

# Community-Based Reintegration in Aceh

Assessing the Impacts of BRA-KDP



Patrick Barron | Macartan Humphreys | Laura Paler | Jeremy Weinstein



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## Preface

The end of the conflict in Aceh led to the arrival of a range of programs aimed at ‘reintegrating’ former combatants and providing assistance to conflict-affected groups. The BRA-KDP program was an innovative attempt by local and national governments to employ lessons learned from successful past community-development work to post-conflict Aceh. The program, the design and implementation of which was supported by the World Bank, delivered over US\$ 20 million to conflict-affected villages, aiming to support the welfare of conflict victims while building social cohesion and trust in the state.

Did it work? What impacts did it have and why? What can the experience of BRA-KDP, and the broader reintegration efforts in Aceh, tell us about how governments, donors and civil society can support peace consolidation in post-conflict arenas?

This paper aims to contribute towards answers to these questions. It outlines the results of surveys of households, former combatants and village heads conducted across Aceh, which were designed to determine project impacts. It should be read in conjunction with a complementary paper, *Delivering Assistance to Conflict-Affected Communities: the BRA-KDP Program in Aceh* (Indonesian Social Development Paper number 13), which in addition to further analysis of the Aceh Reintegration Livelihood Surveys (ARLS) data set discussed here, provides evidence from the project’s Monitoring Information Supervision (MIS) system, from supervision missions and from qualitative fieldwork. In addition to providing a deeper understanding of the BRA-KDP programs and its impacts, the papers aim to contribute to a small but growing literature evaluating post-conflict programs. We hope that the BRA-KDP experience will serve as a laboratory through which broader processes of change can be understood in a society transitioning from conflict.

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## Executive Summary

This paper describes the results of an evaluation of the Community-Based Reintegration Assistance for Conflict Victims program (BRA-KDP) funded by the Aceh Peace-Reintegration Agency (*Badan Reintegrasi-Damai Aceh*, or BRA) and implemented with support from the Ministry of Home Affairs and the World Bank. BRA-KDP was designed to assist conflict victims across Aceh as part of the reintegration program emerging from the Helsinki peace deal, which brought to an end a 30-year conflict between the separatist GAM movement and the Government of Indonesia. US\$ 21.7 million of funds were channeled through the Government's Kecamatan Development Program (KDP), which has been operating in Aceh, and elsewhere in Indonesia, since 1998. Block grants were delivered to communities who decided on how funds should be spent. As with other community-driven development (CDD) projects, the program emphasized participation, local ownership, and transparency in giving communities control over the choice and implementation of projects.

By design the program was to be implemented throughout Aceh in two phases. In the event, however, only the first phase was implemented. This phase was implemented between August 2006 and 2007, and targeted 1,724 villages, around one-third of the total in Aceh, in 67 rural sub-districts. First phase sub-districts (*kecamatan*) were selected on the basis of a rule which took account of the extent to which areas were affected by conflict and how effectively they had disbursed KDP monies in the past; all villages in selected sub-districts received block grants. The program had both economic and social goals. It aimed to deliver quick assistance to conflict-affected villagers in order to improve material wellbeing in the short term. In addition, it sought to promote social cohesion, strengthen village-level decision-making institutions, and cultivate greater faith in governmental institutions in the aftermath of the conflict.

This evaluation uses data from a household and village head survey conducted after the program to examine the extent to which these goals have been met. The evaluation employs a second best approach to estimate the impact of BRA-KDP on material wellbeing, social cohesion, and trust in government. Because the program was not randomized, simple comparison of outcomes in project and control areas are unlikely to produce valid inferences of program effects. Indeed our data suggests that biases arising from selection effects would be considerable. Instead the evaluation relies on an econometric strategy that (a) uses a form of matching to identify suitable sub-districts that did not receive the program to serve as a control group, (b) accounts for variables used in the selection process, and (c) uses an instrumental variables approach to deal with issues of non-compliance with treatment assignment.

The evaluation finds that there were a large number of beneficiaries. An estimated 530,000 individuals live in households that directly received assistance. There was widespread participation in the program (over 200,000 people attended BRA-KDP meetings) and poorer and female-headed households were as likely to attend as others. The program was successful to some extent in reaching out to more marginalized groups in villages. Targeting of conflict victims was however limited. Overall 24 percent of conflict victims in the study area received benefits; within project areas, 44 percent of conflict victims were supported through the

program, a rate only marginally higher than that for non-victims (40 percent). Within villages, conflict victims were no more likely than non-victims to receive benefits. However because the design of the program provided more funds to areas with more exposure to conflict, on average, conflict victims who received cash received 13 percent more than non-victims. Particular categories of conflict victims were likely to receive higher amounts: the ‘most conflict-affected’ received 19 percent more than non-victims.

The program was also well received. People were more likely to be aware of the program than regular KDP and reported it to be very popular. Ninety-four percent of villagers in treatment areas said the program was helpful, and this figure rose to 96 percent of conflict victims and 97 percent for the most conflict-affected.

We find evidence that BRA-KDP is associated with a strong set of welfare gains and improvements in perceptions of wellbeing. The participation of villages in the program is associated with an 11 point decline in the share classified as “poor” as reported by village heads. Typically in programs of this form block, grants are used for community projects selected by villages. In this case, however, the majority of villages prioritized the provision of cash to individuals and groups, primarily for economic purposes. Our data suggest that these cash disbursements are associated with an increased ownership of assets (notably engines and motorcycles) among households in general and conflict victims in particular. The program is also associated with an increase in the farming of productive land (corresponding approximately to a doubling in land use for conflict victims). Conflict victims in areas that received the program are significantly more likely to report their welfare has improved in the past year than are victims in villages that did not get the program. There is, however, no direct evidence of welfare impacts in other areas such as school attendance, health and employment levels. Unsurprisingly, given the small proportion of project funds used for public goods, the program is not associated with changes in the level of community infrastructure.

The evidence for improvements in social cohesion and stronger relations between citizens and government is weak. Levels of social acceptance of returning groups, reported social tensions, divisions and conflict and community efficacy are similar between those villages that received the program and those that did not. BRA-KDP is associated with an increase in participation in women’s groups, but there is no evidence of an overall increase in associational activities. There is some evidence that BRA-KDP results in lower levels of acceptance of ex-combatants by conflict victims. This could be because ex-combatants received funds that were meant for civilian conflict victims, although there is no evidence that they ‘captured’ the program. It may also be a result of frustrations from ex-combatants that they could not benefit more or because of empowerment of communities to stand up to ex-combatant demands. Finally, there is only minimal evidence that exposure to BRA-KDP resulted in higher levels of trust in village and higher level governments.

While there is some evidence in the broader literature that CDD programs improve social cohesion and increase a community’s collective capacity, we do not find evidence that BRA-KDP had these effects. One reason may be that the program only ran for one year, limiting the

extent to which such gains, which tend to build over multiple program cycles, could eventuate. Another reason may be because community decisions to emphasize private goods limited the opportunities for collective implementation. This latter account highlights a possible tension within the CDD model. Many of the goals of CDD may depend upon processes that are brought into play conditional on particular types of activities (joint selection of projects, community oversight of implementation, etc.). Yet certain kinds of activities that communities might choose are less likely to encourage interaction, limiting some of the social gains that CDD projects might purport to have. CDD programs can also lead to increased tensions by promoting competition over finite resources. In the long run, this may lead to a stronger basis for peace, by empowering groups and building local institutions, but it can also create divisions in the short run. In post-conflict contexts, it is necessary to weigh these (potential) effects.



## TABLE OF CONTENTS

Preface.....	i
Executive Summary .....	ii
Table of Contents .....	v
Table of Tables .....	vii
Table of Figures .....	vi
Acknowledgements .....	viii
1 Introduction.....	1
1.1 Approaches to Reintegration.....	1
1.2 Community-Based Reintegration Assistance for Conflict Victims in Aceh.....	2
1.3 The Selection of Project Areas.....	4
1.4 Analytical Framework and Methods.....	6
<i>Selecting appropriate comparison units ex post</i> .....	8
<i>Data collection</i> .....	11
<i>Estimation strategy</i> .....	12
2 Implementing BRA-KDP .....	14
2.1 Who Received Assistance through BRA-KDP? .....	14
<i>Who is a conflict victim?</i> .....	14
<i>Are conflict victims concentrated in the areas that received BRA-KDP?</i> .....	16
<i>Do conflict victims benefit more than others in treatment areas?</i> .....	19
<i>Conclusions on targeting</i> .....	21
2.2 How Were BRA-KDP Funds Spent? .....	22
<i>Direct benefits</i> .....	23
<i>Projects</i> .....	26
2.3 Participating in BRA-KDP .....	28
2.4 Perceptions of and Problems with BRA-KDP .....	29
3 Impacts on Welfare .....	34
3.1 Poverty Profile .....	34
3.2 Asset Index .....	36
3.3 Household Infrastructure .....	38
3.4 Land Use .....	39
3.5 Employment and Wages.....	41
3.6 Education and Health .....	42
3.7 Public Goods .....	43
3.8 Welfare Perceptions .....	44
3.9 Conclusions on Welfare .....	45
4 Impacts on Social Cohesion .....	46
4.1 Social Acceptance .....	46
4.2 Social Tensions.....	50
4.3 Conflict Resolution.....	51
4.4 Collective Efficacy .....	52
4.5 Associational Life .....	53
4.6 Conclusions on Social Cohesion .....	55

5	Impacts on Trust in Local Government and State-Society Relations.....	56
5.1	Trust in Community Decision-Making .....	56
5.2	Trust in Government.....	58
	<i>Behavioral measures</i> .....	58
	<i>Attitudinal measures</i> .....	59
	<i>Knowledge of government</i> .....	60
5.3	Attitudes about Governance .....	61
5.4	Conclusions on Trust in Local Government and State-Society Relations.....	62
6	Community Development and Ex-Combatant Reintegration.....	63
6.1	Ex-Combatant Capture of BRA-KDP Funds?.....	63
6.2	Alternative Explanations.....	64
7	Conclusions.....	66
	References.....	69

## TABLE OF FIGURES

FIGURE 1.1: CONFLICT INTENSITY IN ACEH .....	5
FIGURE 1.2: PROPENSITY SCORES FOR TREATMENT AND COMPARISON UNITS.....	9
FIGURE 1.3: CHARACTERISTICS OF SUB-DISTRICTS SELECTED INTO STUDY .....	10
FIGURE 1.4: LOCATION OF SUB-DISTRICTS SELECTED FOR THE STUDY.....	11
FIGURE 2.1: NUMBER OF CONFLICT VICTIMS IN PROJECT AND COMPARISON VILLAGES.....	18
FIGURE 2.2: DISTRIBUTION OF CONFLICT VICTIMS AND BENEFICIARIES WITHIN VILLAGES .....	20
FIGURE 3.1: SELECTION INTO BRA-KDP AND EFFECTS ON POVERTY .....	35
FIGURE 3.2: MOTORCYCLE HOLDINGS AND SELECTION INTO BRA-KDP.....	38
FIGURE 3.3: LAND USE .....	40
FIGURE 4.1: CONFLICT VICTIMS ACCEPTANCE OF EX-COMBATANTS .....	48
FIGURE 4.2: VILLAGE HEAD ACCEPTANCE OF EX-COMBATANTS.....	48

## TABLE OF TABLES

TABLE 1.1: VILLAGE BLOCK GRANT ALLOCATIONS .....	3
TABLE 2.1: CORRELATION BETWEEN SUBJECTIVE AND OBJECTIVE MEASURES OF VICTIMHOOD .....	16
TABLE 2.2: CONFLICT VICTIM PRIORITIZATION .....	17
TABLE 2.3: BRA-KDP BENEFICIARIES .....	21
TABLE 2.4: USE OF FUNDS (MIS DATA) .....	22
TABLE 2.5: BRA-KDP GOODS (TREATMENT SAMPLE ONLY) .....	24
TABLE 2.6: CASH BENEFITS BY CATEGORY OF CONFLICT VICTIM .....	25
TABLE 2.7: HOW WERE BENEFITS USED (TREATMENT SAMPLE ONLY) .....	26
TABLE 2.8: PROJECTS APPROVED AND SUPPORTED .....	27
TABLE 2.9: PROJECTS SUPPORTED .....	28
TABLE 2.10: BRA-KDP AWARENESS & PARTICIPATION I (PROJECT AREAS ONLY) .....	28
TABLE 2.11: BRA-KDP AWARENESS AND PARTICIPATION II (PROJECT AREAS ONLY) .....	29
TABLE 2.12: BRA-KDP CONDUCT (TREATMENT AREAS ONLY) .....	30
TABLE 2.13: AWARENESS OF DEVELOPMENT PROJECT .....	31
TABLE 2.14: PROBLEMS IN DEVELOPMENT PROJECTS .....	32
TABLE 2.15: HARMFUL/HELPFUL .....	33
TABLE 3.1: AGGREGATE MEASURES OF COMMUNITY WELLBEING (BY VILLAGE HEADS) .....	34
TABLE 3.2: ASSET INDEX .....	36
TABLE 3.3: ASSETS BY CATEGORY .....	37
TABLE 3.4: QUALITY OF HOUSING .....	39
TABLE 3.5: WATER SOURCE .....	39
TABLE 3.6: LAND USE .....	40
TABLE 3.7: EMPLOYMENT .....	41
TABLE 3.8: AVERAGE DAILY WAGES OF LABORERS .....	42
TABLE 3.9: SICKNESS .....	42
TABLE 3.10: IN SCHOOL (INDIVIDUALS $\leq$ 25 YEARS OLD) .....	43
TABLE 3.11: COMMUNITY PUBLIC GOODS .....	44
TABLE 3.12: SUBJECTIVE PERCEPTIONS OF WELLBEING .....	45
TABLE 4.1: SOCIAL ACCEPTANCE .....	47
TABLE 4.2: GROUPS THAT BENEFIT MORE THAN OTHERS .....	49
TABLE 4.3: SOCIAL TENSIONS .....	50
TABLE 4.4: ESCALATING TO VIOLENCE .....	51
TABLE 4.5: CONFLICT RESOLUTION .....	52
TABLE 4.6: COLLECTIVE EFFICACY .....	52
TABLE 4.7: COMMUNITY LEADERSHIP IN PUBLIC GOODS PRODUCTION .....	53
TABLE 4.8: ASSOCIATIONAL LIFE (BY VILLAGE HEADS) .....	54
TABLE 4.9: INVOLVEMENT IN ASSOCIATIONAL LIFE .....	55
TABLE 5.1: SATISFIED WITH DECISIONS .....	56
TABLE 5.2: VILLAGERS' ROLE IN DECISION-MAKING .....	57
TABLE 5.3: POLITICAL EFFICACY .....	58
TABLE 5.4: TRUST IN DISTRICT GOVERNMENT .....	59
TABLE 5.5: TRUST IN VILLAGE APPARATUS .....	59
TABLE 5.6: CONFIDENCE IN EFFECTIVENESS OF SUB-DISTRICT, DISTRICT, AND PROVINCIAL GOVERNMENT .....	60
TABLE 5.7: AWARENESS OF GOVERNMENT .....	61
TABLE 5.8: SUPPORT FOR DEMOCRACY .....	61
TABLE 6.1: SHARE OF EX-COMBATANTS AND CIVILIANS RECEIVING BENEFITS (PROJECT AREAS ONLY) .....	64

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## 1. INTRODUCTION

This paper describes the impact of Aceh's Community-Based Assistance for Reintegration of Conflict Victims program (BRA-KDP). The program, implemented between August 2006 and August 2007, sought to address the needs of conflict victims in a way that would not only generate improvements in welfare, but also increase community cohesion and strengthen relations between citizens and government. This evaluation assesses whether BRA-KDP was successful in achieving these objectives.

### 1.1 Approaches to Reintegration

As international donors accumulate lessons from nearly two decades of work in post-conflict settings, there is a strong consensus that efforts to disarm, demobilize, and reintegrate former fighters are essential to the creation of a stable peace. But an initial, exclusive focus on the needs of fighters in post-conflict programs has gradually given way to a broader vision of the reintegration process—one that emphasizes the needs of conflict victims as well.

To better reflect the needs and interests of those who must accept fighters back into their communities and rebuild their own lives, governments and donors have begun to support community-based approaches to facilitate reintegration as a complement to traditional DDR programs.<sup>1</sup> These community-based processes are designed to engage perpetrators and victims alike in the process of community rebuilding in the hope that such efforts aid in the consolidation of peace and the promotion of social cohesion. Such programs can be effective in reconstructing conflict-affected infrastructure, while strengthening the war-torn social fabric (Cliffe, Guggenheim and Kostner 2003). The conception and design of BRA-KDP reflected this new emphasis on community-based approaches to reintegration, with a particular focus on the welfare of civilian conflict victims.

Yet, despite the new consensus on the importance of community-based processes, and as with programs targeted at former combatants, there have been few attempts to assess empirically the efficacy of these programs or to test the hypotheses implicit in this approach (Humphreys and Weinstein 2007; Muggah 2008).<sup>2</sup> Studies have tended to take the form of lessons-learned from individual case studies. Without variation on the key independent variable (i.e., whether there was a program), analysts have been poorly positioned to say much about programs' *causal* impacts. Here we seek to undertake a systematic investigation of just this, to examine the impacts of BRA-KDP and provide a deeper analysis of what worked, for whom, and why.

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<sup>1</sup> See Swedish Ministry of Foreign Affairs (2006). The recent Cartagena Congress, hosted by the Government of Colombia, brought together more than 1,500 academics, practitioners and policy-makers to discuss how community-based approaches to reintegration can best be designed and implemented.

<sup>2</sup> Mansuri and Rao (2004) argue that evidence on the impacts of community-driven development (or CDD) projects lags behind the extent to which they are being implemented.

## 1.2 Community-Based Reintegration Assistance for Conflict Victims in Aceh

For almost 30 years, separatist rebels with the Free Aceh Movement (GAM) and Government of Indonesia (Gol) security forces engaged in a military confrontation in Aceh. While the conflict occurred in several stages during that period, civilians frequently suffered the brunt of hostilities. Gol forces adopted a strategy of trying to undercut popular support for GAM by terrorizing suspected civilian supporters. GAM, too, killed or intimidated some who refused to support the movement. This resulted in an unconfirmed number of instances of murder, torture, rape, displacement and property destruction, from 1990 onwards.<sup>3</sup>

The Helsinki peace agreement signed by GAM forces and the Indonesian government in August 2005 contained provisions for reintegration assistance to former combatants, pardoned political prisoners and conflict victims. The central government provided substantial sums to support this. A government body, the Aceh Peace Reintegration Agency (*Badan Reintegrasi-Damai Aceh* or BRA) was established to administer government funds and to coordinate with donors providing assistance. After an initial failed attempt to manage individually-submitted proposals from victims, BRA opted for a community-based approach to supporting conflict victims. BRA channeled its funds through the existing Government of Indonesia (and World Bank supported), Kecamatan Development Program (KDP), which had been operating across the province since 1998—producing BRA-KDP.<sup>4</sup> As with regular KDP, the program had an ‘open menu’ with only a very limited number of types of activities ineligible for funding. Communities could choose to use their funds on private or public goods, or a mix. The KDP program was adapted to provide funds directly to villages (KDP normally provides grants to sub-districts, with villages competing over funds) and facilitators were tasked with helping communities to identify conflict victims who could benefit. BRA-KDP allocated approximately US\$ 21.7 million to 1,724 villages, around one-third of the total in Aceh, in 67 sub-districts in all 17 rural districts in Aceh, a target area with a population of 1.1 million.

