the communications materials that the volunteer receives as part of her association with the organization, e.g., newsletters, emails, ‘thank you’ cards etc. Thus suppose a volunteer is a career type according to the functional classification of Clary et al. (1998) but is currently performing generic tasks that are do not specifically appeal to a career type volunteer’s motivation. Rather than assigning her new tasks that build career-related skills, the organization can simply draw attention to the career-related aspects of the tasks that are currently assigned.

This is essentially an extension of the Clary et al. (1998) study that used promotional materials except that we are holding the task constant and the materials that we are manipulating are the active, internal communications of the organization. Naturally, since such communications comprise a small proportion of the volunteering stimuli perceived by the volunteer, and a much smaller proportion than the actual constituents of the tasks assigned to the volunteer, we would expect such manipulations to have a smaller effect. Nevertheless the literatures on stereotyping (Sherman 1996) and priming (Dijksterhuis et al. 2000) suggest that there may still be an effect.

As mentioned above, if such an effect exists, then this would be of particular interest to the managers of organizations that depend upon volunteers. This is because manipulating communications is cheap and logistically straightforward.

3. Experimental design

The Center for Economic Progress (henceforth CEP) is a non-profit organization in Chicago, IL.⁴ Its mission is to provide tax and financial counseling to low-income families. Volunteers' principal function

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⁴ http://www.economicprogress.org/
is to assist the CEP’s clients (the low income families) in preparing their tax returns.\textsuperscript{5} Beyond this, they also carry out administrative work in the CEP’s various sites.

The CEP has approximately 30 sites around the greater Chicago area. These sites are where volunteers conduct their duties. During tax season (January 1\textsuperscript{st} to April 15\textsuperscript{th}), the volunteers have access to a digital portal that allows them to schedule their work. This is necessary because site resources, such as computers, are in fixed supply. For the most part, demand for the volunteers’ time exceeds the supply, i.e., it is rare for a volunteer who wants to work to fail to find an empty slot. Consequently, the only constraint on a volunteer’s work is their own idiosyncratic schedule.

New volunteers must undergo training before they start to work. The CEP organizes training seminars throughout the month of January around its different sites. The training is quite costly and so the CEP is always looking to improve volunteer retention (which typically stands at approximately 50%).

Throughout the year, and especially during tax season, the volunteers receive communications from the CEP. A large proportion are logistical emails (e.g., information about site closures or reminders about seminars). Other communications include monthly newsletters and updates from CEP management. Finally, at the end of tax season, the CEP sends personalized ‘thank you’ notes and other expressions of gratitude.

The CEP is a very successful charity. In 2009, its volunteers donated over 37,000 hours, helping 33,000 families to earn over $50m in rebates. Despite this, the CEP was keen to explore ways of improving its volunteers’ motivation, satisfaction and retention. The opportunity to collaborate with us on a research project presented itself.

The main research question is: is it possible to have a substantial impact upon volunteer behavior by tailoring communications to volunteers by their type? Further, is any such impact robust to the volunteers being aware that the tailoring is going on?

The key advantage of running an experiment is the use of randomized control to sidestep endogeneity problems. Further, one of the advantages of working with the CEP is that we could test these hypotheses in a natural rather than abstract environment (see Harrison and List 2004).

Procedure

This experiment has two stages: administering the survey (to assess volunteer types) and tailoring communications. To maximize survey completion in a cost-effective manner, we decided to administer the surveys during the mandatory training sessions that took place in January.

There were 53 training sessions, divided approximately in equal measure to sessions for new volunteers and sessions for returning volunteers. The 53 sessions occurred in 19 locations around the greater Chicago area. Volunteers were free to sign up to the sessions they found most convenient (subject to

\textsuperscript{5} Many families qualify for substantial rebates on their federal and state taxes but they lack the skills to complete their tax returns, forcing them to forgo these rebates.
the sessions having spaces). Training sessions were run by paid instructors. The sessions that were close to the center of Chicago (which accounted for over half of the volunteers) also had CEP personnel present.

After checking in the participants, and immediately prior to the start of the training session, the instructors distributed the surveys to the volunteers and gave them a few minutes to complete them. The survey was identical to that used by Clary et al. (1998). To give the volunteers an incentive to complete the survey, they were told that completed surveys would be entered into a raffle for some gift vouchers.

Volunteer type was determined by the category in which the volunteer had the highest average stated importance. As will be discussed in the results section, of the six possible volunteer types, protective and social types were incredibly infrequent (less than 3%) in our sample. We reclassified these volunteers by their secondary type. Each volunteer was also assigned an opposite type, which was the category with the lowest average stated importance.  

This study’s principal research question concerns the effect of tailoring communications on volunteer behavior. We were also interested in a secondary question: if volunteers know that the survey will be used to tailor communications, does this affect:

- How they respond to the survey, and
- How they respond to the communications?

The literature on anchoring (Mussweiler and Strack 1999) demonstrates that when people are aware that their attention is being intentionally directed, this can generate contrast effects, i.e., a zero or possibly negative treatment effect. The tailoring of communications is an attempt to anchor volunteers’ thinking upon a certain aspect of the task while they are deciding on how much effort to exert, and so contrast effects are a valid concern.

While it is possible for the CEP to, year-upon-year, issue the survey and tailor communications without ever explicitly disclosing its intentions, volunteers could plausibly infer the plan on their own, e.g., friends could realize that they are getting different versions of a newsletter, and may even realize that the differentiation matches their survey responses.

To investigate this, we administered two versions of the survey (see the appendix). The control (non-disclosure) made no mention of the CEP’s intention to tailor communications. The treatment (full-disclosure) added the following paragraph to the instructions:

> These surveys help us understand what motivates each of you to volunteer for us, something that we are extremely grateful that you have decided to do. Knowing this, we can adapt our communications with you so that they stress the aspects of volunteering at the CEP that most appeal to you.

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6 In both type and opposite type, ties were broken by randomly assigning a type from the equally scored categories.
Survey type was randomized by session to avoid intra-session differences in instructions. The sessions varied substantially in size (below 10 volunteers and well over 50) and show-up rates were impossible to predict with any degree of accuracy, partly due to the fact that many volunteers would bring their friends to sessions and sign-up on the spot. This meant that we could not achieve a perfectly balanced randomization.

The final training sessions occurred in late January. Analyzing the surveys to deduce volunteer type took several weeks, during which time the volunteers continued to receive generic (untailored) communications. Aside from logistical emails, these consisted of monthly newsletters.

We manipulated five communications:

1. A mid-term update letter from the CEP’s executive director delivered by email on March 10th
2. A mid-term newsletter delivered by mail on March 22nd
3. A post tax season newsletter delivered by mail during August
4. An end of season flyer delivered during November
5. An electronic newsletter delivered during December

Only the first two were during tax season (Jan 1st – April 15th) and therefore able to affect hours volunteered.

