The Adverse Effects of Targeting Aid at Vulnerable Groups within Communities

Laura Paler∗ Camille Strauss-Kahn†
April 1, 2016

Abstract
Targeting aid at vulnerable groups within communities is common in humanitarian and development interventions. While targeting is often necessary, it can also lead to capture and group conflict. Arguing that aid targeting creates a complex bargaining environment among three groups in the community—a target group, an excluded group, and elites—that compete for funds, we formalize the conditions under which windfall size and historical group relations result in elite capture, excluded group capture, and group conflict. We find support for key predictions using a regression discontinuity design and original survey data from a post-conflict reintegration program implemented in Aceh, Indonesia. The findings highlight a tension between the goals of efficient targeting and not exacerbating social divisions within communities.

∗Assistant Professor, University of Pittsburgh (Email: lpaler@pitt.edu).
†Ph.D. candidate, Columbia University (Email: cs2899@columbia.edu). The authors would like to thank Stephen Chaudoin, Grant Gordon, Guy Grossman, Macartan Humphreys, Yotam Margalit, Cyrus Samii, Michael Ting, as well as participants at the political economy breakfast at Columbia University, the Northeast Workshop in Empirical Political Science, The Center for Global Development speaker series, and the Global Politics Seminar at the University of Pittsburgh. Paler would also like to thank her collaborators on the Aceh Reintegration and Livelihood Surveys (ARLS), especially Patrick Barron, Macartan Humphreys, Yuhki Tajima, and Jeremy Weinstein.
1 Introduction

For the many developing countries that rely on foreign aid for revenue, such windfalls have the potential to foster growth and development. Yet, there is substantial evidence that aid can be more harmful for development than beneficial, contributing to poor economic performance \cite{Burnside2000}, rent-seeking and elite capture \cite{Svensson2000,Platteau2014}, weak institutions \cite{Djankov2008}, and civil conflict \cite{Crost2014,Nunn2014}. Importantly, however, aid targeting, and its consequences for the social and economic outcomes at the heart of debates about aid effectiveness, has received less attention to date.

Targeting aid, which involves identifying a pool of intended beneficiaries and delivering assistance to them, is essential to distributing humanitarian and development resources at the local level. Targeting vulnerable groups within recipient communities has become the norm among aid organizations and is widely considered the most efficient and ethical means of aid distribution when resources are scarce \cite{NRC2013,FAO2006}. More than 85 percent of the aid intended for individuals now takes the form of targeted distributions of divisible goods such as money, food, and non-food items \cite{Wahlberg2008,Barrett2006}. In recent years, the World Food Program has targeted 54 percent of 4.4 million metric tons of food aid \cite{WorldFoodProgram2011}. The World Bank has supported approximately 400 cash transfer projects targeting the poor in 94 countries valued at almost $30 billion \cite{Wong2012}. In 2015 alone, UN agencies channeled over $900 million dollars in global humanitarian funding specifically for the distribution of non-food items in emergency settings \cite{OCHA2015}.

While aid targeting can be done in different ways, the role that communities play in the targeting process has been the subject of growing attention. Numerous aid programs now directly involve communities in targeting in the belief that community leaders or members at large are better positioned than government or aid agencies to identify qualified recipients and get goods to them efficiently. Evidence supports the claim that community involvement
can be accountability and legitimacy enhancing (Winters, 2012; Alatas et al., 2012).

Yet, there is reason to believe that targeting aid can also yield unintended consequences in the form of capture by elites or third parties and exacerbated conflict within communities. It is now appreciated that involving communities in targeting raises the prospect that local leaders will influence the allocation process in a way that benefits them or their supporters (Alatas et al., 2013). What has received less attention is the fact that community involvement also means that targeting outcomes could be shaped by the nature of long-standing group dynamics within the community, particularly involving those excluded from being beneficiaries. For instance, anecdotal evidence suggests that targeting food aid in East Africa enhanced dissatisfaction and distributional conflict within communities (Jaspar and Shoham, 1999). Similarly, while there is growing evidence of the benefits of cash transfer programs (Blattman, Fiala and Martinez, 2014), recent anthropological work argues that targeted cash transfers exacerbated conflict and jealousy within communities in Niger (de Sardan et al., 2014; de Sardan, 2014).

