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Volunteering is instrumental to many efforts to support successful functioning of local communities. Strategic community interventions to augment volunteerism can bring substantial resources into local communities. The Army Community Services' Army Volunteer Corp (AVC) represents the largest such program for military populations in the world. This work presents findings from an evaluation of the fiscal and societal contributions of over 30,000 volunteers participating in the AVC. The AVC produced over 3 million volunteer hours annually (over 1,300 FTEs) with a positive return-on-investment. The value of this major community program is considered and implications for supporting volunteerism among military populations is discussed.

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Considering the Return-on-Investment of the
Army Community Service's Army Volunteer Corps

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Abstract

Volunteering is instrumental to many efforts to support successful functioning of local communities. Strategic community interventions to augment volunteerism can bring substantial resources into local communities. The Army Community Services' Army Volunteer Corp (AVC) represents the largest such program for military populations in the world. This work presents findings from an evaluation of the fiscal and societal contributions of over 30,000 volunteers participating in the AVC. The AVC produced over 3 million volunteer hours annually (over 1,300 FTEs) with a positive return-on-investment. The value of this major community program is considered and implications for supporting volunteerism among military populations is discussed.

Keywords: *Army Community Services; Volunteering; Civic Engagement; Military Populations*

*Considering the Return-on- Investment of the
Army Community Service's Army Volunteer Corps*

Community agencies, schools, youth groups, religious centers, veteran services, government entities and nonprofits are among many that depend upon volunteers to serve the community—and sometimes just to survive (Crowley & Jones, 2017; Raposa, Dietz & Rhodes, 2017). In particular, successful volunteer management efforts to mobilize individuals to increase their volunteering can be transformative for local economies. Studies of volunteering indicate it can be mutually beneficial to organizations and individuals (Handy & Brudney, 2007). While volunteering is typically thought to produce more benefits than costs, there are differences between paid and unpaid labor, and the productivity of volunteer labor can be low depending on any number of various factors (Handy & Brudney, 2007). Volunteering may allow individuals to learn new skills, enhance their social networks, increase social solidarity, and increase their connection to the community (Hustinx, Cnaan, & Handy, 2010).

While a growing literature has sought to understand the benefits of civic engagement and volunteer management programs among civilian populations, little work has explored such services for military populations and none has systematically assessed the costs and benefits of investing in military populations to support volunteering. Volunteer services can be crucial to a well-functioning military environment, supporting important programming that serves others in the community but which may not be sustained through typical funding channels. At the same time, availability of these programs can provide important experience for service members and their families. Volunteer services rely on fewer economic supports by definition, yet still require administrative resources and use of individuals' time that may or may not lead to economic viability for the Army. To provide greater insight into the opportunities of supporting

volunteering among military populations, this work considers the return-on-investment of the largest US volunteer management program for military personnel in the world—known as the Army Volunteer Corps (AVC). First, we provide background on the literature around volunteer management, the AVC program, and what is known about the economics of investing in volunteering. Second, we present findings from a cost savings analysis of the AVC program. Finally, we discuss the relative value of this program compared to other federal volunteer management initiatives and discuss opportunities for future work.

The Management of Volunteers

Volunteer management includes the recruitment, assigning, training, supervision/monitoring, and retention of volunteers (Handy & Mook, 2011). Volunteer management can be staff-led or volunteer-led. A 2008 Management Matters survey in the U.K. found that a quarter of volunteer managers were unpaid. Also, among both paid and unpaid volunteer coordinators, volunteer management was not their main job but part of a larger role (Machin & Paine, 2008; Hill & Stevens, 2011). Scholars acknowledge that management of volunteers is essential for effective program implementation and is beneficial for the volunteer and the organization (Handy & Mook, 2011; Netting et al., 2004; Vinton, 2012; Waikayi, Fearon, Morris, & McLaughlin, 2012). Because volunteers provide a non-monetary resource (i.e., time), they are often not managed in the same way that organizations would manage their monetary resources. However, the literature suggests that this strategy may be an oversight at best and counterproductive at worst. Volunteers are a resource and, as such, require the same type of management strategies as all other resources (Handy & Mook, 2011; Mook, Handy, & Quarter, 2007).