We produced five versions of each of these communications: a generic version, which was what the CEP would have produced without our intervention, and then four tailored versions (career, enhancement, understanding, values). Generic versions usually touched upon all of the four versions, but the emphasis was almost always on values-type volunteers.7

We worked with the CEP to produce tailored versions that were still very natural. For example, it is common for all communications to involve an expression of gratitude to the volunteers. A pure, career-type volunteer would, in principle, be indifferent to such gratitude. However we retained the expression of gratitude. Thus tailored versions should be thought of as being the same as the generic version but with an emphasis on (rather than exclusive attention to) one category.

The different versions can be found in the appendix. They were based on two sources: the examples and discussion in Clary et al. (1998), and the questions in the survey that were used to identify each type.

For the communications to have an effect, they must be read by the volunteers. There is no reliable way of determining the extent to which a volunteer has read an email or newsletter. However to maximize the probability of a mailed newsletter being read, we made it short (one-side) and printed it in color on glossy paper. The CEP’s design team also ensured that it was aesthetically pleasing.

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7 Creating a longer version that appealed to all types carries two risks: first, it will not be read due to length. Second, the message targeting each type will be diluted.
We had three treatments.

1. Badly matched (control 1): volunteer receives version corresponding to his/her opposite type.
3. Well matched (treatment): volunteer receives version corresponding to his/her type.

We included the generic treatment to ensure the availability of a good counterfactual to our study. We included the badly matched treatment to maximize power. The proportions were 40% badly matched, 20% generic and 40% well matched. We randomized treatment within each training session to ensure a balanced assignment.

Predictions

The outcome variables are the hours worked by a volunteer and the decision to return for the following volunteering season by the volunteer. Our first two predictions follow from Clary et al. (1998).

**Prediction 1**: Volunteers who receive well matched materials work more hours than those who receive generic materials and/or those who receive badly matched materials.\(^8\)

**Prediction 2**: Volunteers who receive well matched materials are more likely to return for the following volunteering season than those who receive generic materials and/or those who receive badly matched materials.

Our third and fourth predictions are based on the anchoring and contrast effects literature (Mussweiler and Strack 1999).

**Prediction 3**: The treatment effect of receiving well matched vs. badly matched (or generic) materials on hours worked will be larger for those unaware of the matching (non-disclosure) than those who are aware of it (full-disclosure).

**Prediction 4**: The treatment effect of receiving well matched vs. badly matched (or generic) materials on volunteer retention will be larger for those unaware of the matching (non-disclosure) than those who are aware of it (full-disclosure).

The final prediction concerns the possibility of a heterogeneous treatment effect.

**Prediction 5**: The accuracy of predictions 1-to-4 differs by volunteer type.

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\(^8\) Given the proposed mechanism, an ideal test of this hypothesis would involve collecting data on the attention paid by each volunteer to the communications. We decided against this for several reasons. First, the CEP’s own voluntary surveys (e.g., their end-of-season satisfaction survey) have a low response rate (approximately 30%), so any data collected would plausibly suffer from selection bias on the respondents. Second, ‘did you read the newsletter’ would be a bizarre and unnatural question for the CEP to ask its volunteers, and this would threaten to undermine the experiment’s integrity. Finally, volunteers may plausibly lie when responding to any such inquiry; there is certainly no extrinsic incentive to respond truthfully.
We expect the smallest treatment effect for values types. This is because the communications that the CEP typically employs, including the generic versions of our interventions and the communications prior to our interventions, are essentially geared towards values types. The starkest difference between our tailored materials and the generic versions are in the career and enhancement versions.

4. Results

We administered the survey to approximately 500 new volunteers. The CEP has demographic information on most of its volunteers, though data is missing for some variables (e.g., some volunteers did not declare their gender and have a gender-neutral name). To retain comparability of our models that condition on demographics to those that do not, we only test the predictions for volunteers for whom we have the complete array of demographics. Thus our final sample size is 432 volunteers. Tax season (January 1st – April 15th) is approximately 100 days long.

Before formally testing our predictions, we provide some descriptive statistics about the data, and we also present some preliminary results that do not relate directly to the above predictions.

Overview of the data and preliminary results

Table 1 shows the sample statistics for the principal numerical and binary variables. The dependent variable in our models will be the number of hours volunteered, which has an average of 25 over the (approximately) 100 days of tax season. Of the volunteers in the sample, 41% returned to volunteer in 2011.

As described in section 3, we had two interventions that could affect hours volunteered: a letter from the CEP director emailed on 3/10, and a newsletter mailed out on 3/22 (and therefore arriving by approximately 3/24). Close to half of the total hours volunteered occurred after our first intervention. As can be seen in Figure 1, the distribution of total hours is skewed. Taking the natural logarithm of total hours eliminates much of the skewness. We persist with the untransformed hours to simplify the interpretation of regression coefficients when ‘hours’ is the dependent variable. However we make sure to investigate robustness to using a logarithmic specification.

Figure 2 is a time series of average hours by day. Hours are minimal in January because that is when most of the training is occurring. From late January onwards, the largest spikes are on Saturdays. Volunteering centers are, in general, closed on Fridays and Sundays.

Also in Table 1, 40% completed the full-disclosure version and 41% were unemployed. Table 2 shows the volunteer types inferred from the surveys. A concise reminder of what each type represents follows.

- Career: volunteer to gain skills and contacts.
- Enhancement: volunteer to gain self-esteem and a sense of importance.
- Understanding: volunteer for new experiences and to see things from a different perspective.
• **Values**: volunteer out of a direct desire to help others.

The first row confirms that values types are the most frequent by far (51% of volunteers).

**Preliminary result**: Volunteer classification based on the survey is not affected by whether the survey was non- vs. full-disclosure.

This is confirmed by a series of Mann-Whitney tests and t-tests, all of which yield p-values well in excess of 10%. Ocular evidence of the similarity is in the second and third rows of Table 2.

The bottom panel of Table 2 describes the relationship between volunteer type and opposite type. Given the distribution of volunteer types and opposite types, and given the randomization weights (40% well matched, 20% generic, 40% badly matched), the resulting materials actually delivered were:

- Career – 23%
- Enhancement – 22%
- Understanding – 11%
- Values – 23%
- Generic – 20%

Before proceeding to the main results, in Table 3, we briefly explore how hours, retention and volunteer type relate to the other naturally varying variables.

Model 1 reveals that age and being unemployed are strongly, positively associated with hours volunteered. Conditional on these observables, volunteer type does not have a significant relationship with hours volunteered.

Model 2 reveals that age has a substantial positive association with the probability of a volunteer returning to volunteer the next year. Also, career types are 13% less likely to return than values types.

Models 3-to-6 are probits where the dependent variable is a dummy indicating being of a certain volunteer type. Older volunteers are less likely to be career and understanding types, and more likely to be values types. Unemployed volunteers are less likely to be values types.

**Main results**

The CEP’s mission is to improve the financial independence and well-being of its clients, principally by getting volunteers to help them complete their tax returns. Each tax return takes approximately 1 hour to complete, and the average rebate (federal plus state) is approximately $2,200. Generally speaking, the demand for volunteer hours far outstrips the supply.9 This means that from the CEP’s perspective,

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9 There are periods of time where the demand falls a little below the supply, either due to a limited number of available clients or to limitations on available computers at the centers, but for the most part, demand exceeds supply.
the marginal value of a volunteer hour is very large. Moreover, training is very costly to the CEP, and so they are particularly keen to improve retention.