According to program documentation:

The primary focus of BRA-KDP is to assist conflict-affected communities in improving their living conditions through provision of small projects that accord with their needs. It also encourages people to overcome mistrust of government that is a result of the conflict by delivering tangible outputs that fit with communities’ priorities. Equally important is the process by which villagers identify, prioritize and implement their projects. A World Bank study on the efficacy of KDP suggests that by applying the principles of participation, transparency, local choice and accountability, community-driven development programs help improve inter-group and state-society relations, helping areas to be more immune to violent conflicts. BRA-KDP is an attempt to apply the community-driven development approach for reintegration with the hope that it will improve relations between different groups such as ex-GAM combatants, IDPs [internally

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<sup>3</sup> See IOM and Harvard University (2007), which shows levels of abuse and trauma in Aceh of a similar scale to Afghanistan and Bosnia.

<sup>4</sup> In 2007, the Government changed the name of KDP to the National Program for Community Empowerment in Rural Areas (PNPM-Rural) and adapted it to become its flagship community poverty reduction program. Funding for PNPM-Rural is now US\$ 1.2 billion. As of 2009, PNPM-Rural covers all 6,408 rural sub-districts in Indonesia.

displaced persons], anti-separatist front members and communities, and to improve relations between these groups and other villagers and the local state (*Terms of Reference, BRA-KDP Evaluation and GAM Livelihoods Study*).

Targeting was to be achieved in three ways. First sub-districts with higher levels of conflict were prioritized (a second criterion was also used: a good performance record in prior KDP grants). Second, the size of the grant allocated to a village depended on estimates of sub-district conflict exposure and village population size (see Table 1.1). Finally, it was hoped that in their decisions regarding how to deploy funds villagers would take special account of the needs of conflict victims. It was originally envisioned that a second round of BRA-KDP would follow, providing assistance to remaining villages, but BRA decided to revert to their initial program of directly targeting individuals.<sup>5</sup>

**TABLE 1.1: VILLAGE BLOCK GRANT ALLOCATIONS**

		Population		
Conflict Intensity		Large (≥700 persons)	Medium (300-699 persons)	Small (<299 persons)
	High	170,000,000 (US\$19,000) <sup>6</sup>	150,000,000 (US\$17,000)	120,000,000 (US\$13,000)
	Medium	120,000,000 (US\$13,000)	100,000,000 (US\$11,000)	80,000,000 (US\$8,900)
	Low	80,000,000 (US\$8,900)	70,000,000 (US\$7,800)	60,000,000 (US\$6,700)

More than simply offering funds, participation in the BRA-KDP program required villages to hold a series of community meetings in which villagers themselves decided how the money should be allocated.<sup>7</sup> Communities were required to hold at least four meetings, run by trained KDP facilitators. The first meeting occurred at the sub-district level and was primarily informational, emphasizing that conflict victims were intended to be the primary recipients and outlining basic program procedures. Subsequent meetings took place at the village level. In the second meeting, villagers established criteria for identifying conflict-affected villagers and to determine who in that village should be considered a conflict victim. Proposals were put forward and voted on by the community at the third meeting. Any villager could submit a proposal for consideration. Proposals had to be for a ‘project’, outlining how funds would be used, by individual households, groups, or (for public goods) the wider community. The fourth ‘accountability’ meeting took place after the funds had been spent, with village officials and facilitators reporting on how the funds had been spent. BRA-KDP thus emphasized local ownership, putting decision-making authority and oversight in the hands of villagers, including conflict victims.

<sup>5</sup> See Barron and Burke (2008) and ICG (2007) for background.

<sup>6</sup> US dollar values are those at the time the program was implemented.

<sup>7</sup> See Morel, Watanabe and Wrobel (2009) for a fuller outline of how the program worked.

### 1.3 The Selection of Project Areas

Every village in selected sub-districts received the program. The rule employed by BRA to select sub-districts into the program was complex but still relatively well-defined (see the full description in Box 1). For all rural sub-districts, BRA assigned sub-districts to receive the program on the basis of two variables: conflict intensity and spending capacity. Their goal was to treat a target number of the most conflict affected sub-districts in a district, conditional on a sub-district surpassing a spending capacity threshold.

When assignment is not done randomly, understanding the selection rule by which communities are assigned to receive a program is important since different types of selection can produce different sorts of bias. This in turn affects how we can interpret differences in outcomes between project and comparison areas. Selecting the ‘neediest’ places, for example, can result in treatment areas that are ex ante worse off than control areas, which could lead to an underestimation of program effects if selection is not accounted for. Selecting the most ‘capable’ places, on the other hand, can result in treatment areas that are ex ante better off than control areas, which could lead to an overestimation of program effects if selection is not accounted for. In the case of BRA-KDP, one selection variable (sub-district conflict exposure) reflects a ‘need’ criterion. The other selection variable (spending capacity) reflects a ‘capacity’ criterion. The net effect of these two potentially offsetting criteria on bias is ambiguous.

For the first selection variable, BRA used a World Bank-produced measure of conflict intensity, generated through a factor analysis of nine indicators. Indicators included data on the number of conflict victims in each of the three years preceding the end of hostilities; the number of reported clashes between GAM and GoI forces; and perceptions of conflict intensity from survey data. Factor analysis creates a continuous measure of conflict intensity, which BRA used to divide sub-districts into low, medium and high conflict intensity groups so that each group had approximately the same number of sub-districts. This division was then used to select the total number of sub-districts to treat in each district, as well as to rank sub-districts within a district by their level of conflict-affectedness. Figure 1.1 shows the geographic location of sub-districts in Aceh by conflict intensity. High conflict intensity sub-districts cluster primarily on the coast, especially near the oil and gas-rich regions on the northern coast, while the low intensity regions are primarily in the highland areas to the south.

The second assignment variable, spending capacity, required sub-districts to have spent at least 60 percent of their 2005 KDP funds at the time of treatment assignment were deemed eligible to participate in the program. This rendered ineligible those sub-districts that were not able to handle effectively the inflow of funds from BRA-KDP.



**FIGURE 1.1: CONFLICT INTENSITY IN ACEH**



Source: Conflict & Development program, World Bank

BRA aimed to use these two variables to prioritize the most conflict-affected sub-districts in a district (with a minimum of one per district), conditional on sub-districts meeting the spending capacity threshold. This was done by using an assignment 'rule' that combines the conflict intensity and spending capacity variables in a non-linear way to select sub-districts for BRA-KDP. First, BRA selected a target number of sub-districts to treat in each district. That target was determined by the number of high conflict-affected sub-districts in a district. If there were no high conflict affected sub-districts, then the target was set equal to the number of medium conflict-affected sub-districts. If there were no high or medium affected sub-districts, however, the target was set to one low conflict-affected sub-district. This was in order to meet the requirement that at least one sub-district be treated in each district. After the target number was selected, sub-districts were ranked in each district by conflict intensity, from high to low. Sub-districts were then selected for treatment up to the target, conditional on their meeting the 60 percent spending criterion. If no sub-district in a district met the spending criterion, then the highest spending capacity sub-district was selected.<sup>8</sup> Box 1.1 summarizes the assignment rule BRA used.

<sup>8</sup> This only occurred in the district of Simeulue.

#### **Box 1.1: The Treatment Assignment Rule**

1. Set a target number of sub-districts to be treated in each district equal the number of high conflict-affected sub-districts in the district. If there are no high conflict affected, set the target equal the number of medium conflict affected districts; if there are no high or medium, let the target equal one.
2. Select the most conflict affected sub-districts in each district up to the target in each district, conditional on a sub-district meeting the 60 percent spending criterion.
3. If insufficient sub-districts meet the spending criterion, select sub-districts with the best spending performance.

Using the data originally employed by BRA, we applied this rule to reproduce the treatment assignment process. This exercise correctly classifies 207 (or 92 percent) of all 225 rural sub-districts eligible for this study.

The classification rate is reassuringly high. Yet, a remaining eight percent did not ‘comply’ with the treatment assignment in that they should have received the program (according to the rule) and did not receive it, or they should not have received it and they did. In particular, ten sub-districts that should have been assigned to treatment did not receive it, and eight that should not have been assigned to treatment did receive it. This non-compliance could result from human error in application of the rule, or it could reflect on-the-spot decisions that had to be made during the roll out process, or it could reflect other elements of the assignment rule that have not been as clearly codified.<sup>9</sup> The danger of non-random non-compliance is that it can introduce bias in the form of factors that we cannot account for but nonetheless impact the estimation of program impacts. Since we cannot be confident that non-compliance in BRA-KDP is random, we take steps to address this issue in our analysis.

## **1.4 Analytical Framework and Methods**

BRA-KDP is hypothesized to impact three families of outcomes: material wellbeing, social cohesion, and trust in government. In this paper, we focus on nine explicit hypotheses about the impact of BRA-KDP. These are detailed in Box 1.2.

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<sup>9</sup> While we use the language of ‘compliance’ to a treatment, there is no implication that the decision to take part or not was made by sub-districts. Indeed the most likely reason for non-compliance is that further criteria were used by program officers when making selections. In particular from correspondence, we know that in some cases for budgetary reasons, some formally non-eligible sub-districts replaced those that met the selection criteria in order to ensure that block grants matched with the overall program budget. We do not however have details on this part of the assignment.

### Box 1.2: Hypotheses

#### 1 Welfare

- 1.1 Socio-economic welfare will be higher and welfare improvements will be greater in BRA-KDP target villages than in villages without BRA-KDP.
- 1.2 In particular, socio-economic welfare levels and gains among conflict victims will be higher in BRA-KDP target villages than in villages without BRA-KDP.

#### 2. Social Cohesion

- 2.1 Social, economic, and political reintegration of ex-GAM combatants, militias, and IDPs will be greater in villages in which BRA-KDP has established programs.
- 2.2 Communities will be less resentful of benefits targeted at ex-GAM combatants, militias, and IDPs in villages in which BRA-KDP has worked and more accepting of their participation in the social, economic, and political life of the village.
- 2.3 Disputes will be less likely to escalate in villages in which BRA-KDP has implemented programs.
- 2.4 Communities will be better able to solve local collective action problems in villages in which BRA-KDP programs have been established.
- 2.5 Associational life will be more developed in villages in which BRA-KDP has operated.

#### 3. Trust in Government

- 3.1 Trust in the decision-making processes of village governments will be higher in BRA-KDP communities.
- 3.2 Trust in the ability of local government to deliver services/benefits will be greater in villages in which BRA-KDP has been in operation.

Source: Program documents

We use a second best strategy to estimate the causal effects of the programs on these objectives. An optimal approach would be to rely on some form of randomization in order to generate comparison ('control') groups that are every way identical to program ('treatment') groups. Because of the need to prioritize sub-districts in the rollout of the program, BRA-KDP did not use a randomized design. This results in treatment areas that are systematically different (more conflict-affected and more efficient at disbursing KDP) than comparison areas. Nevertheless, the selection of areas into the program generally followed the well-defined and transparent process just described. By systematically accounting for this process, we are able to produce a control group as similar to the treatment group as possible and to estimate program effects, even though comparison areas exhibit systematic differences with control areas.

Our empirical strategy has three main components:

- a) a strategy for identifying an appropriate comparison (control) group of sub-districts ex post;
- b) a protocol for data collection; and
- c) an estimation strategy to account for systematic differences between the comparison and treatment groups and the fact that not all communities that should have been assigned to treatment were and vice versa.

We describe these three components next.

### ***Selecting appropriate comparison units ex post***

There was no set of ‘control’ units identified before program implementation; in addition, the treatment units were selected according to a deterministic criterion and sub-districts that received the program differ systematically from those that did not. These features make it difficult to identify an appropriate comparison group of sub-districts. Identifying an appropriate comparison group, however, is essential if we are to estimate what might have happened in the absence of the program and in this way to ascertain the program’s impact.

Our strategy was to identify a pool of sub-districts that were most similar to those that received the program at the time the treatment assignment decision was made. Conceptually, our strategy is similar to determining the ‘propensity’ for assignment to treatment, or the probability that any given sub-district would have received the treatment given the rule.<sup>10</sup> For example, in BRA-KDP high conflict and high capacity sub-districts should have had a very high probability of receiving treatment, whereas low conflict and low capacity sub-districts would not. We then select comparison units that have propensities similar to those of units that were in fact assigned to treatment under the assignment rule.

The difficulty we face, however, is that the actual assignment rule produces binary propensities. In other words, under the rule and *conditional upon the data*, all potential comparison sub-districts either were or were not assigned to treatment. Thus on the surface it appears that some sub-districts had 0 percent probability of receiving the program and some had a 100 percent probability of receiving the program. To select control sub-districts, we need instead a continuous measure of propensity. To do this, we draw on the knowledge that, since continuous measures were used to assign treatment, some untreated units are, in fact, ‘closer’ to being treated than others. Our challenge was to translate these notions of proximity into usable notions of assignment probability.

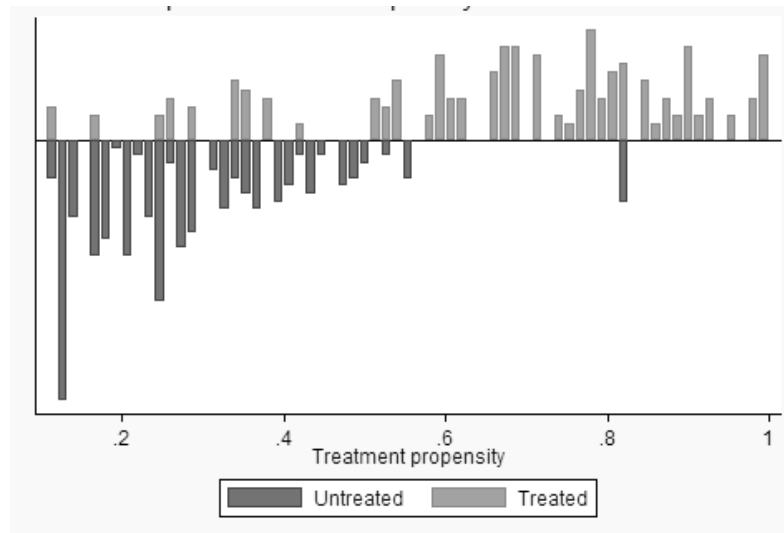
An obvious approach is to generate a propensity score by a logistic or probit regression of actual treatment on the two assignment variables. While this approach generates a continuous propensity score, it does not correctly capture the known assignment process. A measure of treatment propensity should model not only the assignment variables but also the known selection rule in ascertaining the proximity of controls to be treated.

Instead we use an approach in which we generate a continuous measure of treatment propensity under the assumption that a deterministic rule is applied to data that is fundamentally ‘noisy’ (i.e. the assignment variables—like most measures—have some random error in them). The advantage of this approach is that it allows us to make full use of the assignment rule and it provides a natural way to incorporate complex dependencies between units in the assignment process (for example if values for one sub-district determine the target number of sub-districts in a district).

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<sup>10</sup> Rosenbaum and Rubin (1983, 1984) have shown that, if assignment is made on the basis of observable variables and all assignment variables are accounted for, selecting treatment and control groups with similar propensity scores creates comparable groups for causal inference. See also Morgan and Winship (2007: 99).

**FIGURE 1.2: PROPENSITY SCORES FOR TREATMENT AND COMPARISON UNITS**



Source: Authors' calculations

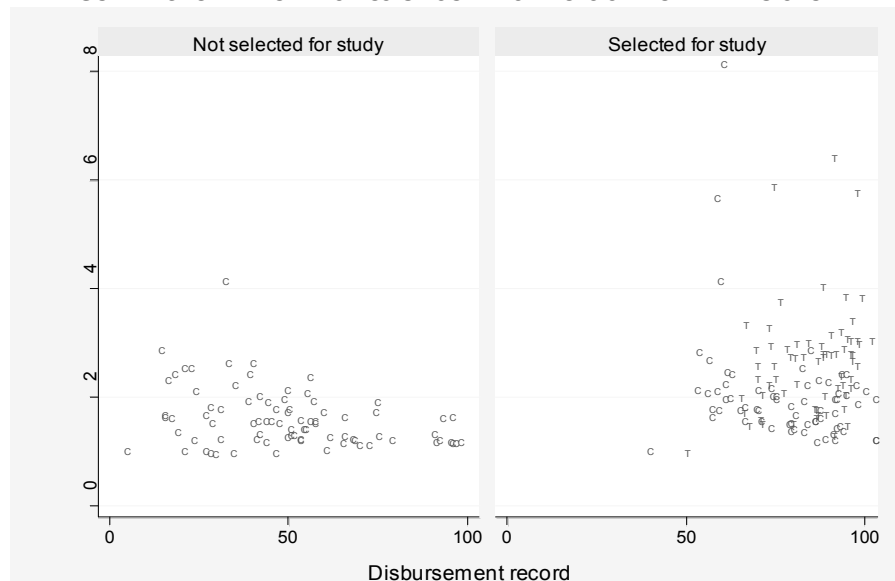
In practice, we simultaneously apply a small independent shock (distributed with mean zero and variance equal to half the standard deviation of that variable) to both the conflict intensity and spending capacity assignment variables in every sub-district. This slightly changed values for these variables in each sub-district. Then we applied the treatment assignment rule to this 'perturbed data', which in turn changed the set of sub-districts selected into treatment. We did this 10,000 times and took the average number of times a sub-district was selected into BRA-KDP of 10,000, producing a continuous measure of propensity.<sup>11</sup> In this way, for each unit, we estimate the probability that it would have been selected were the underlying data slightly different from the recorded data.

Figure 1.2 shows the actual distribution of treatment and control sub-districts according to continuous propensity scores generated using this method. As is clear from the figure, there are notable differences between the assignment probabilities for treatment and control sub-districts. As one would expect, the sub-districts that were actually treated had high estimated propensities of treatment while the sub-districts that were not treated had lower estimated propensities. Excluded areas had uniformly lower propensities. Nevertheless there was substantial overlap and in particular some non-treated sub-districts had a much higher propensity to be selected than others, according to the measure.

<sup>11</sup> To provide a more concrete example, consider a high conflict-affected sub-district with a 59 percent spending capacity. By the BRA's rule, that sub-district would have been ineligible because it did not meet the 60 percent spending capacity. Nonetheless, that sub-district was 'close' to having received treatment. Say that after applying 10,000 small shocks to that sub-district's score on both variables, its conflict intensity score almost always remains in the high category but its spending capacity score crosses the 60 percent threshold for treatment 3,500 of 10,000 times. This would give it a propensity score of 35 percent.

These propensities were then used to select 67 (highest propensity) areas to serve as a comparison group to the 67 treated sub-districts. Figure 1.3 shows the distribution of treatment and comparison units over the two main assignment variables, broken down according to whether they were selected into the study (right panel) or not (left panel) and Figure 1.4 shows the geographic distribution of treatment and control areas. We see from the figures that control areas are ‘close’ to treated areas both geographically and in terms of the assignment criteria.

**FIGURE 1.3: CHARACTERISTICS OF SUB-DISTRICTS SELECTED INTO STUDY**



The left panel shows the set of sub-districts not selected into the study and the values of these on two of the assignment criteria. The right panel shows those selected in the study, markers indicate whether sub-districts were treated (T) or not (C).

**Source:** Authors' calculations

### **Data collection**

Given a set of sub-districts, one in every eight villages was randomly selected for enumeration. Strata (sub-district and population) were used to ensure balance to the extent possible. Within villages, five households were randomly selected to serve as respondents. Within households, one individual was randomly selected from among all household members aged between 18 and 65. Ultimately, the household survey was administered to 2,315 households in total, 1,090 of which resided in areas that received BRA-KDP. Households were sampled in 67 treatment sub-districts and 68 control sub-districts, covering 17 rural districts and 461 villages overall.