Handy & Mook (2011) advocate for the professionalization of volunteer management in order to provide the greatest possible benefit. The number of organizations that do have formal volunteer managers is small. For example, Hager (2004) found that only 39% of charities in the United States have paid volunteer management staff. Of the 39% of charities with a dedicated volunteer manager, a third of the managers have no professional training in volunteer management. Another factor in advocating for professionalism is that volunteers can be costly to an organization without proper management. For example, if volunteers are not adequately trained, they may create a situation that opens the organization up to a liability lawsuit (Handy & Mook, 2011). Depending on the volunteering activity type, a lack of structure and oversight may cause volunteers to leave at higher rates, which could result in an inefficient use of time and efforts as new volunteers would require training and could cause service interruptions (Handy & Mook, 2011; Vinton, 2012).

There are a number of organizational factors that affect volunteers. Volunteering is more likely to occur when volunteers associate with the purpose and mission of the organization (Hustinx & Lammertyn, 2004). Recognition activities, professional development, and appropriately matching volunteers to work contribute to volunteer retention (Hager & Brudney, 2004). Keeping formal records and incurring out-of-pocket expenses negatively contribute to volunteer retention (Stirling et al., 2011). For volunteer coordination, more is not necessarily better. Volunteer coordination needs to be carefully balanced as increased levels of bureaucracy can negatively influence volunteer commitment and increase burden, but very low levels of coordination can also leave volunteers feeling alienated (Studer & von Schnurbein 2013).

Economic Evaluation of Volunteer Programming

Economic evaluation generally refers to analytic tools and strategies for assessing the economic impact of intervention (e.g., policies, practice and programs). This includes estimating the costs and benefits of programs that intervene in different populations and communities to elicit behavior change. Increasingly, researchers are achieving consensus around best practices for such analyses (Crowley et al., 2018; National Academy of Medicine, 2016). Economic evaluation of volunteer management programming allows for comparison of the benefits to the costs of service to ensure that programs have the greatest possible impact.

The economic evaluation of volunteerism also has several methodological challenges, including unreliable and unverifiable accounts of volunteer time, lack of consensus on how to value the inputs of volunteers (i.e., assumption that volunteer labor is equal to paid labor), general resource constraints and the cost of gathering data, and intentional disregard of the contribution of volunteers in order to highlight the need for donations (Cordery, Proctor-Thomson, & Smith, 2012; Haski-Leventhal, Hustinx, & Handy, 2011). Moreover, economic evaluations of volunteer programs have been conservative and have focused on immediate rather than long-term outcomes. Despite these challenges, volunteer programs, historically, have demonstrated benefits exceeding their costs thereby indicating these programs are good societal investments (Belfield, 2013).

In an examination of the economic value of federally-funded national service programs (i.e., AmeriCorps and its sub programs [e.g., Teach for America, Youth Build, National Guard Youth Challenge]), Belfield's (2013) analysis indicated that national service programs provide substantial benefits to the taxpayer and society, and the economic value of national service far exceeds its costs. Of the federal investments in supporting civic engagement and volunteering, these most closely resemble the AVC. In examining federally-funded youth national service

programs, Belfield found that the total social cost is \$1.7 billion annually (with \$1.1 billion coming from tax dollars), while the total social benefit is \$6.5 billion from increased output and productivity and decreased spending on social programs. While not a perfect comparison, they represent the most appropriate category of federal programs to be a comparison for this work. Although largely the same general age group, AVC also engages older, adult volunteers.

The Army Volunteer Corps (AVC)

In 1965, the Army Volunteer Corps (AVC) was created to help volunteers find opportunities with organizations within the larger Army community that benefit the volunteers and the organization. AVC opportunities are available for service members, spouses, youth, retirees, and DoD civilians. The AVC unites volunteers and organizations and works to strengthen volunteerism by enhancing the career mobility of volunteers, establishing partnerships, and promoting a life-long commitment to service.