The treatment group are the volunteers who receive well-matched materials. There are three ways to define the control group:

1. Volunteers who receive badly-matched materials.
2. Volunteers who receive generic materials.
3. Both of the above.

By default, we will use option (3) as the control group, but we will also explore the other two.

**Result 1:** Volunteers who receive well-matched materials work the same number of hours (statistically) as those who receive generic materials and/or those who receive badly matched materials. (Note that this assumes a treatment effect that does not vary by volunteer type.)

We estimate the treatment effect using regression models. We assume a quasi-constant treatment effect:

\[ h_{it} = \alpha + \sum_{s=2}^{99} \theta_s T_s + \beta_{pre} D_{pre} + \beta_{email} D_{email} + \beta_{newsletter} D_{newsletter} + u_i + \epsilon_{it} \]

\( i \) denotes volunteer and \( t \) denotes day. \( h \) denotes hours worked. \( T_t \) is a time effect, i.e., it is a dummy variable that takes the value 1 on day \( t \) and 0 otherwise. Let \( D \) be the treatment dummy variable, let \( t = 67 \) correspond to 3/11 (the date of the first intervention) and let \( t = 80 \) correspond to 3/25 (the date of the second intervention).

- \( D_{pre} = D \) if \( t < 67 \); \( D_{pre} = 0 \) if \( t \geq 67 \)
- \( D_{email} = D \) if \( 67 \leq t < 80 \); \( D_{email} = 0 \) if \( t < 67 \) or \( t \geq 80 \)
- \( D_{newsletter} = D \) if \( t \geq 80 \); \( D_{newsletter} = 0 \) if \( t < 80 \)

Thus, we are assuming a treatment effect that is constant between interventions but can differ by intervention. Finally \( u \) is a random effect and \( \epsilon \) is pure white noise.\(^{10}\) We also allow for the inclusion of the naturally-varying controls in Table 3, in addition to a dummy for full- vs. non-disclosure survey. The results are in Table 4.

Models 1 and 2 are excluding and include additional controls, respectively.\(^{11}\) They replicate the findings of the unconditional t-tests and MW-tests, i.e., a treatment effect that is insignificantly different from

\(^{10}\) We have the day-by-day breakdown of hours volunteered. It is possible that there is a positive treatment effect from our interventions in the immediate aftermath, followed by a compensatory decrease later. In other words, the interventions lead to a redistribution of volunteering time but have no effect on the aggregate. Breaking down Figure 2 into control and treatment, as well as estimating a regression that allows the treatment effect to fully interact with the time dummies, reveals no such phenomenon.

\(^{11}\) Using \( \ln(1 + h_{it}) \) as the dependent variable does not alter Result 1. Results are available upon request.
zero. The estimated sign and magnitude of the effect of the naturally-varying controls mimics the specification in Table 3. The full-disclosure dummy has in insignificant effect.

In Model 3, we only include the volunteers receiving badly-matched materials in the control group. Result 1 is unaffected. (Similar results are obtained if we use only those who received generic materials as the control group.)

**Result 2**: Volunteers who receive well matched materials are as likely (statistically) to return as volunteers for the following tax season as those who receive generic materials and/or those who receive badly matched materials. (Note that this assumes a treatment effect that does not vary by volunteer type.)

This result is based on the probits in Table 5. Model 1 (no controls), Model 2 (controls) and Model 3 (control group is only badly matched volunteers) all yield a treatment effect that is small, negative and statistically insignificant.

**Result 3**: The treatment effect of receiving well matched vs. badly matched (and generic) materials on hours worked is not affected by the volunteers being aware of the matching (full-disclosure) vs. unaware of the matching (non-disclosure).

Models 4 (full-disclosure) and 5 (non-disclosure) in Table 4 contain the results. Somewhat peculiarly, since it is prior to any intervention, we find that there is a statistically (marginally) significant positive effect of the email on hours worked in the period up to 3/10 for full-disclosure but not for non-disclosure. We cautiously dismiss this instance of marginal statistical significance as a random aberration.

**Result 4**: The treatment effect of receiving well matched vs. badly matched (and generic) materials on the likelihood of a volunteer returning is not affected by the volunteers being aware of the matching (full-disclosure) vs. unaware of the matching (non-disclosure).

Models 4 and 5 in Table 5 confirm this result.

**Result 5a**: The treatment effect of receiving well matched vs. badly matched (or generic) materials on hours worked is positive for career type volunteers.

Table 6 estimates the treatment effect on hours for each of the four volunteer types. Model 1 yields a significant effect for career types. The estimated treatment effect is economically very significant: 0.13 hours per day per volunteer over the 21 days of tax season that remain after the newsletter equates to over 2.5 total hours per volunteer. As described in section 3 above, a typical tax return takes approximately an hour and yields an average of over $2,000 in tax rebates for the client. Figure 3 is a pair of histograms of hours worked by career types (treatment vs. control). It shows that the difference is not driven by any outliers.

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12 Estimating a nesting model that allows the treatment effect to interact with disclosure type yields an interaction term that is statistically insignificant. The same is true for Result 4.
Table 7 has some additional parametric specifications. Model 1 demonstrates robustness to including demographic controls.\textsuperscript{13} Models 2 (badly matched only) and 3 (generic only) vary the control group and leave the results essentially unchanged.

**Result 5b:** The positive treatment effect estimated for career type volunteers is driven by the matching of materials rather than the receipt of career versions of newsletter.

In Model 4 in Table 7, we estimate the effect of receiving career materials vs. any other material for new, non-career volunteers. The newsletter has an insignificantly negative effect, confirming that it is the interaction between receiving career materials and being a career type that is driving Result 5a.

**Result 5c:** The treatment effect of receiving well matched vs. badly matched (or generic) materials on the likelihood of a volunteer returning is insignificantly different from zero for all volunteer types.

This result can be seen in Table 8.

5. **Summary and discussion**

Our main research question was: is it possible to have a substantial impact upon volunteer behavior by tailoring communications to volunteers by their type? Further, is any such impact robust to the volunteers being aware that the tailoring is going on? A positive answer to the first question would be of significance to managers of organizations that rely on volunteers, especially given how inexpensive it would be to exploit such an effect.

We collected data using randomized control in a natural setting. Within the confines of the organization with whom we collaborated (a new cohort of volunteers at the CEP), we find that in general, the answer to both research questions is negative. However for the subgroup that is career type volunteers, we find a positive effect of tailoring on hours volunteered. Translating this latter effect into tax rebates yields a figure of over $5,000, which is very significant from the CEP’s perspective.

To some extent, the general inefficacy of this method is not surprising. The mechanism relies on a mixture of stereotyping and priming. The schemata that underlie stereotyping effects are much more malleable early in their formation (analogously to Bayesian updating), while priming effects typically evaporate within minutes of the stimulus.\textsuperscript{14} If we were to somehow require a volunteering decision immediately after a volunteer read their assigned newsletter, we would have plausibly expected a

\textsuperscript{13} Using $\ln(1 + h_{it})$ as the dependent variable does not alter Result 4b. Results are available upon request.