A parallel survey of village heads was conducted focusing on community-level outcomes including material wellbeing and collective action. The ARLS also surveyed a random sample of ex-combatants, which provides some data used in this study.

11

## ***Estimation strategy***

Our selection of sub-districts into the study helped to ensure that we collected data on the most ‘similar’ comparison sub-districts as well as the treated sub-districts. However simple differences between outcomes in these two groups should still not be taken as estimates of the *causal impact* of the BRA-KDP program. The reason, as is clear from our earlier discussion, is that even though we selected most similar comparison areas, there are still systematic differences between the treatment areas and the comparison areas that are not due to the impacts of the program, but rather reflect the assignment rule of the program.

We use two strategies to account for these further differences. As noted above, the vast majority of sub-districts ‘complied’ with their assignment, meaning that those who were selected to receive BRA-KDP did indeed receive it, and those who were not selected to receive it did not. For those cases in which there is this kind of compliance to the rule, we are in the fortunate position in which we know the exact variables that were used for assignment into treatment and can take account of these variables in our analysis. As described above the full assignment rule is complex, but the core substantive criteria make use of only two variables: spending capacity and exposure to conflict.<sup>13</sup>

Under the twin assumptions that (a) there is a constant treatment effect and (b) treatment assignment is ‘unconfounded’ conditional on spending capacity and exposure to conflict (i.e. we have accounted for all variables not related to program impacts that might affect measured outcomes), we estimate treatment effects by regressing outcomes on treatment alongside first, second and third order polynomials of these variables as well as their interaction. In essence, this approach seeks to account for those factors that determined assignment to BRA-KDP and then estimate the causal effect of BRA-KDP itself, independent of the assignment process. Both assumptions (a) and (b) are necessary for the validity of our estimates.

There is, however, one further complication. As discussed above, non-compliance presents complications for the analysis by introducing the possibility of unobserved factors that bias outcomes. To account for this, we employ an approach in which we instrument actual treatment (whether a sub-district participated in BRA-KDP) with assignment to treatment (whether a sub-district was assigned to participate in BRA-KDP). In essence, this enables us to estimate the effect of BRA-KDP for only those areas that ‘complied’ with their treatment assignment and takes into account the potential bias caused by having non-compliers in the study.<sup>14</sup> The resulting estimate of the treatment effect is, we believe, a more reliable estimate of the causal effect of the program than is the simple difference in means.

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<sup>13</sup> Indeed, conditional on our sample we can correctly classify 87 percent of sub-districts into assignment categories using information on disbursement and conflict intensity only; in particular, by employing a model in which these terms raised to the first, second and third powers are entered along with their interaction.

<sup>14</sup> In a regression discontinuity framework this instrumental variables approach corresponds to a ‘fuzzy RD’ approach, and in an average treatment effects framework it produces the ‘local average treatment effect’.



In addition to this core strategy we undertake a series of checks of robustness to model specification and report when different approaches yield substantially different outcomes.<sup>15</sup> We illustrate a number of the results by showing the estimated intention-to-treat effects that result from employing a ‘regression discontinuity’ model in which we create a single running variable that determines assignment to treatment and estimate the effect of treatment at the cutoff point on this variable. The approach used for these figures is described in greater detail below.

In the tables that follow that compare treatment and control groups, we begin in each case by reporting results for the control group (column 1) and the treatment group (column 2). The third column presents the simple difference in means in outcomes across these groups. This difference in means has a very transparent interpretation and reflects well the differences in the situations in the different areas. But it does not necessarily provide a good estimate of the causal impacts of the program. The fourth and final column presents the estimated causal effects accounting for all the selection and non-compliance issues discussed above. Finally, all results reported here take account of the characteristics of our sample (sampling weights, strata and clusters) and cluster standard errors at the sub-district level, the level at which the BRA-KDP treatment was assigned.

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<sup>15</sup> We focus on what we think is the best estimation strategy given the data structure examined here. In different robustness checks we: (a) condition on our estimated propensity scores; (b) implement a regression discontinuity design by conditioning on a single “running variable” that combines the two key variables; and (c) examine direct instead of instrumented effects. Other approaches to estimating causal effects are possible however. Two stand out. In one, we could use our estimate of the propensity to receive treatment as a conditioning variable to establish ‘unconfoundedness’ or as basis to create matches to estimate average treatment effects. Second, we could approximate a more standard regression discontinuity model by seeking (endogenous) break points within each district, and seeking to estimate the treatment effect at the (two dimensional) cut-off between treatment and control units; again, in this case, we would need to instrument to account for non-compliance.

## 2. IMPLEMENTING BRA-KDP

### 2.1 Who Received Assistance through BRA-KDP?

A key aim of the BRA-KDP program was to ensure that BRA-KDP funds, while benefiting communities in general, were especially effective at reaching conflict victims in particular. The difficulty of achieving this goal derives from at least three challenges: (a) the lack of consensus over a clear definition of what constitutes a conflict victim; (b) uncertainty in knowing where conflict victims are located and the practical difficulty of targeting individuals using a program that, by its nature, works at a higher level of aggregation (BRA-KDP is implemented at the village level, but the program is assigned at the sub-district level, with all villages in a chosen sub-district receiving it); and (c) the fact that the ultimate decisions about how to target funds rested with villagers who had freedom to choose how and to whom funds would be allocated. We consider each of these three aspects in turn.

#### *Who is a conflict victim?*

Having a clear definition of conflict victims is rendered difficult because of the many different ways and degrees in which individuals can be affected by conflict. The conflict impacted almost everyone in Aceh, directly or indirectly. By some accounts everyone was a conflict victim. Moreover, individual perceptions often matter as much as what experiences people may have endured. The program opted for subjective assessments of victim status; while guideline categories were provided, it was left to communities to define who is and is not a conflict victim.

For this reason, we base our core analyses on a measure that reflects subjective perceptions of victim status. In addition, however, we generate an objective measure based on self-reported exposure to conflict. In practice these two measures are very closely related, as described below.<sup>16</sup>

The subjective measure of conflict victim status simply captures whether an individual responded affirmatively when asked in the survey if they consider themselves a conflict victim. In order to associate this self-reported status with actual experience of conflict, we also gathered data on *why* individuals consider themselves victims. Victims could provide multiple reasons for victimhood, ranging from death of a family member to internal displacement to mental illness. Using this data we generate a finer category which aims to get at those who were *most* affected by conflict among those who declare themselves to be conflict victims. We code an individual as ‘most severely conflict affected’ if either (a) a family member was killed or disappeared, (b) they were physically injured, (c) their house was destroyed, or (d) they were

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<sup>16</sup> There are a number of arguments that can be made in favor of using one or other measure. The subjective measure has the advantage of corresponding more closely with the project approach; in addition it captures features such as self-reported mental illnesses for which we have no objective measures. A potentially important shortcoming of the subjective measures is that since BRA-KDP areas were socialized on what a conflict victim is, it is possible that individuals living in BRA-KDP areas were more likely to think of themselves as victims than in non-BRA-KDP areas; that is the subjective measure provides a post-treatment measure of stratum. However, the fact that these two measures are largely consistent with each other is reassuring on this point.

displaced by the conflict.<sup>17</sup> Note that by construction, this ‘most severely affected’ category, though tied to ‘facts’, is nested within the subjective category.

To complement this measure, we also constructed an objective measure that classifies an individual as a victim based on their reported exposure to conflict, regardless of whether they self-identify as a victim. This measure explicitly takes account of the conflict experience of the individual’s household and not simply of their own experience, using data on family member-related deaths, disappearances and injuries. We also collect data on homes and workplaces destroyed due to conflict. The subcomponents of the subjective and objective measures relate broadly to each other although on two items—family member kidnapped and missing body part/physical disability—the two measures record somewhat different ideas<sup>18</sup> and for one item—mental illness—we have a subjective but no objective measure.

Table 2.1 below presents the main categories of victimhood, the level at which each variable is measured, and the correlation between objective and subjective measures of victimhood. Overall, the correlations are strikingly high, especially for the criteria for most conflict-affected. The only two items for which there are low correlations (family member kidnapped and missing body part/physical disability) are those two for which the wordings of the measures differ.

These high correlations are reassuring and suggest that findings presented here are likely robust to the choice of measure employed. While the main emphasis is on the subjective measure here and throughout the paper, in the next section we also report both the objective measure and a combined measure. The combined measure captures whether *either* the subjective or objective criteria apply, and can be interpreted as the upper bound on victimhood.

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<sup>17</sup> This definition of most conflict-affected follows suggestions of World Bank staff.

<sup>18</sup> For missing body parts, the subjective measure asks respondents if they have “missing body parts or permanent physical disability due to conflict” whereas the objective measure asks if they were “injured or maimed (resulting in hospitalization or inability to function normally for at least one month) as a result of the conflict.” The subjective measure for kidnapped asks individuals if a “family member disappeared / was kidnapped / or detained due to conflict”. The objective measure asks (only for members of the 1998 household) why an individual in the main respondent’s 1998 household is no longer in the 2008 household. Household members who “disappeared/were taken away because of the conflict” were coded for the objective criteria.

**TABLE 2.1: CORRELATION BETWEEN SUBJECTIVE AND OBJECTIVE MEASURES OF VICTIMHOOD**

	Level at which subjective item defined	Level at which objective item is defined	Correlation between measures
Non-victims			.67
Conflict victims (including most affected)			.67
Most conflict-affected			.86
Family member killed	Household	Household	.92
Family member kidnapped/detained	Household	Household	.12
Missing body part/physical disability	Individual	Individual	.23
House damaged/destroyed	Household	Household	.78
Primary livelihood damaged/destroyed	Household	Household	.61
Internally displaced	Individual	Household	.93
Mental illness (self or family member)	Individual or household	--	--
Physical illness (self or family member)	Individual or household	Household	.29

Source: ARLS

### ***Are conflict victims concentrated in the areas that received BRA-KDP?***

Table 2.2 explores how well BRA-KDP reached conflict victims. Focusing on the subjective measure, we see that 42 percent of all individuals in the study population are conflict victims; of these 28 percent meet the criteria for most-conflict-affected. (If the combined measure is employed, 45 percent are victims and 30 percent of the population are 'most-affected'). We estimate that between 617,000 and 657,000 people in areas that received BRA-KDP are victims. The greatest share of conflict victims were internally-displaced, followed by those suffering from mental illnesses.

**TABLE 2.2: CONFLICT VICTIM PRIORITIZATION**

<i>Panel</i>	I			II			III			IV		
	Share of study population that are... (%)			Share of population in treatment areas that are... (%)			Share of ... that are in treatment areas (%)			Estimated number of ... in treatment areas ('000)		
	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb
Non-victims	58	68	55	51	62	48	41	42	40	643	780	603
Conflict victims	42	32	45	49	38	52	54	55	54	617	480	657
Most conflict-affected	28	28	30	34	33	37	57	56	56	429	420	462

	Share among conflict victims in study population with ... (%)			Share among conflict victims in treatment areas with... (%)			Of all ... that are in treatment areas (%)			Estimated number of those with ... in treatment areas ('000)		
	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb
Family member killed	4	7	5	5	8	6	70	66	66	30	38	38
Family member detained	6	1	6	7	1	7	63	56	62	43	5	48
Physical disability	4	8	8	5	10	9	68	62	63	28	46	61
House damaged/destroyed	19	33	24	19	34	26	55	56	56	117	161	168
Primary livelihood damaged	19	18	21	18	20	22	50	61	56	110	95	144
Internally displaced	50	65	49	54	68	52	58	56	56	335	337	346
Mental illness (self or family)	32	--	32	28	--	28	47	--	47	175	--	175
Physical illness (self or family)	19	21	28	17	22	27	45	56	52	102	105	177

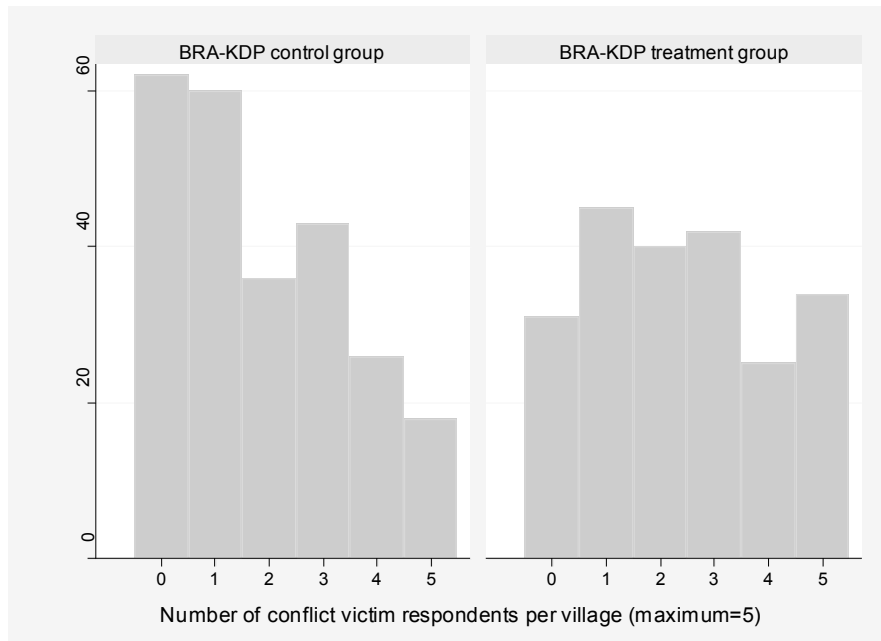
Table reports estimated population means.

**Source:** ARLS

Within the areas that received the program, 49 percent of the population consider themselves conflict victims; in control areas, 36 percent do so (not shown). For the most conflict-affected, 22 percent meet the criterion in comparison areas, compared to 34 percent in areas that received the program. These differences are both significant at the 99 percent level.

Differences in the distribution of conflict victims at the village level are illustrated in Figure 2.1; the figure shows the distribution of the share of the five respondents in each village that were conflict victims. While the distribution is skewed to the left for comparison areas we see that it is relatively uniform in project areas; there are almost as many villages for example with no victims reporting as there are with all five reporting. The differences between these two distributions is significant: There were approximately twice as many villages in comparison areas that had zero of five respondents reporting as conflict victims and about twice as many villages in project areas with all five responding positively compared to comparison areas.

**FIGURE 2.1: NUMBER OF CONFLICT VICTIMS IN PROJECT AND COMPARISON VILLAGES**



**Note:** Figure shows the distribution of the share of the 5 respondents in each village that were conflict victims. For example, 0 of 5 respondents classified as conflict victims in about one in four comparison area villages, but such low reports were only seen in one in eight project area villages.

**Source:** ARLS

Nevertheless, it is clear as well that the overall ability of the program to reach conflict victims was limited, in part because the program was not continued into its planned second round. Although conflict criteria were used to select program areas, among conflict victims, only a bare majority, 54 percent (see Table 2.2, Panel III) of all those in the study area, lived in sub-districts that received BRA-KDP; the corresponding numbers for non-conflict victims and the most conflict affected are 41 percent and 57 percent, respectively. These numbers are much higher for deaths and physical disability (70 percent and 68 percent of these are in treatment areas) although for some categories (mental and physical illness) the estimated shares are actually higher in the general population.

This suggests real difficulties in targeting conflict-affected individuals through programs that are administered at more aggregate levels (i.e. sub-district). The difficulty reflects several factors. The conflict in the Aceh was widespread, which will make any effort of this form imperfect. Furthermore, the correlation between the share of victims and the measure of conflict exposure available to BRA in assigning the program is statistically strong but substantively weak (0.36). In other words, some areas with many conflict victims scored quite low on the measure of conflict intensity (examples include Bendahara and Syiah Utama) It also reflects the tradeoff inherent in assigning treatment on the basis of spending capacity: some areas that scored high on conflict measures were not treated because they fell short on the disbursement criterion (Peureulak Timur is one such case). Of course, these would not have been issues if the program had been extended into all remaining sub-districts in its second year, as was originally planned.

Finally, we note that the broad patterns we describe above hold for both the objective and subjective measures of conflict-affectedness.

### ***Do conflict victims benefit more than others in treatment areas?***

Conflict victims can benefit from BRA-KDP through both private transfers and public investments. As we will see in the next section, the large majority of BRA-KDP funding went towards direct private transfers (for example, to support small businesses); moreover, the scope for targeting victims is likely to be greater for private transfers compared to public investments. In this section, we focus on these transfers and examine the extent to which these were successfully targeted at conflict victims.

The ARLS data asks respondents whether they benefited directly from BRA-KDP.<sup>19</sup> As seen in Table 2.3, these transfers reached wide segments of the population: about 530,000 individuals live in households that benefited from these transfers, of whom approximately 308,000 are adults aged 18-65 (confidence interval for the adults benefiting directly is 230,000 – 386,000). Of total recipients, approximately 273,000 were conflict victims by the subjective measure or 287,000 using the combined measure.

Since BRA-KDP aimed to direct assistance to conflict victims through a community decision-making process, it is worth looking at how conflict victims fared as recipients vis-à-vis non-victims in BRA-KDP areas. We find that an estimated 44 percent of all conflict victims in BRA-KDP areas received goods from the project, compared to 40 percent of non-victims (using the subjective measure). While this suggests that conflict victims did marginally better than non-victims, this four percentage point difference is not significant at conventional levels. In other words, within BRA-KDP areas, self-reported victims and non-victims appear about equally likely to benefit from BRA-KDP.

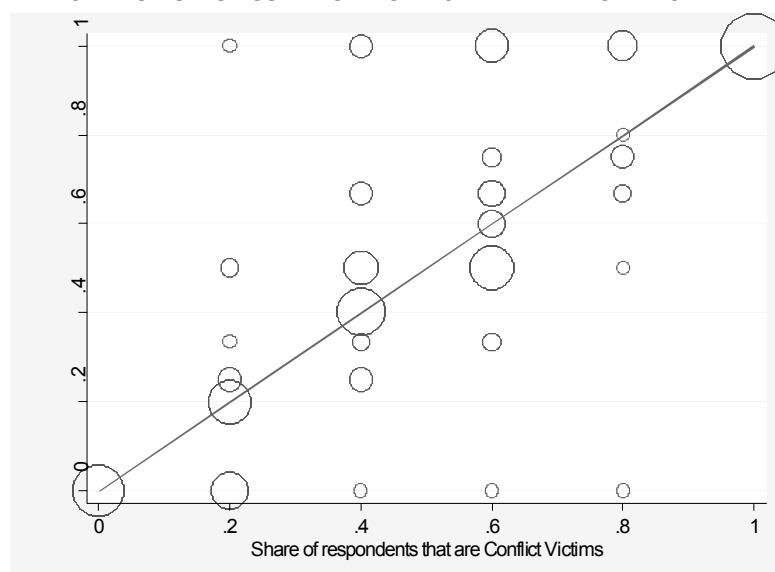
A similar result obtains if we look at distributions within villages instead of within the treatment areas grouped together: within villages conflict victims are not, on average, more likely to receive support than non-victims. Figure 2.2 illustrates the point by showing that the share of beneficiaries that are conflict victims is on average the same as the share of all respondents that are conflict victims.

Together, the analysis suggests that while conflict victims were more likely than non-victims to benefit overall, this is largely because there were more conflict victims in BRA-KDP areas. Overall, about 24 percent of conflict victims in the study areas (both treatment and control) received direct benefits whereas only 16 percent of non-conflict victim households reported receiving this support. This difference is large and statistically significant. It is driven, however, almost entirely by the selection of sub-districts into the program and not by the allocation of funds within the villages.

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<sup>19</sup> It asks, “Did you or your household directly receive any money or goods from BRA-KDP?”