The Army Volunteer Corps Coordinator

The AVC coordinator serves as the single point-of-contact at each Garrison to coordinate and present opportunities for volunteering within the larger AVC framework. AVC coordinators spend much of their time conducting outreach activities and assisting in matching the interests and skill sets of volunteers with organizations in need, which creates a win-win situation for the volunteer and the organization. AVC coordinators also serve as administrative managers for the program and oversee a number of processes, including ensuring that legislative requirements for liability and background clearances (e.g., FBI fingerprint requirement for working with children) are met by all volunteers. Several Army and Department of Defense regulations require volunteers who work with children and youth to submit to a background check (AR 608-10 Child Development Services; AR 608-18 The Army Family Advocacy Program; and DODI

1402.5 Background Checks on Individuals in DoD Child Care Services Program). Further, DD Form 2793 (Volunteer Agreement for Appropriated Fund and Non-appropriated Fund Instrumentalities) is also required to be signed prior to commencement of voluntary services. Thus, the AVC coordinators acts as the record keeper and liaison for all volunteer activities.

The AVC coordinators is responsible to promote, sustain, and report to the Army on the volunteer program; however, each volunteer organization (e.g., Boy Scouts, Girl Scouts, Chapel, Library, Spouses Club, Army Family Action Plan, and Army Family Team Building) also has an Organization Point-of-Contact (OPOC) who works outside of the ACS umbrella and who is the primary interface for the organization and its network of volunteers. Therefore, the AVC coordinator is not necessarily involved with the daily operations of any given volunteer organization; he or she provides administrative oversight for all OPOCs who have a presence on or off the Garrison. OPOCs are often volunteers, and they may also be paid staff who conduct volunteer trainings and ensure that the liability forms or background checks are completed.

The AVC logic model links the primary program activities, which include the marketing and advertising of volunteer opportunities and volunteer recruitment, screening, training, and recognition, with the short-term goal of increasing volunteers and volunteer opportunities. Intermediate outcomes include offering enhanced capabilities of Army programs and services and providing on-the-job training for the skill enhancement of volunteers. Long-term outcomes of the AVC include extending organizations' capabilities to provide services, serving the needs of the Army community, increasing satisfaction with military life, and increasing opportunities for volunteers to find paid employment opportunities.

AVC coordinators also provide briefings about volunteer activities at orientations and similar outreach events. Due to the tight schedule at these mandatory orientations, typically, a

centralized AVC coordinator provides a brief overview of the volunteer opportunities locally available and allows for a more efficient introduction to the larger AVC than might otherwise be provided by each OPOC or organization.

AVC Target Population

In addition to the AVC encouraging volunteerism within the Army community, the program is often promoted to spouses of service members who have difficulty finding employment due to frequent relocation and other challenges associated with the military lifestyle. Gaps in spouse employment are often filled in with volunteer experience, which is especially important for military spouses as they transition to different, and sometimes limited, job markets. Army policy allows for volunteer time to be applied to validate experience applicable for employment; thus, the AVC not only addresses the Army's need for volunteer labor, but the AVC coordinator oversees the Army-wide record keeping necessary to do so. As such, the AVC may work in tandem with the ACS Employment Readiness Program (ERP) to help minimize the impact of gaps in employment. During Garrison site visits, one AVC coordinator estimated that when a local hospital was built, approximately 90% of those who had volunteered were subsequently offered a job (White, Butler, & Perkins, 2016).

AVC Program Implementation

Because the program revolves around the dynamic needs of the people seeking the volunteer opportunity and their specific interests; implementation plans are tailored to the needs at each Garrison. Generally, the AVC does not operate on a set schedule of activities outside of attending regular briefings and orientations; however, some volunteer programs operate on an established agenda (e.g., youth sports coaching during summer months). As part of the

implementation plan, a Program Manager Handbook and a Volunteer Handbook contain standardized operating procedures for AVC staff and volunteers.

Given that many volunteers are looking for opportunities to avoid gaps in their employment history, the AVC may work closely with the Army's the ERP to identify transferable skills for volunteer opportunities. As noted earlier, volunteer hours are counted in the military as experience that can be used to obtain employment; thus, AVC coordinators help prospective volunteers identify the best opportunities for them to enhance their resumes. The AVC coordinator may even be able to refer volunteers to job openings due to their knowledge and experience as volunteers. The reach of the AVC can be extended beyond the boundaries of ACS because of the working relationship with OPOCs on or off the Garrison.