Despite substantial evidence of variation in targeting outcomes, we lack a systematic understanding of why targeting is beneficial in some communities but not in others. The main goal of this paper is to theorize and test the conditions under which targeting aid at vulnerable groups within communities results in different patterns of capture and conflict. Our theoretical framework emphasizes two necessary conditions and two scope conditions about targeted aid transfers. Consistent with the literature, we argue that the practicalities of aid targeting create scope for elite capture. We depart, however, is in highlighting that the process of targeting necessarily creates an excluded group that can also influence how aid is allocated within the community. We emphasize the importance of the role of both the elites and excluded group when two scope conditions hold—when the target group is weak and when the donor agency has low monitoring or enforcement capacity. While these scope conditions do not apply to all targeting contexts, they are plausibly still prevalent. Where they do hold, we argue that targeting can best be conceptualized as creating a bargaining
environment in which three groups within the community—the elites, a target group, and an excluded group—compete over the allocation of funds.

We formalize these intuitions in a simple three-player competition model allowing for bargaining breakdown and coalition formation, in which elite versus excluded group capture depends on the size of the aid windfall and historical group dynamics within the community. Existing models of competition tend to over-predict elite capture when there is a disparity in bargaining power between groups. We draw insights from theories of distributional politics to explain how, by taking into account the role of a third group (the excluded group), elites can be prompted to distribute to vulnerable groups. In our framework, the elites choose an aid allocation to both the target and excluded groups. These groups can contest that offer, and their decision is a function of their group size, influence within the community, and relations with other groups. In the model, the vulnerability of the target group is reflected in their lack of influence. We show that a vulnerable group will choose not to contest the allocation, yet will influence the outcome by forming a coalition with one of the other players in the case of excluded group contestation. The greater the threat of excluded group contestation, the greater the incentives for the elites to share the windfall with the target group to build a coalition. We consider variation in the final allocation by comparing those places where the excluded group has both influence and antagonistic community relations (hereafter ‘competitive’ communities) to those where it lacks influence or has positive community relations (‘cooperative’ communities).

The central predictions from the model are that, as the size of the aid windfall increases, there will be more elite capture in cooperative communities and more excluded group capture in competitive communities. Importantly, the model also predicts that more aid will reach the target group in competitive communities precisely because elites have a greater incentive to build a coalition to mitigate excluded group contestation. This goes against a commonly held intuition that vulnerable groups are better off in more cooperative environments because of stronger norms of social justice and generosity. Interestingly, the model also suggests that
dividing the aid windfall equally among all community members is more likely to occur in very competitive communities. This indicates that equal-sharing, a form of capture widely observed in aid distributions (Harragin and Chol 1998), can best be understood as a tool for conflict management rather than a manifestation of norms of generosity. Finally, the model predicts that bigger aid windfalls on average exacerbate group conflict, which we conceptualize as the heightened social divisions that result when the excluded group contests the resource distribution.

We test our predictions in one case that clearly meets the scope conditions of the model and where we have the added benefit of exogeneity in the size of the aid windfall. Specifically, we test predictions in the context of a post-conflict community-driven reconstruction (CDR) project implemented in the Indonesian province of Aceh. The BRA-KDP program was implemented by the World Bank and Acehnese government in 2007 to facilitate reintegration and development following nearly 30 years of separatist conflict between the Free Aceh Movement (Gerakan Aceh Merdeka, or GAM) and the central government. The program targeted civilian conflict victims as priority beneficiaries and explicitly excluded former GAM combatants from receiving funds. Consistent with the model, targeting in the BRA-KDP program created three groups—a target group (civilian victims), an excluded group (former GAM combatants), and elites—poised to interact strategically over how to allocate the aid. Moreover, there is notable variation in whether community relations are ‘competitive’ or ‘cooperative’ attributable to the history of the conflict.