**FIGURE 2.2: DISTRIBUTION OF CONFLICT VICTIMS AND BENEFICIARIES WITHIN VILLAGES**



**Note:** Figure shows the share of direct beneficiaries that are conflict victims within a village to the share (of 5) respondents within a village that are conflict victims. Data is conditional upon there being at least one reported beneficiary. Sizes of circles represent the number of villages that take a given value.

**Source:** ARLS



**TABLE 2.3: BRA-KDP BENEFICIARIES**

	Share of all ... that received benefits (%)			Share of all ... in treatment areas that received benefits (%)			Share of beneficiaries in treatment areas that are ... (%)			Estimated number of individuals that are ... in households that received direct benefits ('000)			Estimated number of adults that are ... in households that received direct benefits ('000)			Estimated number of households that received direct benefit ('000)		
	Sub	Ob	Comb	Su b	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb
Non-victims	16	18	16	40	43	40	48	63	46	257	336	243	152	197	144	46	60	43
Conflict victims	24	22	24	44	40	44	52	37	54	273	194	287	155	111	164	50	36	53
Most conflict-affected	24	23	24	41	41	42	34	33	37	178	174	194	101	100	111	32	32	36

	Share of all victims with ... that received benefits (%)			Share of all victims with ... in treatment areas that received benefits (%)			Share of victim beneficiaries in treatment areas with ...()			Estimated number of individuals in households with ... who received direct benefits ('000)			Estimated number of adults in households with ... who received direct benefits ('000)			Estimated number households with ... who received direct benefits ('000)		
	Sub	Ob	Comb	Su b	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb	Sub	Ob	Comb
Family member killed	22	29	26	32	41	39	4	5	5	10	15	15	6	9	9	2	3	3
Family member detained	28	22	30	45	47	48	7	1	8	20	4	24	12	2	14	3	1	4
Physical disability	13	27	23	20	43	36	2	7	8	6	20	22	3	10	12	1	4	4
House damaged/destroyed	25	25	24	46	42	42	20	23	24	54	66	70	30	39	41	9	12	12
Primary livelihood damaged	21	24	25	40	38	43	17	11	22	44	37	62	23	20	32	8	7	11
Internally displaced	23	23	23	39	40	40	48	67	47	130	135	139	72	76	78	24	25	26
Mental illness (self or family)	19	--	19	40	--	--	25	--	25	70	--	70	41	--	41	14	--	14
Physical illness (self or family)	25	22	22	55	38	38	20	13	13	56	41	84	31	23	46	10	9	16

Question: Did you or your household receive any money or goods from BRA-KDP? Table reports estimated population means. Source: ARLS

The data also provides information on how well certain *types* of conflict victims did compared to non-victims. For instance, only 32-39 percent of victims in program areas with family members killed and 20-36 percent with physical injuries received goods from BRA-KDP. This could be due to the fact that these groups were somehow disadvantaged in applying for BRA-KDP funds, or because they were already viewed as having benefited from other conflict assistance, among other reasons. In contrast, 45-48 percent of those in program areas who had a family member detailed, 42-46 percent of those whose house was damaged, and around 40 percent of those who had been displaced received support through the program.

### **Conclusions on targeting**

Overall, this analysis supports two conclusions. First, large numbers of direct beneficiaries were reached, including both conflict victims and others. The interruption of the program meant that many victims (in comparison areas) were not reached; nevertheless the geographic

prioritization procedure used helped to offset the effect of the interruption, with conflict victims more likely than others to have access to the program. Across Aceh, a larger proportion of conflict victims than non-victims received support. Second, a large proportion, but by no means all, of the conflict victims within treatment areas were reached. Within-village targeting was relatively blunt, however, in that conflict victims tended not to do much better than non-victims. This result should however be considered in a context in which these individuals might ordinarily have done worse, with conflict victims potentially more marginalized than others in their communities, and hence potentially less likely to be able to access funds allocated through a collective decision-making process.

## 2.2 How Were BRA-KDP Funds Spent?

Under BRA-KDP, individual villages had the freedom to decide how best to spend funds from BRA-KDP. We can assess what decisions were made using both official project monitoring data (MIS data)<sup>20</sup> and data collected through the ARLS.

Table 2.4 provides a summary of official data from BRA-KDP regarding how funds were allocated. The data suggest that the vast majority of funds (Rp. 182 billion, which corresponds to approximately US\$ 20 million at the time the project was implemented) were spent on ‘economic’ projects, delivered in the form of direct transfers.<sup>21</sup>

About half of this amount was allocated to projects that purchased cattle, and another quarter for other types of agriculture; most of the remainder was allocated to trading and business development. Official numbers state that there were 233,000 beneficiaries from these economic investments for a per capita value of Rp. 780,000 per beneficiary.

Infrastructure accounted for less than 10 percent of expenditures. Half of all infrastructure expenditure went to the building of *meunasah* (community centers); the next largest category (18 percent) was investment in mosques, followed by roads (12 percent). All other categories accounted for less than 4 percent of infrastructural expenditures. These numbers are broadly consistent with the survey data in many respects, both for direct benefits and for project support.

**TABLE 2.4: USE OF FUNDS (MIS DATA)**

Activity	Cost (Rp. billion)	Share (%)	Estimated number of beneficiaries
Economy	182	83.48	233,115
Infrastructure	21	9.83	194,408
Education	0.1	0.03	121
Others	1	0.49	14,497
Operational fund	13	6.16	-
Total	218	100	442,141

**Source:** BRA-KDP MIS data. We note that it is not clear that the beneficiaries from economic projects are necessarily different from the beneficiaries from other projects.

<sup>20</sup> The MIS (Monitoring Information System) data is explored further in Morel, Watanabe and Wrobel (2009).

<sup>21</sup> This is 83 percent of all funds and 89 percent of non-operational funds.

### ***Direct benefits***

As we have seen, many households reported receiving direct benefits from BRA-KDP. Of those the vast majority, 94 percent, received cash. The section on economic outcomes explores more in-depth how these funds were spent using the survey data.

On average, households that received money received Rp. 606,000 (approximately US\$ 60; confidence interval is Rp. 507,000 – 704,000). This figure is significantly below the MIS data estimate of Rp. 780,000. However the per capita data from the project's MIS also includes cases where funds were provided in-kind (e.g. where goods such as agricultural inputs were procured at a level above that of the household). Given that 6 percent of those who report receiving economic assistance say support was in-kind (Table 2.5) the amounts suggested by ARLS and the MIS data are fairly close. The average amount of cash received by non-victims was somewhat lower than that received by victims, and the most-affected received the greatest amount on average (although the differences are not statistically significant).<sup>22</sup>

The formal project data breaks allocations down by category (cattle, farming, etc), but the respondents typically report simply receiving cash. The reason for this stems from BRA-KDP's design. Unlike many other livelihoods-type programs, project staff members normally do not procure goods. Rather, communities, villagers, or groups of villagers receive cash and then use it to buy the goods they need for their economic activity. Before individuals or groups (or for public goods, villages) receive funds they prepare a project proposal, which outlines how money received will be spent. As seen in Table 2.5, around 6 percent report receiving other pastoral or agricultural inputs. For these households, it is likely that goods were procured by beneficiary group leaders.

This analysis provides stronger evidence that more funds reached conflict victims. Whereas before we found that in project areas, conflict victims were not significantly more likely to receive direct benefits than non-victims, here we find that those conflict victims that received cash received approximately 13 percent more than non-conflict victims. The most-affected got around 19 percent more on average.

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<sup>22</sup> For the rest of the paper, we use the subjective criteria for breakdowns.

**TABLE 2.5: BRA-KDP GOODS (TREATMENT SAMPLE ONLY)**

	All	All non-victims	All victims	Only most-affected	Difference between victims and non-victims	Difference between most-affected and non-victims
<b>Share, among those receiving benefits that received:†</b>						
Money/cash	0.94	0.92	0.96	0.96	0.04 (0.03)	0.04 (0.03)
Poultry/goats/cows	0.02	0.03	0.02	0.01	-0.01 (0.01)	-0.02 (0.02)
Fertilizer/Seeds/rice	0.03	0.05	0.02	0.02	-0.03 (0.03)	-0.02 (0.03)
Avg. cash amount received by those households that received some cash	605,919	568,405	640,662	673,595	73,215 (53,617)	106,147* (63,412)
Avg. cash amount received all (treatment and comparison areas)	109,278	84,715	143,297	147,980	58,582*** (17,346)	63,265*** (19,067)
N (all recipients)	524	254	270	174		

† “For those who received assistance from BRA-KDP, what was the most important thing you received?” Table reports estimated population means, standard errors and sample N’s. Estimates of average cash amount received were calculated dropping with outliers dropped. **Source:** ARLS

This feature results largely from the fact that the BRA-KDP budgets were larger in areas with more conflict victims and is not a result of within-village allocations being made disproportionately to conflict victims. When we condition on the allocation made in a village, conflict victims received on average Rp. 13,000 more than others, and the most conflict affected received an average of Rp. 2,000 less than other conflict victims (results not shown). Both of these numbers are small and neither is statistically significant. Nevertheless, because more conflict-affected sub-districts received larger allocations, on average the most-conflict affected households received almost 50 percent more in direct benefits than an average non-conflict affected household. As we found before, those who had a family member kidnapped and those with a physical injury received the most on average (Table 2.6).

**TABLE 2.6: CASH BENEFITS BY CATEGORY OF CONFLICT VICTIM**

	Average amount received (Rp.) (se)
Family member killed	676,000 (140,000)
Family member kidnapped/detained	702,000 (187,000)
Missing body part/physical disability	609,000 (193,000)
House damaged/destroyed	662,000 (85,000)
Primary livelihood damaged/destroyed	524,000 (95,000)
Internally displaced	650,000 (70,000)
Mental illness (self or family member)	643,000 (80,000)
Physical illness (self or family member)	743,000 (108,000)

Source: ARLS

Although our account of a programmatic focus on private benefits is consistent across official MIS and ARLS data, there are difficulties reconciling the total amounts spent. The question asked in ARLS probes allocations made to individuals or their households. Under the assumption that individuals fully reported the transfers, the estimated total allocation of cash benefits is Rp. 54 billion (confidence interval: Rp. 39-70 billion), less than a third of the value reported by MIS. We note, however, that while respondents were instructed to report for their households, it is possible that individuals reported only benefits received by themselves and may not have known or reported the total transfers to their households. Such a tendency would have to be very strong however for it to account for the shortfall, and even then beneficiary numbers would be inconsistent between the two data sources.<sup>23</sup>

<sup>23</sup> In particular, if *all* individuals reported *only* own receipts then the estimated total expenditure would be Rp. 174 billion (confidence interval: Rp. 124 billion – Rp. 224 billion). This corresponds broadly to official expenditure figures although it suggests a beneficiary population greater than that reported by MIS (308,000 rather than 230,000).

**TABLE 2.7: HOW WERE BENEFITS USED (TREATMENT SAMPLE ONLY)**

	All	All non-victims	All Victims	Only most-affected	Difference between victims to non-victims (se)	Difference between most-affected and non-victims (se)
<b>Within one month: †</b>						
Production	0.45	0.48	0.42	0.43	-0.06 (0.06)	-0.03 (0.07)
Sold and invested proceeds	0.02	0.01	0.03	0.01	0.02 (0.03)	-0.02 (0.02)
Retained but not used	0.15	0.18	0.12	0.12	-0.06 (0.05)	-0.05 (0.05)
Consumed	0.22	0.20	0.23	0.20	0.03 (0.05)	-0.02 (0.07)
Gave away/taken away	0.01	0.01	0.01	0.00	0.00 (.)	-0.02 (0.02)
<b>Subsequently: ††</b>						
Used for production but now gone	0.56	0.51	0.63	0.61	0.12 (0.07)*	0.07 (0.09)
Being used	0.16	0.19	0.13	0.14	-0.06 (0.06)	-0.03 (0.06)
Being saved	0.01	0.01	0.01	0.01	0.00 (0.01)	0.00 (0.01)
Since given away/consumed/taken	0.27	0.29	0.24	0.24	-0.06 (0.07)	-0.04 (0.08)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. Table reports estimated population means and standard errors.

†Which of the following best describes what you did with these goods within one month of receiving them?

††If used for production/sold and invested/retained but not used/sold and saved: Which of the following best describes what you have done since with these goods? **Source:** ARLS

The ARLS data also allow for a deeper examination of the uses of direct funds. As shown in Table 2.7, 45 percent of recipients used the funds for production within the first month. In 22 percent of cases, funds were consumed while in 15 percent of cases they were saved (the rest fall into other categories, the largest of which is “used for the household economy”). Fifty-six percent report that the goods have since been exhausted while 27 percent report they have since been consumed or otherwise lost. The goods are still being used for about 16 percent of households.<sup>24</sup> There are few noticeable differences across groups although conflict victims are more likely to report that the goods are exhausted.

### **Projects**

Table 2.8, describes the projects that were approved in villages as well as the share of villagers approving different projects. Consistent with the MIS data, the greatest share of villages opted for economic activities although the data confirm that these typically took the form of cash

<sup>24</sup> Note that goods being exhausted does not mean they do not have still have productive impacts. For example, if funds were used to pay for labor to clear land—something that appears to have been common given reported results below—beneficiaries may still be reaping economic gains.

payments (*'bagi rata'* or equal cash disbursement<sup>25</sup> accounted for 67 percent of projects according to reports while agricultural projects accounted for a further 7 percent). Among other projects, the most common were improvements to village buildings, including *meunasah* and mosques (14 percent), and roads (5 percent). There are no significant differences across groups in terms of support for different projects.

**TABLE 2.8: PROJECTS APPROVED AND SUPPORTED**

	Share who said their village received	Share non-victims supporting	Share victims supporting	Share most-affected supporting	Difference between victims and non-victims (se)	Difference between most-affected and non-victims (se)
...						
Improve village buildings (including <i>meunasah</i> and mosques)	0.14	0.14	0.10	0.11	-0.03 (0.03)	-0.02 (0.03)
Improve roads and bridges	0.05	0.02	0.06	0.06	0.03 (0.03)	0.03 (0.04)
Improve access to water	0.04	0.02	0.05	0.05	0.03 (0.01)*	0.03 (0.02)
Support for agriculture	0.07	0.06	0.04	0.04	-0.01 (0.02)	-0.02 (0.02)
<i>Bagi rata</i>	0.78	0.67	0.69	0.71	0.02 (0.05)	0.04 (0.07)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. Table reports estimated population means and standard errors. Note, percentages do not add to 1 as villages may have received multiple kinds of support from BRA-KDP. Reporting for only projects that were at least 4 percent of total approved. **Source:** ARLS

The table also provides information regarding who supported different types of projects, averaging over all villages. In general, support for cash transfers is stronger among conflict victims, while village infrastructure projects were more popular among non-victims. Non-victims may have felt that they would be more likely to benefit from investments that benefited the whole village, than from private goods where victims would be more likely to be prioritized.<sup>26</sup>

Although the numbers selecting different projects track the number of projects supported fairly well on average, this does not mean that in most cases the projects that people chose were implemented. In fact, as reported in Table 2.9 only 65 percent of individuals reported that their preferred project was approved. This is probably because the program encouraged competition within villages over funds: villagers are expected to have viable project ideas if they are to receive funds.

<sup>25</sup> For survey purposes *bagi rata* was defined as equal cash disbursement. However, field supervision (of the program and the survey) showed a wide range of understandings of the term, with many people reporting *bagi rata* for any type of cash disbursement.

<sup>26</sup> Indeed, program supervision missions suggest that this was often the case. See Morel, Watanabe and Wrobel (2009).

This figure is 6 percentage points lower for conflict victims and 10 percentage points lower for the most conflict affected suggesting that conflict victims, in general, had a more difficult time ensuring that the projects they preferred were implemented. Again, this suggests that targeting was imperfect although we emphasize (a point we return to later) that these difference could reflect possibly large preexisting power differentials between conflict victims and others. The differences could also be due to the fact that conflict victims presented lower quality proposals and could have benefited from more assistance in drafting and presenting proposals.

**TABLE 2.9: PROJECTS SUPPORTED**

	All	Non-victims	Conflict victims	Most-affected	Difference between victims to non-victims (se)	Difference between most-affected and non-victims (se)
Probability that preferred project was implemented	0.65 (0.04)	0.68 (0.04)	0.62 (0.05)	0.58 (0.05)	-0.06 (0.05)	-0.10 (0.06)*

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. Table reports estimated population means and standard errors. This table shows the probability that a project was implemented conditional upon it being supported by different categories of respondent. Reporting for only projects that were at least 4 percent of total approved. **Source:** ARLS

## 2.3 Participating in BRA-KDP

Was BRA-KDP successful at engaging populations in decision-making over village expenditures? We answer this question by examining awareness of and participation in BRA-KDP across a number of categories of interest. As shown in Table 2.10, approximately 57 percent of individuals in program areas had heard of BRA-KDP. There are no significant differences across groups. Thirty-seven percent of adults were aware of the meetings. Twenty percent participated, over 200,000 people across Aceh.

**TABLE 2.10: BRA-KDP AWARENESS & PARTICIPATION I (PROJECT AREAS ONLY)**

<i>Share who ...</i>	All	All non-victims	All victims	Only most-affected	Difference between victims and non-victims (se)	Difference between most-affected and non-victims (se)
Have heard of BRA-KDP	0.57	0.57	0.57	0.55	0.01 (0.05)	-0.03 (0.05)
Are aware of meetings	0.37	0.38	0.36	0.32	-0.02 (0.04)	-0.07 (0.04)*
Attended meetings	0.20	0.19	0.21	0.18	0.02 (0.03)	-0.03 (0.03)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. Table reports estimated population means and standard errors. **Source:** ARLS

In Table 2.11 we examine how these numbers differ for different cohorts. Men, we find, were more likely than women to have heard of meetings and attended; 12 percent of women in BRA-KDP areas attended meetings compared with 27 percent of men. Heads of household were also much more likely to attend, with only 11 percent of non-heads of household attending. There are no discernible differences between poorer people and wealthier people, or between male and female-headed households. This is surprising given that poorer and female-headed households tend to be less powerful within villages, and hence have less incentive to attend



given—all else being equal—they would be less likely to benefit. Other research on regular KDP in Indonesia has shown that it often has difficulties in reaching highly vulnerable groups such as female-headed households with such groups often not attending program meetings (McLaughlin, Satu and Hoppe 2007). In contrast, the evidence here shows that BRA-KDP was successful to some extent in reaching out to more marginalized groups in villages.

**TABLE 2.11: BRA-KDP AWARENESS AND PARTICIPATION II (PROJECT AREAS ONLY)**

<i>Share who ...</i>	<b>Men</b>	<b>Women</b>	Difference (se)	<b>Male headed households†</b>	<b>Female headed households</b>	Difference (se)
Have heard of BRA-KDP	0.62	0.52	–0.10 (0.04)**	0.57	0.56	–0.01 (0.05)
Are aware of meetings	0.40	0.34	–0.06 (0.04)	0.37	0.36	–0.01 (0.05)
Attended meetings	0.27	0.12	–0.15 (0.04)***	0.20	0.17	–0.03 (0.03)
	<b>Poorest third</b>	<b>Others</b>	Difference (se)	<b>Head of household</b>	<b>Others</b>	Difference (se)
Have heard of BRA-KDP	0.57	0.56	–0.01 (0.04)	0.63	0.51	0–.11 (0.04)***
Are aware of meetings	0.39	0.34	–0.05 (0.04)	0.42	0.32	–0.10 (0.05)**
Attended meetings	0.20	0.19	–0.01 (0.03)	0.29	0.11	–0.17 (0.04)***

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. Table reports estimated population means and standard errors. **Source:** ARLS

† Note: Reports results for main respondents who reside in male- or female-headed households.