\textsuperscript{14} The exception is chronic priming (see Bargh et al. 1986), but that requires repeated exposure to the stimulus. Since we use only five interventions over nine months, and it is implausible to expect that each volunteer rereads the newsletter every morning (or even more than a couple of times), this mechanism most likely does not apply.
stronger treatment effect. However even if that were feasible, it would not be representative of decision-making by volunteers.\textsuperscript{15}

The same reasoning (in the case of stereotyping) can help explain why we found a positive treatment effect for career type volunteers. The contents of the career versions of the materials arguably represented the largest deviation from the contents of CEP communications, therefore making it exert a larger effect on the volunteering schema.

The policy implication for the CEP is clear: it should make an effort to identify career types among new volunteers and to communicate to them the career benefits of volunteering at the CEP. Generalizing beyond the confines of the CEP is certainly precarious in light of the sensitivity of the estimated treatment effect to the discussed factors. For example with our data, it is impossible to determine if the effect is strongest for career types because of a common trait of career types (e.g., they are comparatively motivated by extrinsic incentives) or because of the interaction between being a career type and being at the CEP (e.g., because the CEP’s standard communications differ substantially from what career type communications would contain).

However we believe that given how inexpensive the method is and how large the potential returns are in terms of volunteer hours, it would be in the interests of any large organization that employs volunteers to conduct its own analogous study.

References


\textsuperscript{15} It would be more appropriate for decisions such as door-to-door solicitations for charitable contributions (see, e.g., Landry et al. 2006).


Figure 1: Histogram of total hours volunteered
Figure 2: Time series of average hours volunteered by day
Figure 3: Histograms of hours volunteered 3/25 – 4/15 for career type volunteers
### Tables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours volunteered: Total</td>
<td>25 (18)</td>
</tr>
<tr>
<td>Hours volunteered: Up to 3/10</td>
<td>16 (11)</td>
</tr>
<tr>
<td>Hours volunteered: 3/11 - 3/24</td>
<td>8.3 (9.1)</td>
</tr>
<tr>
<td>Hours volunteered: 3/25 - 4/15</td>
<td>5.3 (6.6)</td>
</tr>
<tr>
<td>Survey: Full-disclosure (1) vs. non-disclosure (0)</td>
<td>0.40 -</td>
</tr>
<tr>
<td>Returned in 2011 (1) vs. stopped volunteering (0)</td>
<td>0.41 -</td>
</tr>
<tr>
<td>Age in years</td>
<td>34 (13)</td>
</tr>
<tr>
<td>Male (1) vs. female (0)</td>
<td>0.41 -</td>
</tr>
<tr>
<td>Unemployed (1) vs. employed (0)</td>
<td>0.41 -</td>
</tr>
</tbody>
</table>

Table 1: Sample statistics for principal numerical and binary variables (432 observations)
<table>
<thead>
<tr>
<th>By: Survey type</th>
<th>Career</th>
<th>Enhancement</th>
<th>Understanding</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative frequency</td>
<td>17%</td>
<td>8%</td>
<td>24%</td>
<td>51%</td>
</tr>
<tr>
<td>Non-disclosure</td>
<td>16%</td>
<td>9%</td>
<td>24%</td>
<td>51%</td>
</tr>
<tr>
<td>Full-disclosure</td>
<td>20%</td>
<td>7%</td>
<td>23%</td>
<td>51%</td>
</tr>
<tr>
<td>Opposite type</td>
<td>Career</td>
<td>Enhancement</td>
<td>Understanding</td>
<td>Values</td>
</tr>
<tr>
<td>Career</td>
<td>-</td>
<td>58%</td>
<td>36%</td>
<td>54%</td>
</tr>
<tr>
<td>Enhancement</td>
<td>71%</td>
<td>-</td>
<td>55%</td>
<td>44%</td>
</tr>
<tr>
<td>Understanding</td>
<td>4%</td>
<td>17%</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Values</td>
<td>25%</td>
<td>25%</td>
<td>9%</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 2: Volunteer type inferred from survey responses**

Each column refers to the volunteer type. The top row is the aggregate distribution. The subsequent rows break down the distribution by other variables. Total sample size is 432.
<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Total hours volunteered</td>
<td>Returned (dummy)</td>
<td>Career type (dummy)</td>
<td>Enhancement type (dummy)</td>
<td>Understanding type (dummy)</td>
<td>Values type (dummy)</td>
</tr>
<tr>
<td>Estimation method</td>
<td>Regression</td>
<td>Probit</td>
<td>Probit</td>
<td>Probit</td>
<td>Probit</td>
<td>Probit</td>
</tr>
<tr>
<td>Constant</td>
<td>9.7**</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(3.2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Career type (dummy)</td>
<td>0.84</td>
<td>-0.13*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(2.5)</td>
<td>(0.065)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enhancement type (dummy)</td>
<td>-2.0</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(3.2)</td>
<td>(0.088)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Understanding type (dummy)</td>
<td>-0.38</td>
<td>0.028</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(2.2)</td>
<td>(0.061)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age (years)</td>
<td>0.37***</td>
<td>0.0049**</td>
<td>-0.0074***</td>
<td>-0.00027</td>
<td>-0.0047***</td>
<td>0.012***</td>
</tr>
<tr>
<td></td>
<td>(0.071)</td>
<td>(0.0019)</td>
<td>(0.0016)</td>
<td>(0.0011)</td>
<td>(0.0017)</td>
<td>(0.0020)</td>
</tr>
<tr>
<td>Male (dummy)</td>
<td>1.4</td>
<td>-0.051</td>
<td>0.011</td>
<td>0.012</td>
<td>0.033</td>
<td>-0.068</td>
</tr>
<tr>
<td></td>
<td>(1.8)</td>
<td>(0.049)</td>
<td>(0.036)</td>
<td>(0.027)</td>
<td>(0.042)</td>
<td>(0.051)</td>
</tr>
<tr>
<td>Unemployed (dummy)</td>
<td>4.5***</td>
<td>0.0095</td>
<td>0.040</td>
<td>0.039</td>
<td>0.015</td>
<td>-0.10**</td>
</tr>
<tr>
<td></td>
<td>(1.8)</td>
<td>(0.049)</td>
<td>(0.036)</td>
<td>(0.028)</td>
<td>(0.041)</td>
<td>(0.050)</td>
</tr>
<tr>
<td>Observations</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
</tr>
<tr>
<td>R² / Pseudo R²</td>
<td>0.078</td>
<td>0.028</td>
<td>0.064</td>
<td>0.0097</td>
<td>0.021</td>
<td>0.076</td>
</tr>
</tbody>
</table>