Empirically, we focus on estimating how targeting a bigger aid windfall affects capture and conflict, conditional on whether villages have historically competitive or cooperative relations. We exploit exogenous variation in windfall size using a regression discontinuity design and the fact that the amount of aid that villages received was based on an arbitrary cutoff in a continuous measure of village population. This is an advantage as few studies on aid targeting to date have employed exogenous variation in this key parameter. To assess the heterogeneous effects of windfall size, we use observational data from original surveys.
conducted with a random sample of civilians, former combatants, and village heads in 75 BRA-KDP villages.

As predicted, we find evidence that targeting a bigger aid windfall resulted in both the target group and the excluded group receiving more aid in competitive villages. Conversely, elites were significantly more likely to capture aid in cooperative villages. We also find that equal-sharing was indeed more likely to occur in competitive communities. While we observe more limited support for the prediction that targeting a bigger aid windfall resulted in higher levels of conflict, this is possibly attributable to the active role that the World Bank played in conflict mediation in recipient communities. We also find some suggestive evidence that social divisions decreased more in competitive communities, consistent with the notion that equal-sharing—by ensuring that all community members receive benefits—can help to diffuse social tensions.

Overall, these results run counter to most commonly held ideas about the conditions under which ‘good’ targeting occurs. First, they show that more aid is not always desirable, since it can exacerbate competition over funds. Second, they suggest that the final allocation of aid to vulnerable populations and the excluded group might follow a logic of conflict resolution rather than of social justice. This highlights that the efficiency objectives of targeted aid programs—to improve the economic welfare of the most vulnerable—run counter to the “do no harm” goals of maintaining social cohesion and not exacerbating community conflict.

This paper contributes to a growing literature on aid targeting by highlighting the role that group dynamics within communities and contestation can play in shaping patterns of capture and conflict. Much of the literature on aid and targeting to date has approached this subject from a principal-agent perspective, examining for instance the interactions between donors and recipients (Paul, 2006) or between recipients and their elites (Alatas et al., 2012, 2013; Keen, 2008). While there is a growing recognition that the distributive outcomes of targeted programs depend on existing political and social structures (Duffield et al., 1999
Harragin and Chol (1998), the prospects for capture or extortion by excluded groups, and the consequences of such actions, have received considerably less attention.

A further goal of this paper is to address the puzzle of why resources are ever delivered to vulnerable groups. While the literature on elite capture explains how powerful groups succeed in getting elites to distribute resources to them (Bueno de Mesquita et al., 2003; Wright, 2009), this literature fails to address the puzzle of why elites or powerful groups ever distribute resources to a vulnerable group. Following Wright (2009), we build on the intuition that the threat of conflict could prompt elites to distribute windfalls to other powerful groups, and we show that this mechanism can also account for the incentives of elites to distribute to powerless groups, insofar as coalition building can mitigate the risks of such conflict. In finding that capture can occur even in environments in which there is perfect information, this paper also provides an alternative to the literature that attributes elite capture to information and agency problems (Besley, 2006).

Similarly, it is widely appreciated that more fragmented or polarized societies frequently suffer from conflict and the under-provision of public goods (Alesina, Baqir and Easterly, 1999; Montalvo and Reynal-Querol, 2005). An influential literature on group rent-seeking contests highlights how windfall size and social fragmentation determine whether a resource windfall is helpful or harmful for development (Tornell and Lane, 1998; Svensson, 2000). This literature offers the key insight that a resource windfall yields gains in settings where groups are homogeneous and is dissipated in the presence of multiple powerful and competing groups. While we draw on the emphasis on the importance of windfall size and the nature of pre-existing groups, this literature too does not explain why resources ever reach the vulnerable. In conceptualizing targeting in terms of contestation and coalition formation, we highlight the conditions under which those targeted to receive aid—typically the poor, vulnerable, and marginalized—actually receive the assistance to which they are entitled.
2 The Model