## 2.4 Perceptions of and Problems with BRA-KDP

We close this section by considering how BRA-KDP was perceived by respondents. BRA-KDP was very popular amongst people in areas that received the program. Ninety-four percent of people in treatment areas said they thought the program was helpful; this figure rises to 96 percent for victims and 97 percent for the most-affected, although differences are not significant.

Complaints about the program were also low. Table 2.12 provides the share of respondents that agreed with a set of complaints about the implementation of BRA-KDP, broken down by victim status. Across all measures we see that the level of complaints is relatively low; the greatest complaint, made by 14 percent of respondents, was of diversion of money<sup>27</sup> and that the most relevant projects were not selected. Conflict victims were less likely to share these concerns; for these groups the greatest complaint was that the program benefited other groups too much—notably ex-GAM, PETA<sup>28</sup> and IDPs.

<sup>27</sup> The survey did not give a definition of what diversion of money means. From the supervision missions and qualitative fieldwork, it appears a range of issues may have been captured under this category including money being spent on projects that some villagers did not prioritize.

<sup>28</sup> PETA are members of former militia groups that were formed to fight against GAM during the conflict.

**TABLE 2.12: BRA-KDP CONDUCT (TREATMENT AREAS ONLY)**

<i>Share saying they 'agree' or 'strongly agree' (for those who heard of BRA-KDP)</i>	All n=704	<u>Groups</u>			<u>Comparing Groups</u>	
		All non-victims n=347	All Victims n=357	Most-affected n=471	Victims to non-victims diff se	Most-affected to non-victims diff Se
Activities not most important	0.14	0.16	0.11	0.11	-0.05 (0.04)	-0.05 (0.04)
Did not benefit enough people	0.10	0.09	0.11	0.08	0.01 (0.04)	-0.01 (0.04)
Did not benefit conflict victims	0.12	0.12	0.12	0.10	0.00 (0.04)	-0.02 (0.04)
Benefitted ex-GAM/PETA/IDPs too much	0.11	0.10	0.13	0.15	0.02 (0.03)	0.05 (0.04)
Disagreements not well handled	0.09	0.11	0.07	0.07	-0.03 (0.03)	-0.04 (0.03)
Diversions of money	0.14	0.16	0.11	0.09	-0.05 (0.03)	-0.07 (0.04)*
Extortion	0.09	0.11	0.06	0.03	-0.05 (0.03)	-0.09 (0.03)**
Allocation across villages unfair	0.10	0.13	0.07	0.07	-0.06 (0.04)	-0.06 (0.04)
Share that feel the program was generally helpful	0.94	0.92	0.96	0.97	0.04 (0.03)	0.05 (0.03)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. Table reports estimated population means, standard errors and sample N's. **Source:** ARLS

To put these responses in context, we examine how BRA-KDP fared compared to another prominent development project in non-BRA-KDP locations. In non-BRA-KDP locations, the village head was asked to provide the name of the “most important development project in the village, in terms of money invested.” In 64 percent of villages, the head reported that KDP (as distinct from BRA-KDP) was the most important other project. KDP has been active in Aceh since 1998, and funds were delivered through the program in parallel to the BRA-KDP funds. For the analysis in Table 2.13, we focus on such cases for control communities.

**TABLE 2.13: AWARENESS OF DEVELOPMENT PROJECT**

<i>Have you heard of the BRA-KDP (treatment communities)/KDP (control communities) development project?</i>	Individuals in control communities (KDP) (N)	Individuals in treatment communities (BRA-KDP) (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.42 (911)	0.59 (965)	0.17*** (0.06)	0.17* (0.09)
Conflict victims	0.46 (331)	0.60 (466)	0.14* (0.07)	0.25* (0.13)
Most conflict-affected	0.45 (208)	0.59 (321)	0.14 (0.09)	0.07 (0.18)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

We begin with the most basic measure of project visibility, whether the individual is aware of the project in their village. Table 2.13 reports whether individuals in BRA-KDP locations had heard about BRA-KDP, compared to whether individuals in control communities had heard about the KDP project in their villages. There is evidence that BRA-KDP had a higher profile than KDP. The difference is particularly large for conflict victims, although less so for the most affected. These findings are robust to multiple (but not all) alternate specifications.

**TABLE 2.14: PROBLEMS IN DEVELOPMENT PROJECTS**

<i>Looking back at the implementation of BRA-KDP (treatment)/KDP (control) do you agree with the following statements?</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
<i>Activities selected were not the most important ones</i>				
All	0.12 (434)	0.12 (646)	0.01 (0.03)	0.1 (0.09)
Conflict-affected	0.11 (163)	0.09 (321)	-0.01 (0.04)	0.23* (0.12)
Most-affected	0.1 (106)	0.1 (215)	0 (0.05)	0.43** (0.17)
<i>Activities selected did not benefit enough people in the village</i>	0.14 (433)	0.1 (646)	-0.04 (0.04)	-0.05 (0.09)
<i>Activities selected did not benefit conflict victims</i>				
All	0.12 (427)	0.12 (641)	0 (0.03)	0.06 (0.09)
Conflict-affected	0.16 (162)	0.11 (319)	-0.05 (0.04)	-0.09 (0.18)
Most-affected	0.07 (105)	0.1 (214)	0.03 (0.05)	0.14 (0.23)
<i>Activities benefitted ex-GAM, PETA or IDPS too much</i>	0.1 (419)	0.11 (635)	0.02 (0.03)	-0.04 (0.07)
<i>Disagreements in village not well handled</i>	0.13 (421)	0.08 (632)	-0.05 (0.03)	-0.09 (0.07)
<i>Obvious diversions of money</i>				
All	0.16 (383)	0.12 (606)	-0.04 (0.03)	0.15 (0.12)
Conflict-affected	0.14 (149)	0.1 (299)	-0.04 (0.05)	0.21 (0.17)
Most-affected	0.08 (95)	0.09 (200)	0.01 (0.04)	0.30* (0.17)
<i>Money was extorted</i>	0.11 (373)	0.08 (603)	-0.03 (0.04)	0.03 (0.11)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

The survey also collected evidence on what individuals think the major problems are in BRA-KDP and (the control) KDP (Table 2.14). The share of individuals reporting problems is low. Only 12 percent felt that the projects selected were not the most important ones, a share that is higher among conflict victims for BRA-KDP compared to KDP areas. Respondents did not claim

that BRA-KDP benefited conflict victims any more or less than regular KDP, surprising given BRA-KDP's specific focus on conflict victims.<sup>29</sup> The most common complaint overall was that there were diversions of money due to collusion, corruption or nepotism, although these complaints were lower for BRA-KDP than for KDP (16 percent for KDP, 12 percent for BRA-KDP).

As we saw before, the vast majority of individuals in BRA-KDP locations and control locations felt that the development project was helpful. Table 2.15 reveals that this number is no different than that found for the standard KDP program.

**TABLE 2.15: HARMFUL/HELPFUL**

<i>Agree that BRA-KDP/KDP was typically helpful for the village</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.96 (436)	0.94 (649)	-0.02 (0.02)	-0.03 (0.07)
Conflict victims	0.94 (163)	0.96 (322)	0.02 (0.03)	0.15 (0.12)
Most conflict-affected	0.98 (106)	0.96 (216)	-0.01 (0.02)	0.08 (0.16)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: In general, which of the following statements would you say best characterizes the work of BRA-KDP/KDP in this village?* **Source:** ARLS

<sup>29</sup> This may be because KDP focuses on assisting the poor and vulnerable within communities, many of whom are presumably also victims of the conflict.

### 3. IMPACTS ON WELFARE

How did BRA-KDP affect the socio-economic conditions of those who received the program and especially conflict victims? There is some evidence that KDP elsewhere in Indonesia has impacted different dimensions of welfare. Alatas (2005) and Voss (2008) both find gains in consumption among beneficiaries. In post-conflict settings, severely conflict-affected communities often have needs for immediate livelihoods support such as capital, fishing or farming equipment, and income generation activities. Indeed, previous research in Aceh suggests that the top priority for many communities in Aceh was livelihoods support and many villagers noted that provision of capital would best enable them to rebuild their communities after the losses they suffered from the conflict (World Bank 2006). Enhancing welfare, especially for conflict victims, was thus a key objective of the program.

BRA-KDP communities had tremendous flexibility in deciding what projects to fund, how to target the benefits, and whether to finance investments in public goods or to disburse capital to households. As a result, improvements in welfare may be broad or narrowly distributed and they may be reflected in public goods or private goods. We focus first on welfare impacts that might be the result of cash disbursement and then turn to welfare impacts that might be caused by investments in public goods provision or the downstream benefits of greater household wealth.

#### 3.1 Poverty Profile

We begin our analysis with a focus on the aggregate poverty profile of the villages. It appears that BRA-KDP has resulted in a substantial decrease in poverty levels.

In each village, we asked leaders a set of questions designed to tap into comparative levels of welfare. Table 3.1 presents the results from a question in which village heads are asked estimate the share of village households that should be classified as ‘poor’.

**TABLE 3.1: AGGREGATE MEASURES OF COMMUNITY WELLBEING (BY VILLAGE HEADS)**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Share of households classified as poor	0.69 (242)	0.69 (217)	0.00 (0.02)	-0.11** (0.05)

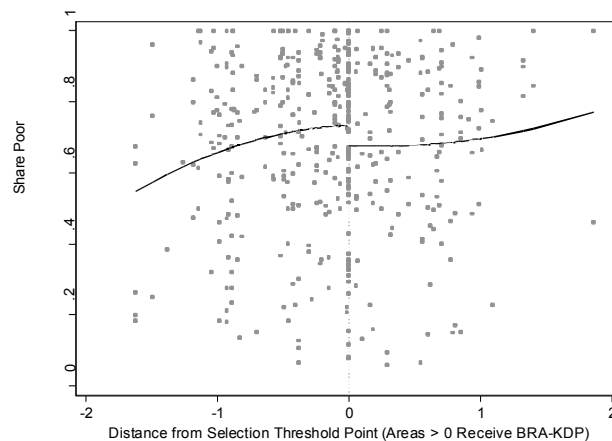
\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's, as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

The table shows that a simple comparison of responses in project and comparison areas reveals no difference. However, once we account for selection effects into the program we find that BRA-KDP is associated with an 11 percentage point drop in the reported share of households that are poor. These results are robust to alternative specifications with similar estimated

magnitudes. The results suggest that the program has had a major impact in reducing poverty in conflict-affected communities, at least according to the classifications of village heads.

This logic is illustrated in Figure 3.1. Before interpreting, we take a moment to explain what is conveyed in this figure and subsequent figures like it. On the horizontal axis there is a measure of assignment to treatment. This was made by collapsing the two assignment variables (conflict intensity and spending capacity) into one continuous measure.<sup>30</sup> The cutoff for assignment to treatment is at the zero point, with all villages to the right of the cutoff in sub-districts assigned to treatment and all to the left of that cutoff assigned to the control. Right in the vicinity of the cutoff, we can assume that sub-districts on either side are highly similar; as you move further away from the cutoff in either direction the sub-districts become increasingly dissimilar and hence treatment and controls become less comparable. Hence, the estimation of treatment effects comes from comparing the size of the jump or drop in the vertical axis (otherwise called a ‘discontinuity’) at the cutoff.<sup>31</sup> In sum, there are two main things to note in these figures. The first is the slope of the lines, which show the selection effects—or the relationship between the probability of being selected for BRA-KDP and the outcome. The second item of interest is the size of the gap at the cutoff, which indicates the size of the treatment effect estimated at the threshold.

**FIGURE 3.1: SELECTION INTO BRA-KDP AND EFFECTS ON POVERTY**



Source: ARLS

Figure 3.1 thus illustrates the difference in the estimated effects on reported poverty when we do and do not account for selection. Those places that are more likely to be selected for BRA-KDP are in general also more likely to have more poor households in the absence of the program. Thus a positive effect of the program could be masked by a negative selection effect.

<sup>30</sup> Since there are two dimensions at work and assignment depended on reaching a threshold on both dimensions simultaneously we generated a measure of (Leontief) distance from the threshold frontier. The frontier is coded as 0, points to the northeast of the frontier are positive and points to the southwest are negative.

<sup>31</sup> Note, since this figure uses assignment to treatment it does not deal with issues of non-compliance discussed earlier. Hence, the size of the discontinuity reflects an intention-to-treat (ITT) effect and conditions only on an aggregated measure of distance from each of the thresholds within each district and not on the individual values of the selection criteria. This is therefore different from the local average treatment effect presented in the tables.

The solid lines in the figure show the average level of poverty for each value on the distance from treatment scale (x-axis). Two features stand out. The first is that these lines are upward sloping. This simply reflects that fact that those areas more likely to be selected were also more likely to have more poor households. This is true for both project and comparison areas. The second feature is that at the threshold point, 0, the left hand line lies above the right hand line. The difference between these two lines is precisely the estimated treatment effect at the cutoff point. This shows that the program had a result in reducing poverty as reported by village heads.

### 3.2 Asset Index

We now consider more direct measures of household welfare in an effort to corroborate the impressions of village leaders. We focus first on asset holdings, which are plausibly influenced by the disbursement of cash through BRA-KDP. Respondents were asked about their household asset holdings with respect to 16 different types of assets that can be used for consumption and investment (transport, agricultural equipment and livestock/fowl).

Table 3.2 presents estimates of the impact of BRA-KDP on an aggregate asset index.<sup>32</sup> The data suggests that, taking account of selection effects, the program is associated with gains on the order of one-third of a standard deviation on overall levels of assets especially for conflict victims. The results are not, however, robust across alternative specifications. Table 3.3 breaks down the assets one by one. The simple comparison of project and comparison areas suggests lower asset holdings in general in project areas; this effect is, however, in part due to selection.

**TABLE 3.2: ASSET INDEX**

<i>Index of 2008 asset holdings</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Difference (se)	Difference Accounting for Selection (se)
All	0.22 (1225)	0.07 (1090)	-0.16** (0.07)	0.04 (0.12)
Conflict victims	0.04 (455)	-0.01 (528)	-0.05 (0.09)	0.34** (0.17)
Most conflict-affected	0.13 (282)	0.04 (269)	-0.09 (0.12)	0.43 (0.26)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: How many of the following things do you or member of your household possess?* **Source:** ARLS

Broken down asset by asset, the significant gains related to the program are in engine/motorcycle holdings and agricultural machinery (Table 3.3). These results are robust in only one of two alternative specifications. In most instances the gains are modest and not

<sup>32</sup> The asset index was formed by a factor analysis of several variables measuring the quantity of assets owned, ranging from chickens and livestock to large-scale agricultural machinery.



statistically significant. However for conflict victims, in particular, there is evidence for higher levels of household stove ownership in BRA-KDP areas and there is very strong evidence on engine/motorbike holdings (these engines are often vital for taking produce or goods to markets). Indeed, the increase in motorcycle engine holdings for conflict victims is dramatic. Once outliers are removed from the dataset, the effect size drops from .6 to .48 motorbikes, which still suggests that participation in BRA-KDP is associated with gains in holdings of these large assets for one in two households with conflict victims. Given the use of funds reported in the both the program's MIS system and in the survey, it is unlikely that a large share of these extra engines were bought with BRA-KDP funds. Rather, it may be that program beneficiaries are using money they earn from economic activities to buy motorbikes.

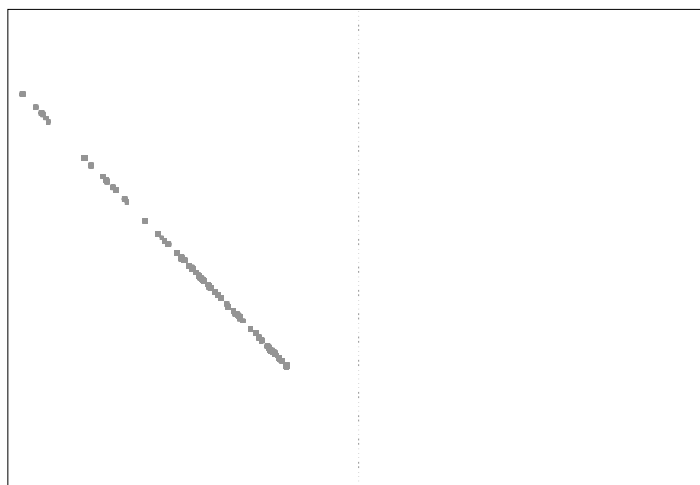
**TABLE 3.3: ASSETS BY CATEGORY**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)	Difference accounting for selection <i>Conflict victims</i> (se)
Stove	1.19 (1,225)	0.96 (1,090)	-0.23*** (0.08)	0.17 (0.16)	0.49* (0.29)
Radio/tape recorder/video	0.5 (1,225)	0.49 (1,090)	-0.01 (0.04)	-0.03 (0.07)	-0.02 (0.11)
Television	0.69 (1,225)	0.61 (1,090)	-0.09** (0.04)	0.05 (0.06)	0.15 (0.10)
Parabola antenna	0.44 (1,225)	0.35 (1,090)	-0.09* (0.05)	-0.08 (0.08)	0.04 (0.10)
Ornamental sideboard/buffet	1.43 (1,225)	1.32 (1,090)	-0.11 (0.09)	0.05 (0.14)	0.13 (0.19)
Refrigerator	0.31 (1,225)	0.28 (1,090)	-0.04 (0.03)	0.02 (0.06)	0.02 (0.09)
Bicycle/row boat	0.74 (1,225)	0.69 (1,090)	-0.05 (0.07)	-0.12 (0.11)	-0.06 (0.17)
Motorcycle/portable engine	0.68 (1,225)	0.68 (1,090)	0.00 (0.06)	0.20* (0.12)	0.60*** (0.19)
Car/motorized boat	0.06 (1,225)	0.08 (1,090)	0.03 (0.02)	0.02 (0.03)	0.07 (0.06)
Telephone/cellular phone	0.99 (1,225)	0.83 (1,090)	-0.16 (0.10)	-0.03 (0.19)	0.3 (0.26)
Chicken/fowl	4.7 (1,225)	5.4 (1,090)	0.71 (0.58)	0.08 (0.79)	-0.58 (1.24)
Goats/sheep	0.56 (1,225)	0.56 (1,090)	0 (0.12)	0.08 (0.21)	0.36 (0.42)
Water buffalo/cows/horses	0.22 (1,224)	0.37 (1,090)	0.15 (0.13)	0.43 (0.37)	1.07 (0.97)
Store/kiosk	0.11 (1,225)	0.11 (1,090)	0 (0.03)	0.03 (0.04)	0.01 (0.07)
Large agricultural machinery	0.01 (1,225)	0.02 (1,090)	0.01 (0.01)	0.02* (0.01)	0.04 (0.03)
Non-agricultural machinery	0.09 (1,225)	0.11 (1,090)	0.02 (0.03)	-0.01 (0.05)	-0.04 (0.08)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: How many of the following things do you or a member of your household possess?* **Source:** ARLS

Figure 3.2 provides another way of examining the effect; the figure shows the expected number of motorcycles/engines held by conflict victim households as a function of treatment status and 'distance' from the treatment cutoff. The figure again highlights the importance of the selection effects: the higher the score on the selection variables the lower the holdings; however holdings are considerably greater for project households than for comparison households around the cutoff point.

**FIGURE 3.2: MOTORCYCLE HOLDINGS AND SELECTION INTO BRA-KDP**



Source: ARLS

### 3.3 Household Infrastructure

We also collected data on a series of larger household assets, such as house construction and access to water. Table 3.4 presents information about the share of households that have constructed homes out of concrete. Only about one-third of households live in high quality, concrete housing. There is no evidence that individuals are more likely to live in more permanent, higher quality housing as a consequence of BRA-KDP.