A previous evaluation was conducted on volunteering in the Army (Cornell University, 2010). In 2009, a survey was piloted at Ft. Bragg with volunteers and non-volunteers. Findings detailed that participation in any ACS family enrichment program was associated with increased volunteering, greater satisfaction with the volunteering experience, and a greater connectedness to the military community. Volunteers were also more likely to report they had a better understanding of the military and their Army community, had a greater connection to their community, had new skills and opportunities, and were more likely to report that their volunteering led to a job offer. They also reported that volunteering acted as a buffer to the stresses associated with war and deployment. Volunteers were more likely to say they intended to continue in the military beyond their current tour of duty. Specifically, those who volunteered through the AVC felt more connected to the military community and were significantly more satisfied with military life.

AVC Cost-Savings Analysis

This paper presents the findings from conducting a cost-savings analysis of the AVC by examining the expenditures of the program and the number of volunteer hours Army-wide. This analysis will explore the fiscal and societal costs and benefits of the AVC using projections linked to methodology previously employed to evaluate military and civilian national service programs (Belfield, 2013).

Belfield's study of federally-funded youth national service programs provides a sound framework for making economic projections and drawing comparisons with other national service programs. Based on over forty years of research and applicable across varying demographic and social groups including international and military populations, this model represents the *best established and most flexible costing* methodology available for valuing investments in civic engagement. National service programs, like AmeriCorps, and AVC have distinct structural and demographic characteristics. The examined national service programs focus on formal, full-time youth volunteer programs that engage in structured and intensive activities, while AVC offers more informal and varied volunteer opportunities designed to meet local needs. Despite these differences, these volunteer programs *share similar goals*.

In this current investigation, the benefits attributed to the AVC are returned back to society at large. Since taxpayer dollars provide funding for the program, return of the benefits it produces to the taxpayers (i.e., through increased social benefits such as crime reduction) is arguably a win-win for the Army. To better understand any benefits specific to the Army population that receives the program would require detailed evaluation data that at present is not available. Further, the methodological best practice for cost-benefit analysis of social programs is to consider the broad, societal perspective, rather than the more local, granular perspective; indeed, in prevention science, an ever-present challenge in cost-benefit analysis is that the

benefits created by a specific program may be returned to an entirely different population than those that use the program.

Methods

A cost-savings analysis of the AVC program was conducted to estimate the resources required to implement the program across 69 Army Garrisons as well as the fiscal and societal benefits of the program.

Study Sample

This study considers all individuals participating in the AVC intervention from January 2014-December 2015 ($N = 30,252$). Of those participants, an estimated 34.8% were service members, 45.2% were family members of a soldier, 16.6% were retired service members and 3.3% were civilians.

Estimating Fiscal and Societal Costs

The annual budgetary files for ACS the umbrella under which AVC is administered, were obtained from military garrisons to enable an assessment of program costs for the most recent year available (2015). This included all garrisons as well as central administration spending on Army and civilian personnel costs. Non-personnel costs for supplies, equipment, space and other key resources were also included in budgetary documents. In addition to budgetary costs, costs not reflected in ACS budgets were tracked. These include all personnel, materials, marketing, space, background checks, and insurance-related costs.

All AVC volunteers who work with children are required to undergo a background check. Although not a direct cost to AVC program, the cost of the background check is incurred by the Army when it submits the volunteer information to the U.S. Office of Personnel Management (OPM). Failure to include these costs would undercount the total costs of the AVC to the Army

and lead to an inaccurate accounting of the total impact of the AVC on Army spending. Data detailing the number of volunteers who underwent a background check for FY 14 and FY 15 were not available. As a result, the standard background check cost of \$20.00 charged by OPM for each AVC volunteer was used (OPM Notice No. 17-04). This will lead to a higher estimate of the total cost of background checks; however, this higher estimate is necessary to ensure a more appropriate costing of support for AVC.