Table 3: Regression and probit models of naturally-varying variables

In probits, coefficients are marginal probability estimates evaluated at the mean. Standard errors are in parentheses. Asterisks denote significance: * = 10%, ** = 5%, *** = 1%.
<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
</tr>
<tr>
<td>Full- vs. Non-disclosure</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>Full</td>
<td>Non</td>
</tr>
<tr>
<td>Control group composition</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
<td>Badly</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
</tr>
<tr>
<td>Well-matched: Up to 3/10</td>
<td>0.017 (0.019)</td>
<td>0.015 (0.019)</td>
<td>0.021 (0.020)</td>
<td>0.051* (0.030)</td>
<td>-0.0067 (0.025)</td>
</tr>
<tr>
<td>Well-matched: 3/11 - 3/24</td>
<td>0.022 (0.029)</td>
<td>0.021 (0.028)</td>
<td>0.037 (0.031)</td>
<td>0.058 (0.045)</td>
<td>-0.0031 (0.037)</td>
</tr>
<tr>
<td>Well-matched: 3/24 - end</td>
<td>-0.0068 (0.025)</td>
<td>-0.0081 (0.024)</td>
<td>0.022 (0.027)</td>
<td>-0.007 (0.039)</td>
<td>-0.0075 (0.032)</td>
</tr>
<tr>
<td>Full-disclosure (dummy)</td>
<td>-</td>
<td>-0.012 (0.018)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age (years)</td>
<td>-</td>
<td>0.0037*** (0.00072)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Male (dummy)</td>
<td>-</td>
<td>0.014 (0.018)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unemployed (dummy)</td>
<td>-</td>
<td>0.047*** (0.018)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Career type (dummy)</td>
<td>-</td>
<td>0.0088 (0.025)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enhancement type (dummy)</td>
<td>-</td>
<td>-0.020 (0.033)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Understanding type (dummy)</td>
<td>-</td>
<td>-0.0046 (0.022)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Observations</td>
<td>42768</td>
<td>42768</td>
<td>34155</td>
<td>17127</td>
<td>25641</td>
</tr>
<tr>
<td>Number of volunteers</td>
<td>432</td>
<td>432</td>
<td>345</td>
<td>173</td>
<td>259</td>
</tr>
<tr>
<td>Random effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Day dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.079</td>
<td>0.082</td>
<td>0.078</td>
<td>0.11</td>
<td>0.067</td>
</tr>
</tbody>
</table>

**Table 4: Regression models of hours volunteered and the main treatment effect**

The ‘Well-matched’ explanatory variables refer to \( \hat{\beta}_{\text{pre}}, \hat{\beta}_{\text{email}}, \hat{\beta}_{\text{newsletter}} \). Standard errors are in parentheses. Asterisks denote significance: * = 10%, ** = 5%, *** = 1%.
<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Returned</td>
<td>Returned</td>
<td>Returned</td>
<td>Returned</td>
<td>Returned</td>
</tr>
<tr>
<td>Full- vs. Non-disclosure</td>
<td>All</td>
<td>All</td>
<td>Returned</td>
<td>Returned</td>
<td>Returned</td>
</tr>
<tr>
<td>Control group composition</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
<td>Badly</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
</tr>
<tr>
<td>Well-matched</td>
<td>-0.059</td>
<td>-0.061</td>
<td>-0.049</td>
<td>-0.076</td>
<td>-0.047</td>
</tr>
<tr>
<td></td>
<td>(0.048)</td>
<td>(0.048)</td>
<td>(0.052)</td>
<td>(0.076)</td>
<td>(0.062)</td>
</tr>
<tr>
<td>Full-disclosure (dummy)</td>
<td>-</td>
<td>0.0049</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.049)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>-</td>
<td>0.0049**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0019)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (dummy)</td>
<td>-</td>
<td>-0.050</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.049)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed (dummy)</td>
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<td>0.0091</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.049)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career type (dummy)</td>
<td>-</td>
<td>-0.13*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.065)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhancement type (dummy)</td>
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<td>-0.031</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.088)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding type (dummy)</td>
<td>-</td>
<td>-0.032</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.061)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>432</td>
<td>432</td>
<td>345</td>
<td>173</td>
<td>259</td>
</tr>
<tr>
<td>Psuedo R-squared</td>
<td>0.0025</td>
<td>0.030</td>
<td>0.0018</td>
<td>0.0042</td>
<td>0.0017</td>
</tr>
</tbody>
</table>

**Table 5: Probit models of volunteer retention and the main treatment effect**

Coefficients are marginal probability estimates evaluated at the mean. The ‘Well-matched’ explanatory variables refer to \( \hat{\beta}_{pre}, \hat{\beta}_{email}, \hat{\beta}_{newsletter} \). Standard errors are in parentheses. Asterices denote significance: * = 10%, ** = 5%, *** = 1%.
### Table 6: Regression models of hours volunteered and the main treatment effect by volunteer type

The 'Well-matched' explanatory variables refer to ($\hat{\beta}_{pre}, \hat{\beta}_{email}, \hat{\beta}_{newsletter}$). Standard errors are in parentheses. Asterices denote significance: * = 10%, ** = 5%, *** = 1%.

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
</tr>
<tr>
<td>Control group composition</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
</tr>
<tr>
<td>Volunteer type</td>
<td>Career</td>
<td>Enhancement</td>
<td>Understanding</td>
<td>Values</td>
</tr>
<tr>
<td>Well-matched: Up to 3/10</td>
<td>0.046 (0.043)</td>
<td>0.031 (0.064)</td>
<td>0.0014 (0.041)</td>
<td>0.011 (0.028)</td>
</tr>
<tr>
<td>Well-matched: 3/11 - 3/24</td>
<td>0.046 (0.065)</td>
<td>0.047 (0.094)</td>
<td>0.073 (0.058)</td>
<td>-0.013 (0.041)</td>
</tr>
<tr>
<td>Well-matched: 3/24 - end</td>
<td>0.13** (0.057)</td>
<td>0.023 (0.083)</td>
<td>-0.052 (0.051)</td>
<td>-0.035 (0.036)</td>
</tr>
<tr>
<td>Observations</td>
<td>7425</td>
<td>3564</td>
<td>10098</td>
<td>21681</td>
</tr>
<tr>
<td>Number of volunteers</td>
<td>75</td>
<td>36</td>
<td>102</td>
<td>219</td>
</tr>
<tr>
<td>Random effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Day dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.084</td>
<td>0.094</td>
<td>0.070</td>
<td>0.089</td>
</tr>
<tr>
<td>Model</td>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
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<td>---</td>
</tr>
<tr>
<td>Dependent variable</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
<td>Hours</td>
</tr>
<tr>
<td>Control group composition</td>
<td>Generic + Badly</td>
<td>Badly</td>
<td>Generic</td>
<td>Non-career materials</td>
</tr>
<tr>
<td>Volunteer type</td>
<td>Career</td>
<td>Career</td>
<td>Career</td>
<td>Non-career</td>
</tr>
<tr>
<td>Well-matched: Up to 3/10</td>
<td>0.028</td>
<td>0.021</td>
<td>0.064</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.042)</td>
<td>(0.048)</td>
<td>(0.060)</td>
<td>-</td>
</tr>
<tr>
<td>Well-matched: 3/11 - 3/24</td>
<td>0.028</td>
<td>0.080</td>
<td>-0.033</td>
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</tr>
<tr>
<td></td>
<td>(0.065)</td>
<td>(0.074)</td>
<td>(0.087)</td>
<td>-</td>
</tr>
<tr>
<td>Well-matched: 3/24 - end</td>
<td>0.11**</td>
<td>0.10*</td>
<td>0.14*</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.056)</td>
<td>(0.064)</td>
<td>(0.077)</td>
<td>-</td>
</tr>
<tr>
<td>Received career materials: Up to 3/10</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(0.026)</td>
</tr>
<tr>
<td>Received career materials: 3/11 - 3/24</td>
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<td>Male (dummy)</td>
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<td>-</td>
</tr>
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<td></td>
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<td>Observations</td>
<td>7425</td>
<td>5742</td>
<td>4653</td>
<td>35343</td>
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<tr>
<td>Number of volunteers</td>
<td>75</td>
<td>58</td>
<td>47</td>
<td>357</td>
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<td>Random effects</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Day dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.089</td>
<td>0.089</td>
<td>0.10</td>
<td>0.080</td>
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Table 7: Regression models of hours volunteered and the main treatment effect on career type volunteers