**TABLE 3.4: QUALITY OF HOUSING**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Share of those whose houses are made of concrete				
All	0.29 (1,225)	0.30 (1,090)	0.01 (0.04)	0.03 (0.08)
Conflict victims	0.25 (455)	0.24 (528)	-0.01 (0.05)	0.07 (0.11)
Most conflict-affected	0.25 (282)	0.22 (369)	-0.03 (0.05)	0.07 (0.13)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: What is the material used most in your house walls?* **Source:** ARLS

Table 3.5 shows the distribution of access to water from clean or protected sources. In all, less than two-thirds of respondents have access to clean water according to this measure. As with other welfare measures, conflict victims have less access to clean water than non-conflict victims. Overall, however, there is no difference between treatment and control communities.

**TABLE 3.5: WATER SOURCE**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
<i>Access to water from a clear or protected source</i>				
All	0.63 (1,225)	0.57 (1,090)	-0.06 (0.06)	0.12 (0.11)
Conflict victims	0.55 (455)	0.50 (528)	-0.05 (0.07)	0.20 (0.13)
Most conflict-affected	0.56 (282)	0.51 (369)	-0.05 (0.08)	0.12 (0.16)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: What is this household's most important source of water?* **Source:** ARLS

### 3.4 Land Use

As agriculture is a major source of income for village households in Aceh, we asked about access to land and the extent of farming households are undertaking. There is strong evidence that BRA-KDP is associated with large increases in the amount of land being farmed. As Table 3.6 shows, these results are especially powerful for conflict victims.

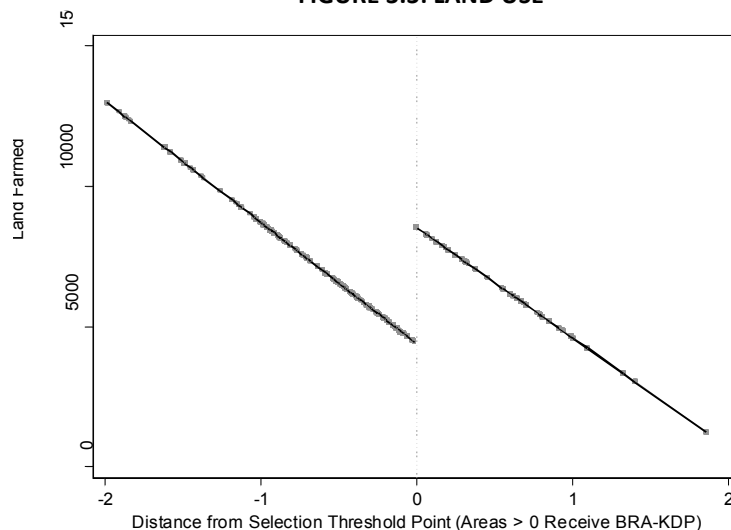
**TABLE 3.6: LAND USE**

m <sup>2</sup> of land that is farmed by household	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	7,740 (644)	9,438 (617)	1,697 (2855.43)	12,201 (7940.23)
Conflict victims	6,906 (245)	7,044 (297)	138 (1114.56)	7,591*** (2174.80)
Most conflict-affected	8,215 (152)	7,607 (200)	-608 (1614.86)	7,382*** (2774.70)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: How many m<sup>2</sup> of land is being farmed by this household?* **Source:** ARLS

These results are quite robust to alternative specifications. On average conflict victims see the land they farm double as a result of the program. The supervision missions showed that many beneficiaries of the project used the BRA-KDP money they received for agricultural inputs and to clear land that had become overgrown during the conflict.

Figure 3.3 presents another view of the data, showing the average level of land use for treatment and control households as a function of the propensity of a village to receive BRA-KDP. The figure highlights the fact that villages more likely to be selected into the program are also more likely to have limited land use, but that conditional on selection criteria, entry to the program has strong positive effects.

**FIGURE 3.3: LAND USE**

**Source:** ARLS

### 3.5 Employment and Wages

BRA-KDP does not appear to have had a significant impact on employment levels. Data collected on entire households through the survey permit us to generate estimates of employment and unemployment. It is possible that BRA-KDP generates higher levels of employment either through community investments in public goods provision or indirectly through greater economic activity resulting from the infusion of capital.

The measure of employment we use includes individuals that are not actively seeking employment in the denominator, a decision that results in lower overall employment rates. Nevertheless, employment rates, as reported in are high. Although they are marginally higher overall in treatment communities, this difference is not significant. There is no evidence of differences for conflict victims in particular (Table 3.7).

Information on the average daily wages of laborers (both male and female) is given in Table 3.8. We find no evidence that the program affected the cost of labor, at least as estimated by village leaders. Note that wage figures do not correspond to *income* since they do not take account of employment rates or of non-wage income, which is likely to be high given the large amount of people working in agriculture who are essentially self-employed. Indeed, the poverty figures above would suggest that at the lower ends of the spectrum, there have been increases in income.

**TABLE 3.7: EMPLOYMENT**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Share of non-students of working age with consistent or full time employment				
All	0.81 (3,309)	0.83 (2,966)	0.02 (0.02)	0.03 (0.03)
Conflict victims	0.79 (1,231)	0.85 (1,411)	0.05** (0.02)	0.01 (0.05)
Most conflict-affected	0.79 (757)	0.84 (1,005)	0.05* (0.03)	0.01 (0.06)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: Which option best describes [...] 's employment situation?* **Source:** ARLS

**TABLE 3.8: AVERAGE DAILY WAGES OF LABORERS**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Average daily wage of a female farm worker or day laborer (controlling for season – Rupiah)	29,954 (237)	29,225 (216)	-729 (867)	1,429 (1608)
Average daily wage of a male farm worker or day laborer (controlling for season – Rupiah)	41,748 (242)	41,631 (217)	-117 (1027)	856 (2098)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

### 3.6 Education and Health

Table 3.9 and Table 3.10 employ further data from the entire household to estimate welfare outcomes in terms of health and education. We focus on the incidence of sickness for the former and school enrollment rates for the latter. Again, on these measures there is no evidence that BRA-KDP communities fare better or worse than those villages that did not receive the program.

**TABLE 3.9: SICKNESS**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Share sick in last month				
All	0.06 (5,619)	0.07 (5,106)	0.01 (0.01)	-0.01 (0.02)
Conflict victims	0.08 (2,151)	0.09 (2,507)	0.01 (0.02)	-0.03 (0.03)
Most conflict-affected	0.08 (1,345)	0.10 (1,752)	0.02 (0.03)	-0.01 (0.04)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: Did [...] suffer from any sickness that prevented him/her from working or going to school in the past month?* **Source:** ARLS

**TABLE 3.10: IN SCHOOL (INDIVIDUALS ≤ 25 YEARS OLD)**

Share of those aged 5 – 25 attending school	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.65 (2,596)	0.65 (2,373)	0.00 (0.02)	0.01 (0.03)
Conflict victims	0.65 (1,033)	0.65 (1,192)	-0.01 (0.03)	-0.06 (0.06)
Most conflict-affected	0.67 (650)	0.62 (824)	-0.05 (0.04)	-0.05 (0.08)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. All regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: Is [...] currently in school?* **Source:** ARLS

### 3.7 Public Goods

We also explored data on a potential direct output of the BRA-KDP program—levels of public goods in villages in Aceh. We looked first at the average number of a variety of different types of public goods at the time of the village head survey in 2008. As Table 3.11 shows, there is weak evidence that BRA-KDP is associated with higher levels of public goods. It appears that treatment communities are likely to have more TPA schools and mosques, but these results are not statistically strong. For other types of public goods, there is no strong evidence of a positive or adverse program impact. This is unsurprising given the relatively small proportion of BRA-KDP funds that communities chose to spend on public goods.

**TABLE 3.11: COMMUNITY PUBLIC GOODS**

Share respondents reporting there is ... in their village	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Elementary school	0.51 (243)	0.44 (220)	-0.07 (0.06)	0.07 (0.10)
Junior/senior high school	0.20 (243)	0.12 (220)	-0.08** (0.04)	-0.13 (0.09)
TPA (Al-Quran education)	0.81 (243)	1.15 (220)	0.34*** (0.13)	0.31 (0.21)
<i>Madrasah</i> (Islamic high school)	0.12 (243)	0.15 (220)	0.03 (0.04)	-0.01 (0.07)
<i>Pesantren</i> (Islamic boarding school)	0.28 (243)	0.38 (220)	0.10 (0.06)	-0.08 (0.11)
Mosque/church	0.71 (243)	0.63 (220)	-0.08 (0.09)	0.39 (0.21)
Village meeting hall	0.27 (243)	0.22 (220)	-0.05 (0.05)	0.06 (0.10)
<i>Puskesmas</i> (health center)	0.40 (243)	0.46 (220)	0.06 (0.06)	0.09 (0.10)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: How many completed [...] are there in this village now?* **Source:** ARLS

Overall, the data suggest that BRA-KDP had little effect on the level of public goods provision in treatment communities. While in principle BRA-KDP could have had an important impact on these outcomes, if communities had chose to spend their money in this way, the results here are consistent with the fact that in practice BRA-KDP money was largely used for private economic activities.

### 3.8 Welfare Perceptions

We close our discussion of welfare effects by examining perceptions of welfare (Table 3.12). The evidence suggests that a large share (about one-third) of individuals in treatment communities is more likely to claim that their living conditions are substantially better than the year before. These results are especially strong for conflict victims. However, they are not robust across alternative specifications.



**TABLE 3.12: SUBJECTIVE PERCEPTIONS OF WELLBEING**

Share of individuals who rate their living conditions as “better” or “much better” than 12 months earlier	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.33 (1225)	0.34 (1090)	0.01 (0.03)	0.07 (0.06)
Conflict victims	0.3 (455)	0.36 (528)	0.06 (0.04)	0.18* (0.09)
Most conflict-affected	0.32 (282)	0.35 (369)	0.03 (0.05)	0.16 (0.11)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: Looking back, how do you rate your living conditions now compared to twelve months ago?* **Source:** ARLS

### 3.9 Conclusions on Welfare

Overall, we find strong evidence of positive program impacts of BRA-KDP with respect to the welfare of beneficiaries and target villages. The data suggests that BRA-KDP has resulted in a significant drop in poverty, a large increase in the assets held by conflict victims, and strong perceptions of improved welfare by conflict victims. Land use for program recipients has increased significantly compared to that in control areas. We find less effect of the program on infrastructure, reflecting the decisions made by communities regarding how best to use BRA-KDP funds. Funds were used largely to promote economic activities through private transfers of cash to individuals. On other welfare measures, such as health and education, there is less evidence of gains in project areas.

## 4. IMPACTS ON SOCIAL COHESION

Sustaining peace in Aceh will require the reintegration of former combatants and internally displaced persons (IDPs) into rural villages. Where reintegration is smooth, social cohesion can be rebuilt providing a basis for a virtuous reinforcing cycle of development and security.

One major motivation for the community-based BRA-KDP program is that it may increase social cohesion. Policymakers and practitioners have placed considerable hope in the potential for participatory development projects to improve a community's conflict management capacity (Chopra and Hohe 2004). Indeed, previous research on KDP in other parts of Indonesia has shown strong improvements in social relations, increases in participation in local civic life, and improvements in local conflict resolution capacity in project areas (Barron, Diprose and Woolcock 2006). Indeed, unlike the vast majority of development projects, KDP remained in Aceh during the conflict, suggesting some degree of robustness to violence. By introducing inclusive and collective decision-making and problem solving, BRA-KDP may positively enhance the reintegration of different community members such as ex-GAM combatants, PETA (anti-separatist groups), and IDPs. Conversely, BRA-KDP may create new tensions or exacerbate existing conflicts or tensions by introducing competition over limited resources. If the process is seen as unfair and nontransparent, favoring certain groups of people, it could strengthen the divide among different groups and potentially create conflicts. Does participation in BRA-KDP strengthen or weaken social cohesion?

### 4.1 Social Acceptance

To examine whether participation in BRA-KDP increased the social acceptance of marginalized groups, we generated a standard version of a social distance scale, asking about a respondent's comfort level with particular groups as members of the village, participants in community associations, as leaders of the community, as close friends, and as kin by marriage. We focus our attention on two marginalized groups in particular: ex-combatants and internally displaced people (IDPs).

As one can see in Table 4.1, expressed levels of comfort with both groups are uniformly high in both treatment and control communities. The table reports the share of individuals expressing comfort with members of the marginalized group in all of the roles mentioned above.

Even with levels of acceptance very high overall, there are some differences between individuals in treatment and control communities. Nearly all of the estimated program effects are negative, suggesting lower levels of acceptance of these marginalized groups in communities exposed to BRA-KDP. The results are particularly powerful for ex-combatants: conflict victims in treatment communities are less accepting of ex-combatants where the BRA-KDP program was implemented than they would likely have been if they had not received the program. This is true despite the fact that victims in treatment communities are generally more accepting of ex-combatants overall; it suggests that before the program such individuals were *even more* accepting of ex-combatants than they are today (see Figure 4.1). The results on how conflict victims perceive ex-combatants are, however, not robust across all alternate

specifications. We explore potential reasons for decreased acceptance of former combatants in Section 6.

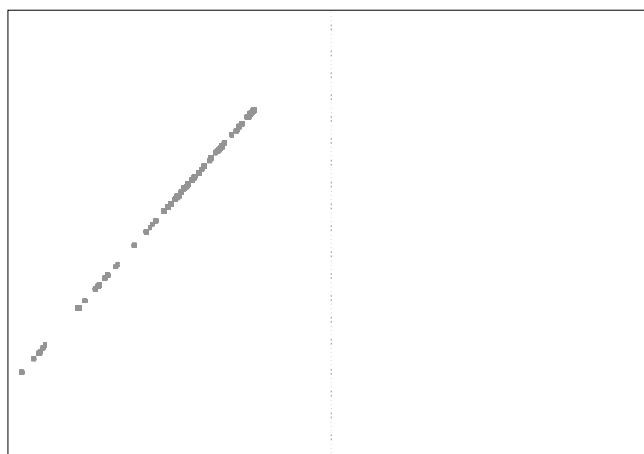
**TABLE 4.1: SOCIAL ACCEPTANCE**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
<b>Share that report full willingness to accept ex-combatants in all roles</b>				
All	0.77 (1211)	0.86 (1076)	0.09* (0.05)	-0.08 (0.06)
Conflict victims	0.83 (452)	0.89 (522)	0.06 (0.04)	-0.18** (0.09)
Most conflict-affected	0.80 (279)	0.89 (364)	0.08* (0.05)	-0.19* (0.11)
Village heads	0.80 (239)	0.87 (217)	0.07* (0.04)	-0.19*** (0.07)
<b>Share that report full willingness to accept IDPs in all roles</b>				
All	0.68 (1223)	0.63 (1088)	-0.05 (0.04)	-0.08 (0.07)
Conflict victims	0.69 (455)	0.65 (528)	-0.03 (0.06)	-0.11 (0.11)
Most conflict-affected	0.65 (282)	0.66 (369)	0.02 (0.07)	-0.03 (0.13)
Village heads	0.73 (242)	0.77 (220)	0.04 (0.04)	0.06 (0.08)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: I would now like to ask you some questions about your feelings toward different categories of people. Should [...] be fully welcomed in this village? Allowed membership in community associations? Allowed to be among the leaders of the village? Among your close friends? Welcomed into your family through marriage?* **Source:** ARLS

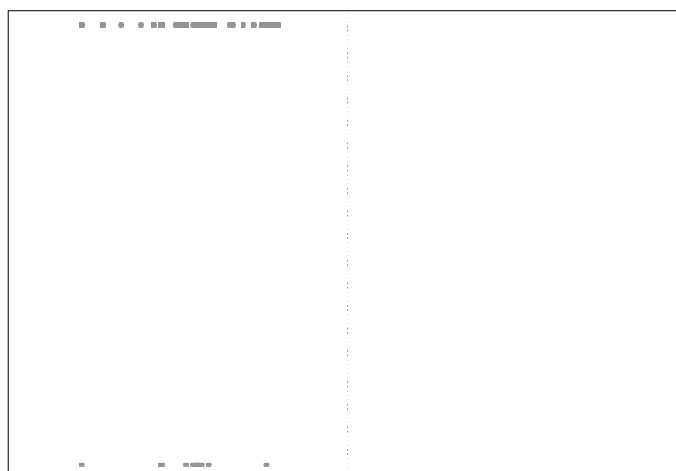
Also consistent with the results from our sample of households, there is evidence that village heads in treatment communities are less accepting of ex-combatants, although levels of acceptance are very high in both project and non-project areas. This suggests an adverse impact of the program on the willingness of community leaders to welcome ex-combatants. We illustrate the relation for one component of this index—the willingness to accept ex-combatants into one's family through marriage—in Figure 4.2. These negative results are robust across alternative specifications.

**FIGURE 4.1: CONFLICT VICTIMS ACCEPTANCE OF EX-COMBATANTS**



**Note:** The figure shows the average willingness to accept an ex-combatant into one's community as a function of selection criteria. Villages with values on or above 0 on the horizontal axis were selected to participate in BRA-KDP. **Source:** ARLS

**FIGURE 4.2: VILLAGE HEAD ACCEPTANCE OF EX-COMBATANTS**



**Note:** Areas to the right of 0 on the horizontal axis were selected to receive treatment those on the left were not. Acceptance levels are typically higher in areas that are more likely to gain access to the program; but conditioning on this selection, acceptance is lower in program areas. **Source:** ARLS

We also asked about the way in which different groups are treated in the context of community-decision making processes: do some groups benefit more than others when decisions are made about how to allocate resources? Table 4.2 suggests that the poor, conflict-affected, elderly, and IDPs tend to do better than other groups in the village. In contrast, people who are well-connected with the village government and with KPA (the organization set up by ex-GAM combatants to help them transition into a political movement) do relatively poorly.

In examining the impact of BRA-KDP, there is strong evidence that those most-affected by the conflict are perceived as benefiting more from community decision-making in areas that received the program than in control communities. This result is apparent in simple differences and is more powerful once we account for selection effect. It suggests that BRA-KDP may have helped conflict victims play a larger role in village decision-making. These results are robust in one of the two alternate specifications.

Strikingly, there is no evidence that ex-combatants are perceived as benefiting disproportionately from village meetings in BRA-KDP communities. The adverse impact of BRA-KDP on acceptance of ex-combatants is therefore likely not the result of former fighters exerting undue influence in the process and could instead simply reflect a lower tolerance for former fighters (discussed further in Section 6).

**TABLE 4.2: GROUPS THAT BENEFIT MORE THAN OTHERS**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
<i>Share saying that (...) benefit more</i>				
Those most affected by conflict	0.44 (1,213)	0.56 (1,086)	0.11*** (0.05)	0.22** (0.09)
<i>Conflict victims subsample</i>	0.42 (453)	0.57 (527)	0.15** (0.06)	0.21* (0.12)
The relatively poor	0.58 (1,220)	0.55 (1,086)	-0.03 (0.04)	0.10 (0.08)
<i>Conflict victims subsample</i>	0.54 (454)	0.55 (527)	0.02 (0.06)	0.24** (0.12)
Older People	0.41 (1,219)	0.45 (1,086)	0.04 (0.04)	0.11 (0.07)
Friends and family of the village leader	0.22 (1,211)	0.21 (1,075)	0.00 (0.03)	-0.01 (0.06)
People that are well-connected with local government	0.17 (1,208)	0.17 (1,072)	0.00 (0.04)	-0.02 (0.08)
People that are well connected with KDP facilitators	0.13 (1,206)	0.15 (1,070)	0.02 (0.04)	0.02 (0.08)
People that are well-connected with KPA	0.12 (1,194)	0.14 (1,071)	0.03 (0.03)	-0.01 (0.07)
Ex-GAM combatants, PETA members	0.17 (1,197)	0.19 (1,071)	0.02 (0.04)	0.04 (0.07)
IDPs	0.38 (1,205)	0.43 (1,077)	0.06 (0.04)	0.09 (0.07)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending

capacity, their quadratic and cubed terms, and their interaction. *Question: When the community has to make a decision about how to allocate resources in the village, sometimes some groups benefit more than others. Generally, do you think the following people do especially well or especially badly relative to other people in the group?* **Source:** ARLS

## 4.2 Social Tensions

By emphasizing transparency and participatory decision-making, BRA-KDP aimed to provide communities with mechanisms for handling community level tensions. We asked a series of questions to respondents about the extent of social division in their village.