Under Federal Employee Compensation Act (FECA), 5 USC ch. 81, and the Federal Tort Claims Act (FTCA), 28 USC ch. 171 and related statutes, the Army is liable if a volunteer is harmed in the course of his or her volunteering or is found to have harmed an individual or property in the course of volunteering (FTCA. 10 U.S.C. § 1588(d); see also AR 608-1, para. 5-8). Specifically, the FTCA permits recovery against the Government. Such cases have occurred for Army volunteers in the past (e.g., *Heath v. Department of Defense, Supply Logistics Agency*, Docket No. 98-1077, U.S. Department of Labor Employees' Compensation Appeals Board (Nov 29, 1999). The cost of this liability is not be accurately captured by observing actual award amounts during a single study year; however, estimating the cost of insuring the Army against such awards is a more reliable way to assess this cost. Therefore, to estimate these costs, a projected standard cost of premium coverage for insuring against volunteer liability is applied. In this context, a point estimate of \$14.35 per volunteer to insure against volunteer liability, volunteer accidents, and automobile-related liability is used. This estimate reflects an effort to observe best practice for such cost analyses and avoid undercounting the costs of the program.

The societal costs of the AVC include the total costs of the program to society, not just direct budgeted costs, and can be projected using the same estimation procedure employed by Belfield (2013) for other federal volunteer service programs. Specifically, the social costs reflect

the costs of implementing the program and the costs to collect the tax revenue to implement the program. These costs, generally referred to as the tax burden, reflect the cost to the economy of collecting taxes. A standard tax burden rate of 13% or 13 cents on every dollar spent on the AVC (Allgood and Snow, 1998) was employed.

Estimating Fiscal and Societal Benefits

To estimate the fiscal and societal benefits of the AVC, volunteer time attributable to programming was calculated. To accomplish this calculation, we used the Volunteer Management Information System (VMIS) that tracks volunteer information, the number of volunteers actively serving and the total number of hours served at each Garrison. Volunteers are required to enroll in the VMIS, create a profile, access forms required to volunteer, log their training, and enter the number of hours volunteered. The VMIS provides a standardized Army-wide system for volunteers to record their service history and ensures that volunteers have documentation of their volunteer history as they move. A central system of documentation is essential given that volunteer time can be applied to validate experience applicable for employment.

The fiscal benefits of the program are the taxable earnings and output from the volunteer hours produced by the program and reductions in government spending on health/welfare from implementing the program (i.e., cost aversion or reduction in costs). Taxable earnings (i.e., the income taxed by the government) and outputs of the AVC are considered part of the total fiscal benefits of the volunteer hours produced by the AVC. Taxable output is based on the value of taxes on the output produced (i.e., marginal tax rate - see IRS, 2008). Valuation of the projected reduction in government costs from spending on crime, health, and welfare support are based on

the Belfield (2013) model that allowed for comparison with other federally-supported national service programs.

To estimate intervention benefits from a societal perspective we consider both the private and social benefits. Private benefits represent improvements in education, earnings, and employment and gains in behavioral skills and delinquency avoidance. These benefits are improvements in human capital as a result of the experiences gained through the time spent volunteering. Earnings benefits from increased education were calculated based on estimates by Belfield and Levin (2007) using Current Population Survey data from 2006-2010. Improvements in health status and reductions in delinquent behavior were projected based upon the consequent changes in high school graduation (Belfield et al., 2013). Social benefits represent the flow of benefits to the larger community over time. Lower community crime and welfare-related costs and spillover benefits to the community and projected future service are considered. The valuation of social benefits from reduced crime are based on opportunity youth profiles and crime costs (Belfield et al., 2013; Blomberg et al., 2011; Cohen & Piquero, 2009). Benefits from reductions in welfare avoidance are based on projections by Belfield (2013). Community spillover benefits are associated with benefits from more secure and prosperous neighborhoods (Green & White, 1997; Haurin et al., 2002; Marsh et al., 2000; McCarthy et al., 2001; Perry & Katula, 2001). Benefits associated with projected future service are based on findings that volunteer time in national service programs leads to additional volunteer time in the future. For example, the published estimate employed by Belfield (2013) indicates that for every 100 hours an additional two hours of volunteer labor will be induced (Abt Associates, 2008).

Modeling Estimate Uncertainty

We estimated the likelihood of a positive return-on-investment of AVC by considering the implementations of the program across Garrisons in both study years and observing the number of Garrisons that did not break even from fiscal and societal standpoints (i.e., costs were greater than the societal benefit). Then, the proportion of Garrisons that did break even or better was calculated.