The 'Well-matched' explanatory variables refer to ($\beta_{pre}, \beta_{email}, \beta_{newsletter}$). Standard errors are in parentheses. Asterisks denote significance: * = 10%, ** = 5%, *** = 1%.
<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<td>Control group composition</td>
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<td>Generic + Badly</td>
<td>Generic + Badly</td>
<td>Generic + Badly</td>
</tr>
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<td>Volunteer type</td>
<td>Career</td>
<td>Enhancement</td>
<td>Understanding</td>
<td>Values</td>
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<td>Well-matched</td>
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<td>0.11 (0.17)</td>
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<td>Pseudo R-squared</td>
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<td>0.019</td>
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</table>

Table 8: Probit models of volunteer retention and the main treatment effect by volunteer type

The ‘Well-matched’ explanatory variables refer to \( (\hat{\beta}_{pre}, \hat{\beta}_{email}, \hat{\beta}_{newsletter}) \). Standard errors are in parentheses. Asterices denote significance: * = 10%, ** = 5%, *** = 1%.
Appendix

Volunteering survey

Name___________________________________ Email__________________________________

This is a survey about volunteering. The survey is very short and usually takes about 3 minutes to complete. Please note that all responses will be treated with the strictest of confidence.

Everyone who completes a survey with their name and email on it will be entered into a sweepstakes with all the other volunteers who fill out the survey. The first five names drawn out of a hat will each get a $100 Apple gift voucher.

Below are 30 possible reasons for volunteering. Please indicate how important or accurate each of the 30 possible reasons were for you in your decision to volunteer at the Center for Economic Progress. In each question, please shade-in one of the seven numbers.

PLEASE USE THE PROVIDED PENCILS ONLY. Our scanners will not be able to read your answers unless you use the pencils. Thank you!

[This appears in the full-disclosure version only]

These surveys help us understand what motivates each of you to volunteer for us, something that we are extremely grateful that you have decided to do. Knowing this, we can adapt our communications with you so that they stress the aspects of volunteering at the CEP that most appeal to you.

[For each of the following questions, the volunteers indicate: (1) Extremely inaccurate/unimportant, (2) Inaccurate/unimportant, (3) Weakly inaccurate/unimportant, (4) Neither accurate/important or inaccurate/unimportant, (5) Weakly accurate/important, (6) Accurate/important, (7) Extremely accurate/important.]

1. Volunteering can help me to get my foot in the door at a place where I would like to work.
3. I am concerned about those less fortunate than myself.
4. People I'm close to want me to volunteer.
5. Volunteering makes me feel important.
6. People I know share an interest in community service.
7. No matter how bad I've been feeling, volunteering helps me to forget about it.
8. I am genuinely concerned about the particular group I am serving.
9. By volunteering I feel less lonely.
10. I can make new contacts that might help my business or career.
11. Doing volunteer work relieves me of some of the guilt over being more fortunate than others.
12. I can learn more about the cause for which I am working.
14. Volunteering allows me to gain a new perspective on things.
15. Volunteering allows me to explore different career options.
16. I feel compassion toward people in need.
17. Others with whom I am close place a high value on community service.
18. Volunteering lets me learn things through direct, hands on experience.
19. I feel it is important to help others.
20. Volunteering helps me work through my own personal problems.
21. Volunteering will help me to succeed in my chosen profession.
22. I can do something for a cause that is important to me.
23. Volunteering is an important activity to the people I know best.
24. Volunteering is a good escape from my own troubles.
25. I can learn how to deal with a variety of people.
26. Volunteering makes me feel needed.
27. Volunteering makes me feel better about myself.
28. Volunteering experience will look good on my resume.
29. Volunteering is a way to make new friends.
30. I can explore my own strengths.

Midterm letter from director

Generic version

Hi {FIRST_NAME|Friend},

Thank you again for joining us this tax season! Volunteers truly are the heart and soul of our organization, and we cannot thank you enough. Speaking on behalf of our staff and board, it’s wonderful to see familiar faces year after year as well as being introduced to the new volunteers joining us for the first time. Each of you brings something important to the lives of our clients.

With half the season still to go, volunteers across our Illinois tax sites have served over 10,000 families and returned over $21 million into their homes and communities. I continue to be impressed with your results.

In addition to preparing tax returns, we’ve made a substantial change by integrating financial services at our sites, allowing a more personalized and in-depth array of services that connect our clients to the financial mainstream.
This year we celebrate our 20th anniversary, a huge milestone for staff, volunteers and supporters. I’d like to take this opportunity to thank all of you for helping make our successes possible.

I really appreciate your commitment and dedication.

Warmly,

David Marzahl
Executive Director

---

**Career version**

Thank you... [same first paragraph]

Did you know that in addition to the families you help, employers really value volunteers? A recent study by employment specialist Reed Executive found that:

- 73% of employers would recruit a candidate with volunteering experience over one without
- 94% of employers believe that volunteering can add to skills
- 94% of employees who volunteered to learn new skills had benefited either by getting their first job, improving their salary, or being promoted

I was pleased to learn that our volunteers could gain such important career benefits in addition to helping so many families.

This year we celebrate our 20th anniversary, a huge milestone for staff, volunteers and supporters. I’d like to take this opportunity to thank all of you for helping make our successes possible.

I really appreciate your commitment and dedication, and we are all very proud of the CEP’s ability to help its volunteers gain useful skills and opportunities.

---

**Enhancement version**

Thank you... [same first paragraph]

With half the season still to go, over 10,000 families have been able to rely on volunteers like you. Thanks to your hard work, over $21 million have returned into their homes and communities. I continue to be impressed with your results.

This year we celebrate our 20th anniversary, a huge milestone for staff, volunteers and supporters. I’d like to take this opportunity to thank all of you for helping make our successes possible.
Your volunteering is so important to us. I really appreciate your commitment and dedication.

---

**Understanding version**

Thank you... [same first paragraph]

Recently, we talked with some of our valued volunteers about how volunteering has helped widen their perspectives. They spoke about how surprised they were to serve such a diverse group of individuals. Our volunteers also expressed their admiration for how the young clients, seniors, and the unemployed can still have such a positive outlook. Many volunteers feel that they themselves can learn so much through direct, hands on experience with the families.