**TABLE 4.3: SOCIAL TENSIONS**

<i>To what extent do the following differences tend to divide people in your town?</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Received special assistance from government	0.45 (1,224)	0.41 (1,090)	-0.04 (0.04)	-0.02 (0.07)
Between rich and poor				
All	0.21 (1,224)	0.22 (1,090)	0.01 (0.03)	0.02 (0.05)
Conflict victims	0.20 (455)	0.26 (528)	0.05 (0.04)	0.05 (0.09)
Most-affected	0.21 (282)	0.23 (369)	0.03 (0.04)	0.07 (0.10)
Men and women	0.06 (1,224)	0.08 (1,090)	0.02 (0.03)	0.03 (0.05)
Younger and older generations	0.04 (1,224)	0.05 (1,090)	0.01 (0.02)	0.00 (0.03)
Returnees/IDPs and villagers	0.02 (1,224)	0.02 (1,090)	0.00 (0.01)	0.02 (0.02)
New migrants and villagers	0.03 (1,225)	0.03 (1,089)	0.00 (0.01)	0.03* (0.02)
Ex-combatants and villagers	0.03 (1,224)	0.04 (1,088)	0.01 (0.01)	0.02 (0.02)
Different ethnic groups	0.03 (1,225)	0.04 (1,090)	0.01 (0.02)	0.05** (0.02)
Village and neighboring village				
All	0.06 (1,225)	0.06 (1090)	0.00 (0.02)	0.09*** (0.03)
Conflict Victims	0.03 (455)	0.05 (528)	0.02 (0.02)	0.11** (0.04)
Most-affected	0.04 (282)	0.05 (369)	0.02 (0.02)	0.16** (0.06)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

The most prevalent division we find in the data is between those who have received special assistance from government and those who have not. The second greatest division is between

rich and poor. There is some evidence that divisions between new migrants and villagers and among ethnic groups are higher in BRA-KDP communities (these findings are robust in some but not all alternative specifications), although very small proportions of the population reports these divisions. While conflict between the village and neighboring villages is not a major source of division in general, there is evidence that it is nevertheless a greater source of division in BRA-KDP treatment villages. Again, the results are not very robust to alternative specifications.

### 4.3 Conflict Resolution

In strengthening cooperation and collective decision-making, BRA-KDP is hypothesized to increase the ability of communities to resolve tensions and increase satisfaction with how problems in the village are resolved.

Table 4.4 looks at whether the divisions outlined above have escalated to physical violence in the past six months. It is hypothesized that BRA-KDP reduces the escalation of tension to violence by strengthening the capacity of individuals to resolve conflict through formal mechanisms. It is worth noting first that divisions rarely escalate to violence in both treatment and control communities. Nevertheless, there is no evidence that exposure to BRA-KDP strengthened the ability of communities to prevent escalation.

**TABLE 4.4: ESCALATING TO VIOLENCE**

<i>Share of divisions that escalated to violence in the past six months</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Received special assistance from government	0.07 (553)	0.12 (420)	0.05 (0.05)	-0.04 (0.08)
Between rich and poor	0.09 (237)	0.13 (200)	0.04 (0.07)	0.01 (0.09)
Men and women	0.15 (55)	0.11 (55)	-0.05 (0.10)	-0.12 (0.16)
Younger and older generations	0.12 (54)	0.09 (45)	-0.03 (0.06)	-0.02 (0.08)
Returnees/IDPs and villagers	0.08 (17)	0.00 (14)	-0.08 (0.08)	-0.18 (0.15)
New migrants and villagers	0.09 (35)	0.00 (24)	-0.09 (0.06)	-0.24 (0.15)
Ex-combatants and villagers	0.11 (35)	0.07 (37)	-0.04 (0.08)	0.11 (0.16)
Different ethnic groups	0.16 (32)	0.06 (29)	-0.10 (0.09)	0.06 (0.27)
Village and neighboring village	0.04 (61)	0.02 (45)	-0.02 (0.03)	-0.02 (0.05)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

Table 4.5 presents evidence of whether individuals feel that problems in the village are normally resolved satisfactorily or whether they tend to endure. Overall, the data point to high levels of satisfaction with problem-solving. But there is no evidence that communities that received BRA-KDP exhibit greater satisfaction than those that did not.

**TABLE 4.5: CONFLICT RESOLUTION**

<i>Share agreeing that problems in the village are normally resolved satisfactorily</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.81 (1,208)	0.81 (1,077)	0.00 (0.03)	-0.05 (0.05)
Conflict victims	0.82 (449)	0.81 (522)	-0.01 (0.04)	-0.09 (0.07)
Most conflict-affected	0.80 (277)	0.83 (366)	0.04 (0.04)	-0.02 (0.10)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

## 4.4 Collective Efficacy

In seeking to ease tensions among groups, one goal of BRA-KDP is to improve the capacity of villages to act collectively. By strengthening collective action, BRA-KDP communities could be more effective in initiating or securing other projects for the benefit of the community.

**TABLE 4.6: COLLECTIVE EFFICACY**

<i>Share reporting that in the past six months, there has been a (non BRA-KDP) project involving the community to:</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Build or rebuild a school	0.32 (1,221)	0.29 (1,089)	-0.03 (0.05)	0.03 (0.08)
Build or repair a road	0.44 (1,223)	0.49 (1,089)	0.04 (0.04)	0.08 (0.08)
Dig or repair a well	0.19 (1,221)	0.18 (1,090)	-0.01 (0.04)	-0.05 (0.07)
Organize security	0.20 (1,224)	0.11 (1,088)	-0.08** (0.04)	0.00 (0.06)
Increase agricultural productivity	0.25 (1,219)	0.26 (1,086)	0.02 (0.03)	0.07 (0.07)
Build or rebuild a meeting hall or mosque	0.67 (1,223)	0.73 (1,089)	0.07* (0.04)	0.08 (0.07)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS



Table 4.6 presents evidence of whether BRA-KDP communities had more village projects ongoing than non-BRA-KDP communities. Simple differences suggest that BRA-KDP communities were less likely to organize initiatives to increase security and more likely to build new mosques, but these results do not survive once selection effects are taken into account.

Table 4.7 offers another way of presenting the results. Respondents were asked about the number of non-BRA-KDP projects initiated in their community in the previous six months; for those where a project was initiated they were further asked to specify whether it was initiated by the community, by the government or by an international organization. To examine whether BRA-KDP induced higher levels of community public goods provision, the analysis in Table 4.7 focuses on the share of community-initiated projects. Efforts to provide security and build a mosque or meeting hall are the most common activities that are community-initiated. The data suggest, however, that BRA-KDP communities were less likely to initiate a project to rebuild a meeting hall or mosque than control communities in the past six months (although this result is not robust to alternative specifications).

**TABLE 4.7: COMMUNITY LEADERSHIP IN PUBLIC GOODS PRODUCTION**

<i>Share of projects that were community initiated (for those where a non-BRA-KDP project was initiated in the past 6 months):</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Build or rebuild a school	0.18 (304)	0.17 (247)	-0.02 (0.07)	0.02 (0.10)
Build or repair a road	0.21 (528)	0.25 (499)	0.05 (0.04)	0.03 (0.08)
Dig or repair a well	0.25 (210)	0.27 (163)	0.02 (0.08)	-0.14 (0.12)
Organize security	0.81 (205)	0.76 (137)	-0.06 (0.07)	-0.05 (0.14)
Increase agricultural productivity	0.16 (349)	0.21 (258)	0.05 (0.05)	0.11 (0.08)
Build or rebuild a meeting hall or mosque	0.81 (775)	0.74 (756)	-0.07 (0.04)	-0.17** (0.07)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

## 4.5 Associational Life

A final approach to assessing the impact of BRA-KDP on collective efficacy explores the richness of associational life in Acehese villages. Is it the case that exposure to BRA-KDP has led to the sprouting of new organizations or increased the involvement of villagers in existing ones?

Table 4.8 reports on the existence of associations of different types in treatment communities, as described by village heads. Most villages have associations that focus on farming or other productive activities, religion, youth and sports, and women.

**TABLE 4.8: ASSOCIATIONAL LIFE (BY VILLAGE HEADS)**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection IV (se)
Farmer's group / professional / trader's association / union	0.75 (243)	0.79 (220)	0.03 (0.04)	0.06 (0.08)
Credit / finance group	0.21 (243)	0.29 (220)	0.08* (0.04)	0.08 (0.08)
Community development / self help	0.06 (243)	0.04 (220)	-0.03 (0.02)	-0.03 (0.04)
Religious group	0.93 (243)	0.97 (220)	0.04** (0.02)	0.03 (0.03)
Cultural / ethnic association	0.21 (243)	0.28 (220)	0.07* (0.04)	0.09 (0.08)
Political group	0.15 (243)	0.20 (220)	0.05 (0.04)	0.07 (0.06)
Youth or sports group	0.91 (243)	0.93 (220)	0.02 (0.03)	-0.01 (0.05)
Women's group	0.94 (243)	0.92 (220)	-0.02 (0.02)	0.12** (0.05)
KPA	0.03 (243)	0.12 (220)	0.09*** (0.02)	0.06 (0.04)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: Are any of the following types of associations active in your village? List includes farmer's group/traders' association/union/professional association, credit/finance group, community development, religious group, cultural/ethnic association, political group, youth/sports group, women's group.*

Source: ARLS

There is some evidence of a greater diversity of associational life in communities that received BRA-KDP, although only the result on women's groups survives accounting for selection. Although the likelihood that villages have women's groups is very high overall, there is strong evidence that BRA-KDP increases this likelihood (a result that is robust to alternative specifications).

Finally we examine the extent of participation in associational life by community members. Table 4.9 reports the share of existing associations in which individuals participate as members. There is no evidence that individuals are more actively engaged in association life in communities that benefited from BRA-KDP.

**TABLE 4.9: INVOLVEMENT IN ASSOCIATIONAL LIFE**

<i>Share of existing associations in which individuals participate</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.40 (1,221)	0.42 (1,084)	0.02 (0.02)	0.04 (0.04)
Conflict victims	0.47 (453)	0.44 (523)	-0.03 (0.03)	0.03 (0.06)
Most conflict-affected	0.47 (280)	0.44 (364)	-0.03 (0.03)	0.04 (0.08)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: If one exists, are you a member of any of the following types of associations? List includes farmer's group/traders' association/union/professional association, credit/finance group, community development, religious group, cultural/ethnic association, political group, youth/sports group, women's group.* **Source:** ARLS

## 4.6 Conclusions on Social Cohesion

Overall, acceptance of conflict-related groups, especially ex-combatants and IDPs is high overall in both treatment and control locations. Notably, however, areas that received BRA-KDP demonstrated significantly less acceptance of ex-combatants, especially among conflict victims and community leaders. Interestingly, there is no evidence, however that ex-combatants are perceived as benefitting disproportionately from village meetings in BRA-KDP communities. The adverse impact of BRA-KDP on acceptance of ex-combatants is therefore likely not the result of former fighters exerting undue influence in the process and could instead simply reflect a lower tolerance for former fighters, a topic we return to in Section 6.

BRA-KDP had some positive impact on some measures of social cohesion, such as the existence of women's groups. For the most part, however, this analysis reveals little impact of BRA-KDP on social cohesion as captured for example by measures of as conflict resolution, community public goods provision, and involvement in associational life.

One explanation for the lack of gains may be the short time period BRA-KDP ran for. Previous work on KDP in Indonesia has shown that increases in collective action and participation tend to occur after three to four program cycles (Barron, Diprose and Woolcock 2006). BRA-KDP ran for only one year. If so, this analysis suggests that sustained involvement may be a necessary condition for program effectiveness.

## 5. IMPACTS ON TRUST IN LOCAL GOVERNMENT AND STATE-SOCIETY RELATIONS

In a post-conflict context, it is crucial for the government to win people's trust to regain legitimacy. This is particularly true in Aceh where the government is associated with previous oppression and where people are generally skeptical of the government's intentions and capacity (MSR 2009).

It was hypothesized that, if properly implemented, BRA-KDP might provide a channel for the government (at all levels) to demonstrate tangibly its ability to address the population's needs. This might in turn generate greater faith and trust in village and governmental institutions, reinforcing the transition from war to peace. Conversely, if the program was not implemented fairly, transparently and in a timely manner, it risked further alienating the population, potentially creating space for anti-government elements to win them over. Does participation in BRA-KDP increase trust in local government and strengthen state-society relations?

### 5.1 Trust in Community Decision-Making

As a community-driven development project, BRA-KDP provided villagers with the opportunity to participate directly in decisions over how funds would be spent. We explore whether exposure to this participatory methodology has changed how decisions are made within communities and how individuals believe decisions should be made.

By exposing communities to participatory decision-making, BRA-KDP is hypothesized to lead to higher levels of overall satisfaction with how decisions are made at the village level. We see in Table 5.1 that levels of satisfaction with village decision-making are high across all key groups of interest. There is no significant difference in satisfaction with decision-making across treatment and control areas.

**TABLE 5.1: SATISFIED WITH DECISIONS**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.91 (1,217)	0.91 (1,079)	0.00 (0.02)	0.02 (0.04)
Conflict victims	0.89 (453)	0.92 (525)	0.03 (0.03)	-0.02 (0.05)
Most conflict-affected	0.88 (280)	0.94 (368)	0.07* (0.03)	-0.03 (0.07)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: Overall, how satisfied are you with the way that decisions that affect all community members are made in your village?* **Source:** ARLS

Table 5.2 describes the groups that individuals believe play the biggest role in community decision-making. The largest share feels that villagers play the greatest decision-making role, with elders/traditional leaders and village government playing the second and third largest roles, respectively. However, there is evidence that, accounting for selection, individuals feel villagers play *less* of an important role in BRA-KDP communities (a result that is robust in both alternative specifications), despite the program’s emphasis on participatory methodologies.

**TABLE 5.2: VILLAGERS’ ROLE IN DECISION-MAKING**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple Difference (se)	Difference Accounting for Selection (se)
<b><i>Share believing that villagers do play the most important role</i></b>				
All	0.44 (1,224)	0.42 (1,082)	-0.02 (0.04)	-0.16* (0.08)
Conflict victims	0.46 (455)	0.46 (526)	0.00 (0.05)	-0.25** (0.12)
Most conflict-affected	0.43 (282)	0.42 (367)	-0.01 (0.06)	-0.17 (0.13)
<b><i>Share believing that village head/government does play the most important role</i></b>				
All	0.15 (1,224)	0.16 (1,082)	0.01 (0.02)	0.04 (0.05)
Conflict victims	0.16 (455)	0.15 (526)	-0.02 (0.04)	0.02 (0.08)
Most conflict-affected	0.16 (282)	0.16 (367)	0.00 (0.05)	0.10 (0.09)
<b><i>Share believing that elders/traditional leaders do play the most important role</i></b>				
All	0.40 (1,224)	0.41 (1,082)	0.01 (0.04)	0.10 (0.09)
Conflict victims	0.36 (455)	0.38 (526)	0.02 (0.06)	0.18 (0.13)
Most conflict-affected	0.38 (282)	0.40 (367)	0.02 (0.07)	0.06 (0.14)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N’s (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. Table only reports results for responses reported by at least 2 percent in the population.

*Question: Imagine that the village receives funds to invest in improving infrastructure in the village. A decision needs to be made about how the funds should be spent. Who would likely play the biggest role in making the decision?* **Source:** ARLS

Table 5.3 examines whether individuals believe their participation in village meetings is valuable. Specifically, we ask whether respondents believe they are influential in shaping the outcomes of community decision-making processes. Overall, the data suggest that beliefs about

efficacy are relatively low. Moreover, the results suggest that individuals (especially conflict victims) in treatment communities believe they are less influential than individuals in control communities, although these results do not survive accounting for selection.

**TABLE 5.3: POLITICAL EFFICACY**

<i>Share that believe they play an influential role in decisions at least some of the time</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.38 (1,193)	0.35 (1,063)	-0.03 (0.03)	0.01 (0.06)
Conflict victims	0.43 (441)	0.33 (522)	-0.10** (0.05)	-0.02 (0.10)
Most conflict-affected	0.39 (273)	0.30 (367)	-0.09 (0.05)	-0.04 (0.12)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: When decisions are made on issues that affect all villagers, do you feel that you personally play an influential role in affecting the outcome, for instance, when you speak at village meetings or try to persuade others?* **Source:** ARLS

## 5.2 Trust in Government

One possible outcome of the BRA-KDP program is higher levels of awareness and trust in government, as the program was an attempt by government to delivery on key needs in the immediate aftermath of the conflict.

### ***Behavioral measures***

Table 5.4 reports the results of an attempt to measure how willing individuals are to support the activities of the district government using a behavioral measure. To measure trust in local government directly, we implemented a procedure in which respondents were given Rp. 10,000 (around US\$ 1) and asked to decide (in private) how much they wished to contribute to development activities administered by the district government and how much they wished to keep for themselves. The money they wanted to send to the district government was to be put in an envelope; all these envelopes were later delivered to the district office.

The share of funds sent to local government serves as a measure for trust in the ability or willingness of local government to use funds well; differences in willingness to contribute can serve as a measure of program effects. In effect the measure captures the willingness to pay local taxes. We found that respondents tended to send about 20-25 percent of the endowment, keeping the rest for their personal use. There is, however, no difference in level of trust exhibited by individuals in treatment and control communities, both in the simple comparison and in the comparison that takes account of selection effects.

**TABLE 5.4: TRUST IN DISTRICT GOVERNMENT**

<i>Share of Rp. 10,000 contributed to district government for investment in local development</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.25 (1,225)	0.24 (1,090)	0.00 (0.03)	0.00 (0.05)
Conflict victims	0.22 (455)	0.21 (528)	-0.01 (0.03)	-0.02 (0.06)
Most conflict-affected	0.24 (282)	0.20 (369)	-0.04 (0.03)	-0.08 (0.06)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Exercise: Respondents were given an envelope with Rp. 10,000 and asked to decide how much they wished to keep for themselves and how much they wanted to contribute to the local government for development in the area. The money contributed was then transferred to the district government office.*

Source: ARLS

### ***Attitudinal measures***

Confidence in government can also be recorded through responses to attitudinal questions. We now turn to trust in the local village apparatus. Table 5.5 describes how individuals responded to a hypothetical situation: if a grant of Rp. 100 million (around US\$ 10,000) was given to the village, what share do they think should be managed by the village government as opposed to distributed directly to villagers? By this measure, respondents exhibit relatively low levels of trust in the village apparatus, generally believing that only about one-third of the funds should be given to village government. There is no difference in responses between treatment and control communities.