Summary Metrics

When comparing the fiscal and societal benefits of the AVC, two metrics can be calculated that provide insight into the value of the program. The first is the net-present value (NPV), which reflects the benefits after subtracting the programs costs. The second is the quotient of benefits and costs referred to as the cost-benefit ratio and is an estimate of the program's return-on-investment.

Results

AVC Fiscal and Societal Costs

The AVC's costs to taxpayers, also referred to as fiscal costs, were derived from the total budgetary personnel costs and the other non-pay costs. Non-pay costs include direct expenditures on materials, marketing, and space rental. Of all direct costs, 88.5% were from personnel (e.g., the AVC coordinator), and 11.5% were from non-pay related costs. Two additional key cost drivers were included to estimate the total fiscal costs of the AVC. These additional costs were not part of direct line-item spending but, instead, were a function of the program recruiting volunteers. These include the costs to conduct background checks when required on AVC associated volunteers and the costs connected to protecting the Army against costs associated with liability for AVC volunteers.

The sum of AVC personnel, materials, marketing, space, background checks, and insurance-related costs provides an estimate of the total fiscal costs of the program. Specifically, the average annual fiscal cost to operate the AVC for the Army is about \$3.4 million a year (in 2015 dollars). Applying the above procedure for estimating the additional tax burden of public spending described above, the additional average societal cost of the AVC is \$445,763 per year. In sum, this leads to a total societal cost of about \$3.9 million a year.

AVC Fiscal & Societal Benefits

On average, the AVC produced nearly three million hours of volunteer time or about 1,393 FTE. For FY 14 and FY 15, this reflects an average of \$52.3 million in total fiscal benefits annually. The total societal benefits of the AVC reflect a value of over \$86.8 million in addition to the fiscal benefits for a total estimated societal benefit of over \$139 million (i.e., \$86.8 + 52.3 million; Table 1).

Estimates of the AVC Return-on-Investment

The fiscal NPV of the AVC is \$48 million for each year of AVC delivery. Thus, the fiscal return-on-investment is \$15.25 for every dollar invested in the AVC. From a societal perspective, the societal return-on-investment, which includes social, private, and fiscal benefits, is \$35.92 for every dollar spent. Moreover, the societal NPV (i.e., net program benefits after subtracting costs) is approximately \$135 million for each year of AVC delivery.

Based on FY 14 and FY 15 data, on an annual basis, the average Garrison produces over 18,000 volunteer hours or 8.70 FTE. The average fiscal cost to operate the AVC in a Garrison is about \$21,000 a year. The average societal cost (i.e., fiscal costs + social costs + private costs) to operate the AVC in a Garrison is approximately \$24,000. The average fiscal benefits produced by a Garrison from a year of implementation is over \$320,000. The average societal benefits

(i.e., fiscal benefits + social benefits + private benefits) are projected to be nearly \$870,000 a year. This reflects an average fiscal net-benefit of over \$320,000 and a societal net-benefit of over \$860,000 a year per Garrison. The economic value of the AVC varies across Garrisons as a result of differential investment in AVC services as well as success recruiting volunteers and the number of volunteer hours produced. As a result a Garrison has a 89% likelihood of a positive fiscal return-on-investment and a 91% likelihood of a societal return-on-investment (Table 2, Figure 1).

Discussion

This evaluation of the AVC program found that investment in this strategic ACS program offers potential return both in terms of fiscal and societal benefits. These benefits stem from the program's capacity to mobilize military personnel to help meet community volunteer needs. Based on previous projection models of the benefits of the volunteer management and civic engagement programs, the cost-effectiveness of the AVC likely leads to a number of positive future outcomes. Findings from this study highlight the promise of the investment in AVC.

The AVC receives a relatively minimal amount of resources compared to other national service programs (see Table 3 for examples of cost of the various programs). The AVC's cost to produce an FTE of volunteering is significantly smaller than all civilian national service programs. The only smaller national service program is the National Guard's Youth Challenge Program. This intensive program has shown substantial promise (Schwartz et al., 2013; Schwartz & Rhodes, 2016) and receives eight times as much funding, having the benefit of efficiencies of scale (e.g., fixed administrative costs spread over a greater number of volunteers) that the AVC is unlikely to receive. This efficiency may be due to, in part, AVC employing a uniquely tailored, central management infrastructure system to meet the needs of its volunteer base (e.g., spouses

of service members) as well as the organizations that use volunteers within the broad Army community. This is consistent with the volunteer literature that indicates utilizing an infrastructure of support (e.g., volunteer coordinator, volunteer management system and ongoing quality monitoring) significantly increases the efficiency and effectiveness of volunteer programs and increases the benefits for the volunteer and volunteer organizations (Brudney & Mejis, 2009).