Our theoretical framework departs from the two necessary conditions that all targeted aid programs invariably create both an excluded group that can contest the allocation and opportunities for elite capture. Additionally, we consider targeting when the target group is weak and the donor agency cannot enforce its contracts. While these two scope conditions do not apply to all contexts, where they do hold, we claim that targeting aid at the vulnerable within a community creates a bargaining environment in which three groups—a target group, an excluded group, and the elites—compete for funds.

First, we observe that targeting by definition creates an excluded group. A well-targeted aid program ensures that assistance reaches those who are eligible and bypasses those who are not. This goal reflects targeting’s double-edged nature: by targeting one group within a community, humanitarian actors implicitly define two—a target group and a group excluded from receiving benefits (Duffield, 1996). While there is some evidence that aid targeting can exacerbate tensions within communities (Jaspars and Shoham, 1999; de Sardan et al., 2014; de Sardan, 2014), the academic literature has long overlooked the role of non-beneficiaries in determining the distributional outcomes of targeted aid.

Second, in virtually all cases, elites can influence the final allocation of aid. While targeted programs formally vary in the extent to which they intend to involve local leaders, in practice, aid agencies face time, cost, and capacity constraints that limit their ability to operate within communities. This in turn requires them to rely on intermediaries like traditional leaders or local committees for implementation, opening the door for local power structures to influence distributional outcomes (Harragin and Chol, 1998; Jaspars and Shoham, 1999). Even when aid agencies attempt to bypass elites, such as the World Food Program with direct distributions, local leaders are frequently reported to organize a ‘re-distribution’ of the food within the community afterwards (Duffield, 1996; Narbeth, 2001). This is consistent with a large literature on the susceptibility of aid projects to elite capture (Platteau, 2004).
Third, we assume that the target group designated by the aid agency to receive benefits is weak and lacks influence within the community. This is a scope condition and departs from existing formalizations of aid targeting, for instance Winters (2012), who argues that targeting strengthens the ability to hold leaders accountable for aid targeting. While aid agencies could in theory define a target group that is strong enough to secure its benefits, in most cases they choose to target the most vulnerable elements in the community (such as women, the poor, widows, internally displaced persons, or conflict victims). By targeting the vulnerable, aid agencies attempt to assist precisely those individuals that would otherwise be marginalized from resource allocation in their community. What is unusual about targeting aid at vulnerable groups within communities—and what makes targeting different from other distributional contexts—is that it gives a weak group a seat at the table and an opportunity to influence the outcome despite a lack of formal bargaining strength.

Finally, we assume that aid agencies lack the monitoring or sanctioning capabilities necessary to enforce a contract with the community over the targeting criteria. The same operational constraints that force aid agencies to rely on local leaders for distribution also makes it difficult for them to monitor how aid is spent within communities and to credibly enforce sanctions if targeting criteria are transgressed. This assumption also builds on a

1 Most aid agencies like the United Nations emphasize the conceptual distinction between ‘lack’ and ‘needs’ when designing targeted aid programs. Whereas ‘lack’ simply refers to an absence of something, ‘need’ also implies the inability to acquire it by one’s own means; the norm has become to target specifically based on ‘needs’ (NRC 2013; OCHA 2014).