**TABLE 5.5: TRUST IN VILLAGE APPARATUS**

<i>Share of Rp. 100 million grant respondent believes should be managed by village apparatus as opposed to distributed directly to villagers</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.37 (1,221)	0.36 (1,084)	-0.01 (0.02)	-0.03 (0.04)
Conflict victims	0.33 (454)	0.35 (528)	0.02 (0.03)	0.03 (0.06)
Most conflict-affected	0.33 (281)	0.35 (369)	0.02 (0.03)	0.02 (0.07)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Question: If a grant of Rp. 100 million were made available to support this village, how much should be managed by the village apparatus to be used for development projects to help the village and how much should be divided up and given directly to individual villagers to use as they see fit?* Source: ARLS

We also asked individuals to report their confidence in a set of actions they could take that might be effective in improving the situation in their village. We focus in Table 5.6 on the share of respondents reporting that sub-district, district, and provincial authorities could make a difference in addressing local challenges.

Only about one-third of respondents believe that governmental authorities are best placed to improve the situation in the village. However, the survey results suggest that treatment communities, and conflict victims in particular, were more likely to believe this than control communities (a result that is not consistent with the evidence in the behavioral game). These results are significantly weakened in the robustness tests however.

**TABLE 5.6: CONFIDENCE IN EFFECTIVENESS OF SUB-DISTRICT, DISTRICT, AND PROVINCIAL GOVERNMENT**

<i>Share of respondents reporting that sub-district, district, or provincial authorities would be among the “most effective” or “next most effective” groups to improve the situation in the village</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
All	0.31 (1,225)	0.32 (1,090)	0.01 (0.04)	0.17* (0.09)
Conflict victims	0.32 (455)	0.32 (528)	0.00 (0.05)	0.28** (0.14)
Most conflict-affected	0.32 (282)	0.34 (369)	0.01 (0.06)	0.32** (0.15)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. *Exercise: Respondents were asked to rank a list of actions they could take to improve the situation in their village. Ten options were presented including complaining to a village head, sub-district official, district official, provincial official, religious leaders/elders, KPA/GAM; appealing to local NGOs or international organizations; expressing opinion during elections; taking part in protests; or resorting to violence.* **Source:** ARLS

### **Knowledge of government**

Finally we consider a series of knowledge questions. Table 5.7 provides information about how aware respondents are of the leaders at various levels of government. Individuals were asked whether they could name the head of the sub-district, the district, and the governor, as well as in which year the next election would be held. The advantage of this kind of question is that it can capture effects of increased levels of contact or interaction with government and is not easily susceptible to misrepresentation.

Overall we find that knowledge of more central politics (the date of the presidential election, the governor of Aceh) is greater than knowledge of local politics (the names of district and sub-district leaders). Only about one-third of respondents can provide the names of sub-district heads. There is no evidence that individuals in treatment communities exhibit greater or lesser awareness of government.



**TABLE 5.7: AWARENESS OF GOVERNMENT**

<i>Share of all individuals who can correctly name...</i>	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
The head of the sub-district	0.28 (1,225)	0.33 (1,090)	0.05 (0.04)	0.02 (0.06)
The head of the district or regency	0.62 (1,225)	0.53 (1,090)	-0.09** (0.04)	-0.08 (0.08)
The governor of Aceh	0.63 (1,225)	0.68 (1,090)	0.05 (0.03)	0.03 (0.06)
The year in which the next presidential election will be held	0.61 (1,225)	0.64 (1,090)	0.02 (0.04)	-0.04 (0.06)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

### 5.3 Attitudes about Governance

BRA-KDP also aimed to expose individuals to transparent and participatory decision-making. Does this exposure lead to greater support for democracy in treatment communities? To find out, we asked respondents a series of questions on potentially divisive issues of governance in their communities. The results are reported in Table 5.8.

**TABLE 5.8: SUPPORT FOR DEMOCRACY**

	Individuals in control communities (N)	Individuals in treatment communities (N)	Simple difference (se)	Difference accounting for selection (se)
Agree that we should be more active in questioning the actions of our leaders.	0.33 (1,224)	0.33 (1,087)	0.00 (0.04)	-0.01 (0.07)
Agree that leaders should not favor their own family or ethnic group.	0.98 (1,223)	0.98 (1,086)	0.00 (0.01)	-0.01 (0.02)
Agree that all should be permitted to take part in important decisions	0.22 (1,221)	0.26 (1,084)	0.04 (0.04)	0.08 (0.07)
Agree that women should have the same roles as men in positions of authority in village government	0.32 (1,221)	0.25 (1,088)	-0.07* (0.04)	0.02 (0.08)

\*\*\* Significant at 99%; \*\* Significant at 95%; \* Significant at 90%. The table reports estimated population means, standard errors and sample N's (where total sample size is 2,315), as well as the difference for populations in treatment and control communities using least squares and instrumental variable regressions. IV regressions control for conflict and spending capacity, their quadratic and cubed terms, and their interaction. **Source:** ARLS

In general, citizens exhibit deference to their leaders; only about 33 percent feel they should be more active in questioning their leaders. Citizens also show low levels of support for permitting everyone to participate in important decisions. Citizens overwhelmingly agree, however, that leaders should represent everyone, rather than favor their own family or ethnic group. Overall, there are no differences in attitudes for individuals in treatment and control communities.

#### **5.4 Conclusions on Trust in Local Government and State-Society Relations**

We find little evidence that BRA-KDP resulted in changes in key indicators of attitudes towards government, such as awareness of local government and support for democracy. On the whole villagers feel they play a role in local decision-making, although individual perceptions of political efficacy are low. There is some evidence that villagers feel less influential in community decision-making in BRA-KDP areas, despite the program's empowerment goals. Additionally, there is little evidence of enhanced trust in village government or in district government using a behavioral measure. BRA-KDP does appear to have resulted in higher levels of confidence in sub-district, district or provincial level government as expressed in survey responses, which could indicate that credit for the program is being attributed to governments at these levels. This might be consistent with the fact that sub-district level facilitators play a key role in the program and that the program was managed by BRA's provincial office. In contrast, district level government played a much smaller role in program so the lack of an impact of BRA-KDP on faith in district government, as recorded through the behavioral game, is not surprising. Again, the lack of improvements in trust in local government may be a result of the short time period of the program.

## 6. COMMUNITY DEVELOPMENT AND EX-COMBATANT REINTEGRATION

A surprising result of this study is that on a number (although not on all) measures BRA-KDP appears to be associated with lower rates of acceptance of ex-combatants. In particular, we find that BRA-KDP contributed to reported lower levels of acceptance of ex-combatants for both conflict victims and village leaders. On other measures, such as reports of social tensions and on self-reporting of acceptance by ex-combatants, we do not find evidence of adverse effects, although we do not find positive effects either.<sup>33</sup>

Collectively, these results run against the belief held by many practitioners of demobilization and reintegration programs that social investments in post-conflict areas are an especially effective way of ensuring the acceptance of returning ex-combatants. While there is now broad consensus around this view, there is in fact little evidence that a community-focused approach is equally or even more effective than an approach focused on ex-combatants (of course, often programs focus on both groups). Thus it is striking that in this analysis of a program targeted at civilian victims we find no evidence of positive effects and some evidence of adverse effects. What accounts for these adverse impacts? A number of different explanations are possible.

### 6.1 Ex-Combatant Capture of BRA-KDP Funds?

One plausible explanation is that BRA-KDP increased tensions between ex-combatants and civilians in project areas because of concerns that ex-TNA, the combatant wing of GAM, appropriated funds or because conflict victims felt that the allocation to ex-combatants was unfair.

The evidence on this hypothesis is mixed. In Table 2.12 we saw that the most common complaint among conflict victims was that ex-combatants (or PETA or IDPs) benefited too much from the BRA-KDP program (13 percent of victims agreed with this statement). Was this the case?

Table 6.1 shows that ex-combatants received BRA-KDP benefits at rates approximately equal to those of non-combatants. Individuals in households with ex-combatants received goods from BRA-KDP in about the same proportion as civilian victims and non-victims with no ex-combatants in their households. Most households with ex-combatants also report as conflict victims. These households fare marginally worse than other conflict victims (the difference is not significant), while ex-combatant non-victims fare marginally better than other non-victims (although again this difference is not significant).

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<sup>33</sup> In general self-reporting of acceptance universally suggests few problems of exclusion. All of the few (7) cases of reported problems are among ex-combatants, but the estimated rate of problems is the same in project and comparison areas.

**TABLE 6.1: SHARE OF EX-COMBATANTS AND CIVILIANS RECEIVING BENEFITS (PROJECT AREAS ONLY)**

<i>Share of ... who reported received benefits</i>	Non-conflict victims	Conflict victims	Total
Households with no ex-combatants	40 (640,000)	44 (602,000)	42 (1,243,000)
Households with ex-combatants	43 (3,900)	42 (19,500)	42 (23,500)
Total	40 (645,000)	44 (622,000)	42 (1,267,000)

The table reports population averages (with estimated population N's below). **Source:** ARLS

These findings suggest that 'capture' did not take place on a large scale.

What then explains apparent dissatisfaction? Recall that by design, ex-combatants should not have been direct beneficiaries of the BRA-KDP process. (Former combatants had their own programs and so were meant to have been excluded from the program). For this reason, any benefits they received could be seen to be too much even if ex-combatants fared no better than civilian populations in the distribution of program funds. Thus, while it seems clear that ex-combatants did not 'capture' BRA-KDP funds, they did succeed in obtaining funds destined for non-combatants at rates approximately equal to non-combatants. This could account for the adverse effects of the program on the social acceptance of ex-combatants. In general, the data supports this interpretation.

## 6.2 Alternative Explanations

A second hypothesis is that ex-combatants may have resented the fact that they were unable to disproportionately benefit. While BRA ran separate programs for ex-combatants, funds were often late in being disbursed, were of low levels per capita (World Bank 2006), and many ex-combatants missed out (MSR 2009). This may have increased demands from ex-combatants for a large share of the BRA-KDP pie. If this led to misbehavior on the part of former combatants (as on occasions it did – Morel et. al. 2009) this may in turn have increased community resentment and had a negative impact on acceptance.

A third hypothesis is that BRA-KDP helped empower communities to stand up to demands from ex-combatants. This may have happened through a number of different mechanisms. One is that, by focusing attention on an individual's status as a 'conflict victim', the BRA-KDP program may have facilitated a process of blame assignment in which former fighters came to be seen as responsible for the injuries suffered by the population due to the war. This could have reduced acceptance. Another mechanism might be that the participatory process gave conflict victims more confidence to stand up to the demands of former combatants. It is possible, for example, that by providing independent revenue sources, BRA-KDP lessened the dependence of villagers on ex-combatant structures, which could lead to a decline in acceptance of ex-combatants

We do not have data to test such a claim but the supervision missions suggest that, at least in some areas, conflict victims were more willing to stand up to ex-combatant demands (Morel et. al. 2009). If this is the case, it is difficult ex ante to say whether this is positive or negative for sustainable post-conflict stability. In Aceh, there have been growing complaints from many that

the influence of former combatants is too great.<sup>34</sup> If programs like BRA-KDP increase the counter-veiling power of civilian community members, it may create an important check and balance to GAM power, for untrammelled control over resources and decision-making could lead to fresh resentment (and potentially uprisings) in the future (Barron 2009). Conceptualized as such, an increase in minor tensions between former combatants and civilians may be positive for post-conflict stability, as long as such tensions do not escalate into more serious conflict as they rarely have to date.<sup>35</sup>

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Our data do not permit us to assess the validity of these different hypotheses adequately. We believe however that this would be a fruitful area for further research. More broadly, future work on post-conflict reintegration and development programs should take into account the possibility of adverse initial impacts on community-combatant ties and to seek further evidence that might shed light on the mechanisms at work and the ultimate impacts on peace.

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<sup>34</sup> The 2006-2007 local executive elections (at the provincial and district levels) and the 2009 local parliament elections saw many members of the former rebel group accede to positions of power (Clark and Palmer 2008; MSR 2009). This has given many former commanders access to and control over state resources, for example through the awarding of construction contracts (Aspinall 2009).

<sup>35</sup> We note, however, that measures in the data suggest that the influence of ex-combatants and KPA structures in villages is modest at best. Almost no respondents claimed that ex-combatants played a dominant role in village decision making either in treatment or comparison areas and only about 1 percent of respondents felt that complaining to ex-combatant or KPA (the committee put in place by GAM to help former combatants transition to civilian life) structures would be an effective way to resolve a local problem. One might also expect higher levels of individual and collective efficacy as a result of BRA-KDP, especially among conflict victims, if this hypothesis were true. However, as reported earlier, there is little evidence that BRA-KDP positively impacted efficacy.

## 7. CONCLUSIONS

Established in the immediate aftermath of the conflict in Aceh, BRA-KDP was designed to deliver community-based reintegration assistance through a participatory mechanism that emphasized local ownership and transparency in decision-making. Its particular focus was on conflict victims, given the many other initiatives targeted at ex-combatants at the conflict's end.

BRA-KDP had a multiplicity of objectives, but three were of particular importance. The program sought: (a) to improve the material wellbeing of its beneficiaries, particularly conflict victims; (b) to rebuild social cohesion in Acehnese communities, many of which faced the difficult task of reintegrating ex-combatants and IDPs; and (c) to help build faith and trust that governmental institutions could deliver in meeting the needs of individuals and communities.

This paper presents evidence on the impact of BRA-KDP on material wellbeing, social cohesion, and trust in government. In assessing impact, we examine outcomes against a 'null hypothesis' of no effect. For each outcome, we ask what we would have expected to see if BRA-KDP had no impact and assess how different what we actually observe is from this null outcome. Establishing the causal impact of the program on outcomes in this way is challenging however because the program was implemented in communities that differed systematically from those that did not receive BRA-KDP. We draw on a variety of statistical techniques to deal with these biases that result from selection into the program in order to produce valid estimates of the program's impact.

This complexity, though unfortunate, appears to have been necessary. In many instances, we found that our estimated program effects differ substantially from what would be inferred from simple comparisons of means: a simple comparison of outcomes in 'treated' and 'control' areas would have led to erroneous inferences. But it also comes with costs. In this case, we find that even after accounting for selection, many of the messages emanating from this research lack the clarity that one seeks in an evaluation of this form. In many cases where impacts are apparent, they are not robust to alternative specifications. The core methodological lesson we draw, one that is increasingly being appreciated in the evaluation community, is that evaluations are most effective and give clearest answers when evaluation considerations are built into the design of a project. The first best approach is to use some form of randomized intervention, when possible. When this is not possible a second best approach is to apply a fully replicable selection rule that determines treatment status from a continuous underlying prioritization variable(s). It is also clear that in-depth qualitative work is necessary to satisfactorily understand outcomes and (most importantly) the processes through which they eventuate.

Nevertheless, the results are supportive of the following general conclusions:

*BRA-KDP had mixed success in targeting conflict victims as beneficiaries.* The BRA-KDP program sought to target conflict victims. In some respects, it was successful. On average conflict victims fared better than non-conflict victims in large part because the geographic prioritization rule used ensured that sub-districts with a disproportionately large share of conflict victims were

more likely to receive the program in the first round and were more likely to receive larger grants in that round. This resulted in significantly higher levels of per capita assistance being provided to conflict victims than to those who were less affected by the conflict. However, targeting within communities was less successful, with conflict victims generally faring no better than non-conflict victims. Indeed, while conflict victims and non-victims were equally likely to benefit from the program within sub-districts, conflict victims were more likely to report that their preferred projects were not selected for implementation. Since the program was terminated before completion, about half of the conflict victims in Aceh were never reached at all.

*BRA-KDP is associated with welfare gains and improvements in perceptions of wellbeing.* Although communities were given discretion to allocate BRA-KDP funds to private transfers or public goods, the vast majority elected to distribute the cash directly to households. We find evidence that these cash transfers are associated with an increased ownership of assets among households in general and conflict victims in particular. Moreover, we find evidence that the program contributed to a substantial increase in the farming of productive land (a near doubling for conflict victims). There is also evidence of a substantial program effect on the incidence of poverty as reported by village heads. These gains, however, do not (yet) translate into broader welfare improvements, as reflected in health, schooling, and community infrastructure.

*There is little evidence that BRA-KDP generated improvements in social cohesion or improved awareness of or faith in governmental institutions at the village or at higher levels.* Levels of social acceptance of ex-combatants and IDPs, reported social tensions and conflict among groups, and observed levels of community efficacy are broadly similar between those villages that received BRA-KDP and those that did not, even after accounting for selection. There is some evidence that BRA-KDP is associated with less acceptance of ex-combatants by conflict victims in project areas, although there is no evidence that these tensions escalate to violence.

Some of these findings are not surprising. BRA-KDP ran for just one year, perhaps limiting the gains in social cohesion that may have been possible if the program had been implemented for multiple cycles.<sup>36</sup> The program functioned mainly as a mechanism for transferring private benefits to households. While participatory and transparent community-processes were a required element of project selection in each village, the vast majority of communities moved quickly to distribute the block grants as cash payments to community members. These transfers are associated with welfare gains (in terms of asset ownership and the cultivation of land) and with reported reductions in the incidence of poverty, but there is not yet evidence that they have effects on broader welfare improvements in terms of access to health or education. It is striking that we find evidence for a welfare effect on individuals in BRA-KDP areas but, contrary to the presuppositions of community-based programs of this form, very little evidence that BRA-KDP resulted in higher levels of social cohesion. This finding differs from results

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<sup>36</sup> This leads to two further conclusions. First, planners who seek to use CDD-type programs in post-conflict contexts should think about designing programs that run over multiple cycles. Second, methodologically, it may be premature to assess the social and state-society impacts of programs after one year of operation.

reported in other research on the effects of community-driven programs. In one randomized evaluation of a community-driven reconstruction program in Liberia, for example, there was evidence that the CDD process contributed to gains in social cohesion, even though there were few positive impacts on material welfare (Fearon, Humphreys and Weinstein 2009).

There are of course many differences between the Liberia case and the case examined here. One difference of importance is that in Liberia, all program funds were used for public goods projects whereas in Aceh, village allocations were primarily distributed privately. While the decision-making process components were the same across the two cases, the predominance of private goods in Aceh might have limited improvements in cohesion that could come from the joint production of collective goods. This raises the question: Does the impact of community driven reconstruction depend on whether development money is spent on private or public goods?<sup>37</sup>

The predominance of cash transfers may also account for the evidence of increased tensions with ex-combatants in BRA-KDP communities. To the extent that ex-combatants benefited from cash disbursements that were, at least in principle, intended for conflict victims, increasing social tension may have been the result. Alternatively, ex-combatants might have resented their inability to control the program and disproportionately benefit (in particular, because of problems with other reintegration programs targeting ex-combatants), or the programs may have empower civilian conflict victims to stand up to ex-combatant demands.

These patterns point to two fundamental tensions within the CDD model. First, many of the goals of CDD may depend upon processes that are brought into play conditional on particular types of activities being implemented (joint selection of projects, community oversight of implementation, etc.) But insofar as a CDD model allows communities full control over the use of finances, these processes can be bypassed which may eliminate the gains in social cooperation and faith in government which CDD is intended to generate. Second, and as observed elsewhere, CDD programs, including those with peacebuilding aims, can lead to tensions between groups through their promotion of competition over finite resources. In the long run they may lead to a stronger basis for peace, through empowering groups and building local institutions. But in the short run they can lead to social divisions. Weighing these (potential) short and long run impacts is important in post-conflict environments.

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<sup>37</sup> In initial exploration of this hypothesis using the Aceh data (comparing outcomes between areas in which villages opted for public goods to outcomes in areas where villages opted for private goods), we do not find support for the hypothesis that adverse outcomes are due to the focus on private goods. Places that selected group goods were significantly less likely to be accepting of ex-combatants (the effect is also negative but weaker in areas that selected private goods only). On only one measure (participation in associations) are effects more positive for groups that engaged in some public goods production. The conclusions we can draw from this data are however limited since communities self select into public or private goods projects.



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