Opportunities for Future Investment

While the AVC supports over 30,000 volunteers annually, the US Army includes over 1 million people. In this context, less than 3% of the eligible population participates in the AVC. While not all personnel would participate, it is likely that expanded investment in the program, would result in an increased number of volunteers. In Belfield et al., 2013's work considering the value of other national service programs, they find that expansion of these programs would likely led to further economic benefits. The findings here provide evidence for a similar conclusion, that strategic expansion could benefit both AVC participant as well as the communities they serve.

The highest value to both individuals and communities are likely to be achieved through targeted investment for sites where garrison involvement is not yet saturated (lower AVC involvement) and the surrounding community's volunteer needs are high. Importantly, more work is needed to improve precision of estimates and identify how to best target resources to achieve the greatest return-on-investment.

Limitations

While use of administrative records such as the VMIS offers one of the best methods to measure community participation (e.g., Christens, Speer & Peterson, 2016), one limitation faced

by the AVC is the chronic underreporting of volunteered time. As such, a volunteer may not record his or her time in the VMIS, or he or she may simply feel that tracking and entering the hours in the VMIS as not worth his or her time. In this context, the estimates here are likely a conservative estimate of the actual volunteer time occurring in the Army community.

Further, like other evaluations of volunteering programs, this work employs projection models to provide comparable estimates to other national service programs. To improve precision around the estimated economic impact, longitudinal studies that follow participants in these programs should be undertaken to ascertain a more nuanced understanding of the individual and economic value of these programs. For instance, efforts could be made to further track volunteers' subsequent employment and perceived health or mental health benefits. A better understanding of volunteer outcomes for a longer period after providing services can increase accuracy of projection models for long-term benefits. Improved assessment of variation across garrisons can also help evaluators understand what key contextual factors lead to higher functioning volunteer systems. This increased understanding of such factors will help enhance the program performance and increase the potential for a return on investment.

Conclusions

This study represents the first evaluation of the AVC program's economic value—characterizing its return-on-investment using a common methodology with previous evaluations of national service programs. The AVC is an important component of the Army Community Services' umbrella these analyses reveal that the benefits of the program appear to outweigh the costs. While future work is needed to increase precision of estimates, this work recognizes the value of supporting national service programs for both individuals and the communities that support.

Figure 1: Army Community Services' Army Volunteer Corp Economic Logic Model

Inputs	Activity	Output	Fiscal Benefits	Private Benefits	Social Benefits
<p>Command Support</p> <p>AVC Coordinator</p> <p>Background Check</p> <p>Volunteer Liability Protection</p>	<p>Link commander, volunteer agencies, volunteers, and the community</p> <p>Coordinate and facilitate volunteering on the installation</p> <p>Monitor compliance with regulatory requirements</p> <p>Assess changing needs of the community</p> <p>Report volunteer issues to key stakeholder groups</p> <p>Market program opportunities to volunteers and community partners</p>	<p>Number of Volunteers</p> <p>Number of Volunteer hours</p>	<p>Taxable Earnings</p> <p>Crime, Health & welfare</p> <p>Taxable Output</p>	<p>Labor Market</p> <p>Health & Juvenile Delinquency</p>	<p>Crime Cost Aversion</p> <p>Welfare Cost Aversion</p> <p>Community Spillover</p> <p>Leveraged Future Service</p>