2 Donors sometimes conduct audits or establish complaints mechanisms to improve monitoring and enforcement of targeting objectives, but in reality donors face capacity constraints in investigating violations and often cannot credibly threaten to punish violators or cancel a program. Also, if the target group is weak, it might be reluctant to make use of complaints mechanisms.
large literature that has acknowledged the shortcomings in principal-agent relations between donors and recipient governments or, in our case, communities (Paul 2006). While donors can use tools like conditionality and reporting requirements to enforce compliance with their objectives, agency problems mean that contract enforcement will often be imperfect and empirical evidence suggests that it often works poorly (Cordella and Dell’Ariccia 2002; Killick 2004). In our framework, the donor or aid agency designates the target group and crystallizes the bargaining environment but we assume that the challenges of monitoring and enforcing sanctions mean that it is not a strategic player. This scope condition is most likely to hold in low income countries with weak capacity and transparency or where donors have some tolerance for implementation problems—conditions that are not uncommon in the context of development programs or humanitarian crises.

We contend that where these conditions hold, the economic and social outcomes of aid targeting depend on community dynamics and are determined by competition among the target group, excluded group, and elites. This approach departs from both existing competition and principal-agent models of aid targeting in considering the role played by group dynamics within a community—especially the role played by those who are not targeted—in shaping the distributional and social outcomes of a targeted aid program. In existing frameworks, minimizing capture and conflict requires mechanisms that allow either aid agencies to credibly enforce contracts within a community or community members to hold leaders accountable for how aid is distributed. For the reasons elaborated here, we think these approaches do not apply to some common targeting contexts.

We formalize these intuitions in a three-player ultimatum game with bargaining breakdown and coalition formation. The elite proposes an allocation of the aid windfall between

---

3While there could in practice be some overlap between the excluded group and the elites, we think it unlikely that all individuals who are not part of the target group are local leaders or their affiliates. And while some members of the elite could be part of the target group, the focus on vulnerability suggests this will be minimal.
itself, the target group, and the excluded group\textsuperscript{4}. The allocation can be contested by either the target or excluded groups at a cost, and in the case of contestation, alliances between groups can be formed to determine whether contestation is successful. The goal of the model is to combine insights from the existing literature on three-player Nash competition, distributional politics, and bargaining under a hard budget constraint, and apply them to the context of aid targeting\textsuperscript{5}. Using this simple setup, we can explain when the target group is likely to receive more of the benefits to which it is entitled when both elite and excluded group capture are possible.

2.1 Setup

Let us consider a population \( N \) of size \( n \). A humanitarian actor has decided to give to the population a windfall \( S > 0 \) that is to be distributed to a target group \( T \subset N \) within the population. A group \( L \cup N \setminus T \), the elite, is put in charge of the distribution. We define the rest of the population \( X = N \setminus L \cup T \) as the non-targeted or excluded group.

By providing targeting criteria exogenously, the humanitarian actor has defined a unique partition \( P_T \) of the population, in which not only the size of the three relevant groups is perfectly pre-determined at the beginning of the game, but also their composition and their relationship to one another. We capture these essential characteristics of the three groups

\textsuperscript{4}The use of an ultimatum game here rather than other types of bargaining environment is dictated by the phenomenon we are attempting to model, where the elite is institutionally set as the primary distributor. Even though the dynamics of targeting are akin to bargaining, there is no formal bargaining arena in the situations we describe and the offerer can be considered as fixed (see Appendix A for further discussion of alternate setups).

\textsuperscript{5}Dal Bó and Powell (2009) propose a model of spoil politics that combines a two-group bargaining situation with bargaining breakdown. The extensive form of their game comes closest to our setup. Our model also draws on insights on three-player bargaining situations with coalition formation offered by McNollGast (1995).
with three parameters. For \( i \in \{L, T, X\} \), we note \( n_i \in (0, n) \) is the size of group \( i \), where \( \sum_i n_i = n \). We use \( \nu_i \in [0, 1] \) to denote the influence of group \( i \) in the community, which ranges from highly powerful \( (\nu_i = 1) \) to highly vulnerable \( (\nu_i = 0) \). Finally, \( \sigma_i \in [0, 1] \) captures the quality of group \( i \)'s relationship with the rest of the community and ranges from extremely friendly and mutually beneficial \( (\sigma_i = 1) \) to extremely antagonistic \( (\sigma_i = 0) \).