This year we celebrate our 20th anniversary, a huge milestone for staff, volunteers and supporters. I’d like to take this opportunity to thank all of you for helping make our successes possible.

I really appreciate your commitment and dedication.

---

**Values version**

Thank you... [same first paragraph]

*With real wages down in the last three years, hard-working families continue to live on the brink.* Now, 38 million Americans live in poverty. Often feeling they have no choice, those with the least end up paying more. Basic things – like filing taxes, obtaining a loan, or even cashing a paycheck – can cause families to fall behind.

Through our free tax and financial services, we serve low-wage families earning less than $50,000, and individuals earning less than $25,000 per year. Based on these income guidelines, *with your commitment we can help one in three Illinois residents.*

With half the season still to go, volunteers across our Illinois tax sites have served over 10,000 families and returned over $21 million into their homes and communities. That means that on average, *each family that you help will get over $2,000!*

This year we celebrate our 20th anniversary, a huge milestone for staff, volunteers and supporters. I’d like to take this opportunity to thank all of you for helping make our successes possible.

I really appreciate your commitment and dedication to helping those in need of your help.
Generic version

On behalf of the thousands of families that you help every year, the Center for Economic Progress is so grateful for the time that you donate. In this newsletter, we wanted to update you on our latest news.

Take a few minutes and see how the Center is being featured in the news16. One article ran in the March 8th Chicago Sun-Times and featured volunteers across the state. Great job!

The Center has partnered with Chili’s restaurants throughout Illinois as part of the Pepper Partner Profit Program! This program helps organizations raise funds quickly and easily. Simply bring a voucher into participating restaurants before April 15th and we’ll get a check for ten percent of your total purchase. Visit our website (www.economicprogress.org) for a voucher and list of participating locations.

Many employers encourage staff to get involved in the community. Additionally, some employers offer incentives for employees to donate their time to a local organization. The Center encourages you to speak with your employer and learn of any incentive programs. In February alone, State Farm donated $1,000 to the Center, matching the volunteer hours for two volunteers: Luke Wellman and Stephanie Irwin. Thanks to these volunteers for their recent contributions! And many thanks to all volunteers who have participated in employee matching campaigns across the state. We couldn’t do it without you!

16 http://www.economicprogress.org/index.php/c/In_the_News
Finally, the Center is turning 20! Our 20th anniversary celebration will be held the evening of September 25, 2010 at the Tiffany Celebration Garden at Grant Park in Chicago. More information and ticket details to come!

Keep up the great work!

---

**Career version**

On behalf of the thousands of families that you help every year, the Center for Economic Progress is so grateful for the time that you donate. In this newsletter, we wanted to share with you how volunteering can help with your career.

Volunteering is a very costly way to spend your time, and so it’s reasonable to expect that volunteers are those who don’t earn very much (possibly unemployed) or who don’t have much else to do with their time.


- Volunteers are 7% more likely to be employed
- Volunteers are 95% more likely to be employed in professional or managerial roles
- Volunteers are 24% more likely to be married and have more children
- Volunteers earn 20% more per hour

In addition to being some of the most generous members of society, it turns out that **volunteers are some of the most successful**. It’s no wonder that a recent study by Reed Executive found:

- 73% of employers would recruit a candidate with volunteering experience over one without
- 94% of employers believe that volunteering can add to skills
- 94% of employees who volunteered to learn new skills had benefited either by getting their first job, improving their salary, or being promoted

At the Center for Economic Progress, it fills us with so much pride to know that our volunteers can benefit from the time they donate. Keep up the great work!

---

**Enhancement version**

On behalf of the thousands of families that you help every year, the Center for Economic Progress is so grateful for the time that you donate. In this newsletter, we wanted to share with you why you are so important to us.
Every year, volunteers like you help return millions of dollars to hard-working families around Illinois. With so much demand, families would have been turned down without the help of volunteers like you.

This year, at the midpoint of the tax season, we were astounded by the $21 million generated by your hard work. It is always remarkable to us how you can find it in the goodness of your heart to donate so much time to helping those in need. That is why you are so important in what we do.

The great news is that volunteering can be good for your health too! Studies by experts [footnote: See Mellor et al. (2008). “Volunteering and well-being: Do self-esteem, optimism, and perceived control mediate the relationship?,” Journal of Social Service Research, 34, p64-70. Also see the Johns Hopkins study discussed at http://www.hopkinsmedicine.org/Press_releases/2004/04_06_04.html] have found that, compared to people who do not volunteer:

- Volunteers are more optimistic
- Volunteers have a stronger sense of self-control
- Volunteers feel less stress

We hope that volunteering at the Center for Economic Progress can provide you with the deep and lasting personal satisfaction of knowing that you are helping people in need. The families truly appreciate your generosity.

Understanding version

On behalf of the thousands of families that you help every year, the Center for Economic Progress is so grateful for the time that you donate. In this newsletter, we wanted to share with you what kind of experiences and perspectives people gain from working at the Center for Economic Progress.

Our volunteers have remarked about how helping out at the Center for Economic Progress can widen their perspective. It is a little known fact that 38 million Americans live in poverty. Preparing tax returns is a regular part of the annual schedule for most Americans, but for those with low incomes, preparing taxes can seem like a massive hurdle, and as a result, those with the least end up paying more. Basic things – like filing taxes, obtaining a loan, or even cashing a paycheck – can cause families to fall behind. Volunteers are often surprised about the diversity of the families that they help via the CEP.

As reported by a recent study [footnote: “Regular and occasional volunteers: How and why they help out,” Institute for Volunteering Research.], over 25% of people volunteering learn things through direct, hands on experience. Many more see volunteering as a way of exploring their own strengths. At the Center for Economic Progress, these experiences comprise one of the ways in which we feel our generous volunteers can benefit from helping our clients.
After working with the families, our volunteers have also expressed their admiration for how the young clients, seniors, and the unemployed can still have such a positive outlook despite the difficulties that they face.

Once again, thank you for your generosity and keep up the great work!

---

**Values version**

On behalf of the thousands of families that you help every year, the Center for Economic Progress is so grateful for the time that you donate. In this newsletter, we wanted to share with you how you help improve the lives of others.

When Esperanza, mother of three, walked into the Center for Economic Progress’ Tax Clinic in 2003, she had no idea that she was going to receive a tax refund of $12,000!

When Esperanza filed her tax returns for 2000, 2001 and 2002, she was not aware that she was eligible for the Earned Income Tax Credit. The Center filed amended returns and helped her claim $12,000 in refunds she and her family deserved.

**With her refund, Esperanza began saving for a house, assisted with her mother’s healthcare expenses, and bought plane tickets for her sister and niece to come visit her.**

Esperanza is now a strong supporter of the Center and conducts her own outreach efforts by distributing Center for Economic Progress flyers around her neighborhood, so that other people can benefit from the free, valuable services she received.