Table 1. Average Annual Garrison Economic Value

Domain	Type	Average Economic Value (Site)	Standard Error*
Costs	Fiscal Costs	\$21,431	\$53,666
	Societal Costs	\$24,217	\$60,642
Cost-Effectiveness	FTE Produced	9	23
	Fiscal Cost Per FTE	\$2,462	\$2,306
	Societal Cost Per FTE	\$2,782	\$2,606
Fiscal Benefits	Taxable Earnings	\$171,743	\$459,364
	Crime, Health and Welfare	\$122,996	\$328,979
	Taxable Output	\$32,047	\$85,716
	Total Fiscal Benefits	\$326,786	\$874,059
Private Benefits	Labor Market	\$375,533	\$1,004,443
	Health & Juvenile Delinquency	\$48,296	\$129,177
	Total Private Benefits	\$423,829	\$1,133,620
Social Benefits	Crime Cost Aversion	\$78,311	\$209,460
	Welfare Cost Aversion	\$1,580	\$4,225
	Community Spillover	\$28,210	\$75,454
	Leveraged Future Service	\$10,607	\$28,371
	Total Social Benefits	\$118,708	\$317,510
Total Fiscal Benefits		\$326,786	\$874,059
Total Societal Benefits		\$869,323	\$2,325,189

Note: The large standard errors indicate the variation in Garrison costs and benefits.

Table 2. Metrics of AVC Return-on-Investment

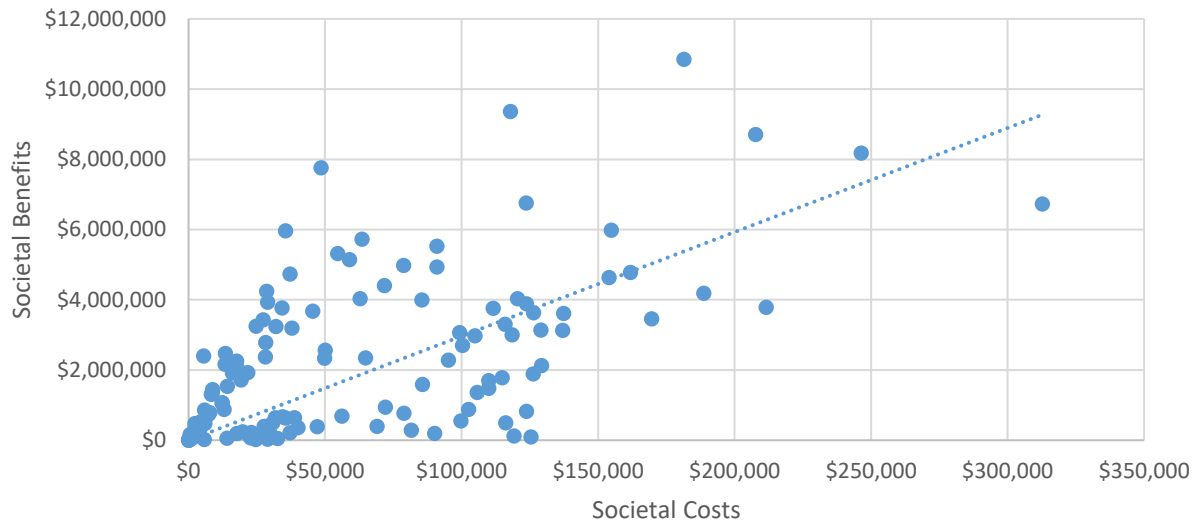
Metric	Estimate
Fiscal Net Present Value	\$48,894,370
Societal Net Present Value	\$135,316,882
Fiscal Return-on-Investment	\$15.25
Societal Return-on-Investment	\$35.92

Table 3. Comparison of National Service Programs' Cost to Produce an FTE of Volunteer Time

Program	Fiscal Costs	FTEs	Cost to Produce
	(million)	Produced	FTE
National Guard Youth Challenge*	\$28	18,000	\$1,556
Army Volunteer Corp (AVC)	\$3	1,393	\$2,462
Teach for America*	\$63	9,000	\$7,000
AmeriCorps State/National*	\$427	31,600	\$13,513
AmeriCorps Vista*	\$118	5,750	\$20,522
YouthBuild*	\$302	10,000	\$30,200
AmeriCorps NCCC*	\$41	1200	\$34,167

*Note: Non-AVC estimates are drawn from Belfield (2013).

Figure 1. Societal Costs and Benefits of AVC by Garrison



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Conflict of Interest

The authors have any no conflicts of interest to disclose. The work described in this manuscript complies with ethical standards and been approved by the University's Institutional Review Board.