Each group is henceforth a player with perfect and complete information in a one-shot Dictator game in which there is one fixed distributor, \( L \), and two receivers, \( X \) and \( T \). The game unfolds as follows. First, the distributor, \( L \), proposes an allocation \((\alpha_L, \alpha_X, \alpha_T)\), such that \( \sum_i \alpha_i = 1 \). Second, each receiver \( j \in \{X, T\} \) can decide to contest this allocation and to fight \( L \) for the windfall. Third, in case a receiver \( j \)—hereafter the contestant—contests the allocation, the other receiver—the supporter—decides whether to support the elite and form a coalition against the contestant, or not. (See Appendix A for the extensive form of the game).

If both receivers accept the distribution, each group receives a share \( \alpha_i \) of \( S \). In case of contestation, the contestant wins its fight against \( L \) with a probability \( p \in [0, 1] \) that is directly proportional to the size of its coalition. Players’ utilities are primarily a function of

\[ \text{For the purpose of this model, } \nu \text{ captures influence in the broadest possible sense. For example, it encompasses political or economic influence, military power (as in our empirical case), or any fact that may affect a group’s bargaining strength or skew bargaining in its favor that is not purely related to group size.} \]

\[ \text{See Appendix A for a discussion of simultaneous versus sequential setups. We show that it doesn’t affect the results we present below.} \]

\[ \text{In which case the supporter forms a coalition with the contestant instead.} \]

\[ \text{In other words, we typically have } p = p_w = \frac{n_j}{n} \text{ if the supporter decides to join } L, \text{ and } p = p_w = \frac{n_j + n - n_j}{n} = 1 - \frac{n_j}{n} \text{ otherwise. This choice of setup is a reflection of how we consider the situation to be akin to bargaining within a polity. The outcome of the contestation of a proposed allocation is a direct function of the existing alliances: the majority coalition has} \]
their respective payoffs. In case of contestation, group relationships also inform the curvature of the supporter’s utility function when choosing whether to join one side or the other.

Finally, the contestant pays a penalty $\Pi_j$ for contestation. The extent of this penalty is a combination of $j$’s capabilities and costs of contestation. As such, $\Pi_j$ is a function both $j$’s influence and its relations with other groups in the community, such that

$$
\frac{\partial \Pi_j(\nu_j \cdot \sigma_j)}{\partial \sigma_j} \geq 0 \quad \text{and} \quad \frac{\partial \Pi_j(\nu_j \cdot \sigma_j)}{\partial \nu_j} \leq 0.
$$

The more group $j$ enjoys good relations with the rest of the community, the more costly it will be for that group to initiate conflict with other groups. This is a reflection of the fact that material and non-material benefits are derived from good and cooperative relationships. Similarly, the more influence group $j$ has in the community, the greater the group’s capabilities to contest.

In this paper, our focus is on exploring situations in which the humanitarian actor sets criteria in order to target only the most vulnerable in the population, which can be translated for the purpose of our model into the following constraint: $\mathcal{P}_T = \{T \subset N | \nu_T \sim 0\}$ (see Appendix A for a discussion of $\mathcal{P}_T$). We find that, under $\mathcal{P}_T$, the distribution will never be directly contested by the target group (see proof in Appendix A.1). The target group differs from the excluded group only in its size, influence, and relationships. Yet, when aid is targeted at vulnerable groups, only the excluded group is likely to challenge the elite’s decision (under some range of parameters).

For the sake of generalizability, we discuss in Appendix A several possible specifications more chances to win.