At the half-way point of the season, volunteers across our Illinois tax sites had served over 10,000 families and returned over $21 million into their homes and communities. That means that on average, each family that you help will get over $2,000! Keep up the great work!
Newsletter 2

The newsletter was printed in color on 2-sided glossy paper and looked similar to the first newsletter.

**Generic version**

We wanted to send you a big ‘thank you’ for your generous help this tax season. You mean so much to us and the families we serve. In this newsletter, we wanted to update you on our latest news.

The Illinois state legislature passed landmark legislation regulating short-term credit, capping interest rates that have been as high as 700 percent on some payday loans. The bill, signed by Governor Quinn on June 21st and scheduled to go into effect in March 2011, aims to increase oversight of predatory lending practices. Advocates from CEP were instrumental in contacting state legislators about this bill. Thanks to all who made calls during the campaign!

Also, CEP is turning 20! Join us at Progress in Bloom: Celebrating 20 Years of Impact to commemorate this milestone. Progress in Bloom is a one-of-a-kind celebration at the new Tiffany Celebration Garden in Chicago’s Grant Park on September 25, 2010. NBC5 reporter Natalie Martinez will serve as Master of Ceremonies.

More than 200 friends will kick off this celebration. The following luminaries have joined together to form our Honorary Committee: Chicago Mayor Richard M. Daley and Illinois Governor Pat Quinn.

With the Chicago skyline as a backdrop, attendees will celebrate with an evening of mingling and music, while they enjoy fine food and drinks served by strolling waiters. Guests will also be invited to participate in a unique silent auction where local artists decorate terra cotta pots which are then filled with a variety of goodies. For more information and ticket details, please visit www.economicprogress.org/progressinbloom.

Thanks again for contributing to a great tax season. Keep up the great work!

---

**Career version**

We wanted to send you a big ‘thank you’ for your generous help this tax season. You mean so much to us and the families we serve. In this newsletter, we wanted to share with you how volunteering can help with your career.

In a famous study of volunteering\(^\text{17}\), the researcher concluded the following:

“For the most part, volunteers are people with higher potential earnings or greater demands on their time: the employed, married persons, those with larger families, persons in the... peak earnings

ages, the more highly educated, professionals and managers. Most strikingly, volunteers have higher wages and family incomes.”

And for those who find themselves seeking a job, perhaps due to the recession, a recent article in the Wall Street Journal\(^\text{18}\) confirms just how useful volunteering at a non-profit can be.

Volunteers can catch the eye of board members -- who are often corporate executives or senior managers -- looking for employees. "If a volunteer comes to our attention with a particular skill set, and we know someone on our board is looking for someone, we'd help that person any way we can," says Robert Wilson, major-gifts manager for Gleaners Food Bank of Indiana.

At the Center for Economic Progress, it fills us with so much pride to know that our volunteers can benefit from the time they donate. Keep up the great work!

---

**Enhancement version**

We wanted to send you a big ‘thank you’ for your generous help this tax season. You mean so much to us and the families we serve. In this newsletter, we wanted to share with you why you are so important to us.

Every year, the Center for Economic Progress helps return millions of dollars to hard-working families around Illinois. **We are completely reliant on volunteers like you to succeed in our mission.**

In 2010, we were astounded by the $54 million generated by your dedication. **Every hour of your time that you donate has a massive impact on the lives of families around Illinois.** Over 30,000 families were touched by the kindness of volunteers like you.

We are also pleased to report that volunteering is great for your personal well-being. In a study by Vanderbilt University\(^\text{19}\), researchers found that volunteer work enhances:

- Happiness
- Life satisfaction
- Self-esteem
- Physical health

We hope that you appreciate just how much of an impact your generosity has on our clients. We are so grateful for the help that you have provided us in working toward our mission.

---


We wanted to send you a big ‘thank you’ for your generous help this tax season. You mean so much to us and the families we serve. In this newsletter, we wanted to share with you how you help improve the lives of others.

After living in her Hyde Park apartment for thirty years, Janet lost her job in 2003. Forced to abandon her apartment, her most prized possessions were packed into a few small boxes in a friend’s basement, and the rest were thrown away. A year later, Janet found a job and a new apartment and started to rebuild her life from the ground up.

Fortunately, 2003 was also the year that Janet found the Center for Economic Progress.

“I heard about the Center when I was searching for a new job,” said Janet. “I went because I thought it would be better to have someone else do my taxes.”

The Center for Economic Progress has helped Janet get a tax refund each year, which she uses to make advance payments on rent and electricity. Each year, Janet also puts some of her refund into savings.

“Every year I buy a savings bond because I don’t want to be caught without anything ever again.”

Slowly but surely, Janet is replacing her lost belongings and using her yearly tax refunds to rebuild her home—and her life. Seven years later, she continues to make her yearly visit to CEP.

“I am trying to put my life back together. I know that life isn’t about the stuff you have, but it is hard to rebuild everything when you are left with nothing. I am slowly refilling my kitchen with cookware and my apartment with furniture.”

During the 2010 season, volunteers across our Illinois tax sites served over 30,000 families and returned over $54 million into their homes and communities. That means that on average, each family that you help will get over $1,800! Keep up the great work!
Hi Friend,

Here at CEP, we’re very excited because it’s almost time for the 2011 tax season! We need your help to make this year as successful as last!

Read on for information about [Story 1] and [Story 2].

If you missed them from previous newsletters, I’m happy to share our 2009 Annual Report and 2010 Tax & Financial Services Highlights.

Until next month,

Angela Perkins
Manager, Volunteer Services

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**TREATMENT TEXT**

Generic: nothing

Values/understanding: *Our clients got an average rebate of over $1,700 in 2010 – volunteering makes such a difference!*

Career: *Volunteering at the CEP is a great way to help others and give your career a boost!*

Enhancement: *Your hard work and generosity is critical to the thousands of dollars our clients earn each year!*

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**STORY 1: CAREER**

Title: “How can volunteering help my career?”

Volunteering is a very costly way to spend your time, and so it’s reasonable to expect that volunteers are those who don’t earn very much (possibly unemployed) or who don’t have much else to do with their time.
Yet nothing could be further from the truth. Studies by experts of volunteering⁵⁰ find that compared to people who do not volunteer:

- Volunteers are 7% more likely to be employed
- Volunteers are 95% more likely to be employed in professional or managerial roles
- Volunteers are 24% more likely to be married and have more children
- Volunteers earn 20% more per hour

At the Center for Economic Progress, it fills us with so much pride to know that our volunteers can benefit from the time they donate. Keep up the great work!

---

**STORY 1: ENHANCEMENT**

**Title:** “Why you are so important to us”

Every year, volunteers like you help return millions of dollars to hard-working families around Illinois. With so much demand, families would have been turned down without the help of volunteers like you.

This year, we were astounded by the $54 million generated by your hard work. *It is always remarkable to us how you can find it in the goodness of your heart to donate so much time to helping those in need.* That is why you are so important in what we do.

We hope that volunteering at the Center for Economic Progress can provide you with the deep and lasting personal satisfaction of knowing that you are helping people in need. The clients truly appreciate your generosity.

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**STORY 1: UNDERSTANDING/VALUES**

[Any story about a client and how they benefited from the CEP]

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