\footnote{In Appendix A.1, we discuss other possible specifications of $\Pi$, and show that they do not affect our results substantively.}

\footnote{While the agency of the target group is not formally restricted by the model, as long as vulnerability (a lack of influence) affects a group’s cost-benefit calculation about contestation, this proposition will hold (see Appendix A.1 for further discussion). Basically, vulnerability increases the cost of contestation or diminishes the prospects of successful contestation such that it outweighs its potential benefits.}
for the payoffs in case of contestation as well as several other variations of the basic setup. Using Subgame Perfect Nash Equilibrium as a solution concept, we characterize in Appendix A.2 a comprehensive set of equilibria for the game under \( P_T \). We find that three equilibrium features hold across all setups and specifications (see proofs for each in Appendix A.3). As such, they can be considered as characteristic of the strategic structure of the game.

First, we find that, in equilibrium, \( \alpha^*_L \) is an increasing function of \( \Pi_X S \). Substantially, this means that the elite keeps a bigger share of the windfall as the contestation penalty for the excluded group increases relative to the size of the windfall. This result reflects classic competition dynamics between the elite and the excluded group, which are both powerful groups. The fact that the parameters that define the stakes of the competition—the windfall size and the cost of contestation—are the main parameters of interest is standard in competition models (Tornell and Lane, 1999; Svensson, 2000). Yet, the substantive interpretation of this result—that it is competition with the excluded group that explains elite capture—has not previously been brought to the fore in an aid targeting context. This result also emphasizes the point of distinguishing elite capture from excluded group capture.

As a corollary, we find that, in equilibrium, \( \alpha^*_T > 0 \) with \( \alpha^*_T \) (non-strictly) increasing then (non-strictly) decreasing in \( \Pi_X S \). This result is less intuitive: it states that the share of the windfall distributed to a receiver with low bargaining power increases when the bargaining power of another powerful receiver increases and the interests of the latter are not aligned with those of the distributor. In other words, the share of the windfall received by the target group is strictly positive, but this is a function of the excluded group’s bargaining power rather than its own. While classic competition models would indeed predict that \( X \)’s share of the windfall is increasing in its bargaining power, they would fail to show that \( T \)’s share of the windfall is also increasing in \( X \)’s bargaining power. This is true because, as the relationships of the excluded group with the rest of the community worsen, it becomes

\[ \text{Respectively, we find that } \alpha^*_X \text{ is a decreasing function of } \frac{\Pi_X S}{S}. \] The share received by the excluded group increases with the size of the windfall relative to its contestation penalty.
marginally cheaper for the elite to buy support from the vulnerable target group than to
assuage the excluded group. Yet, the more credible the threat of excluded group contestation,
the more the elites eventually need to give away to both receivers.

Second, we find that, in any given specification $s$, there exists a constant $K_s$ such that for
$\frac{\Pi_X}{S} < K_s$, there is contestation in equilibrium. In other words, contrary to other bargaining
models where there is always a range of negotiation when players have perfect information, in
our model, there can be bargaining breakdown in equilibrium. Because there is no theoretical
bound to how low the costs could be compared to the reward, there is a range of the
parameters under which contestation—which we consider conflict—cannot be avoided.$^{13}$

Finally, we find that, for $\frac{\Pi_X}{S} \geq K_s$, $\lim_{\sigma_{X} \to 1} \alpha_i^* = \frac{m_i}{n}$. In any given specification, there
exists a range of parameters for which the final allocation of the aid windfall in equilibrium
approaches an equal distribution, where each group receives a share of the windfall equal to
its size. Notably, this is also the Nash Bargaining Solution for the game which is expected in
a competition model. However, insofar as such equal distributions are observed as specific
outcomes in some targeted contexts, it is interesting to explore the conditions under which
this phenomenon may occur.

To summarize the fundamental intuition conveyed by this model, under some circum-
stances, the elite will choose to distribute more of the windfall to the target group to build
a coalition in order to mitigate the threat of extortion by a powerful excluded group. As ex-
pected from a competition model, the main parameters that define whether a given context
is more or less prone to capture and conflict are the parameters that define the bargaining
environment and the bargaining power of each of the three groups: group size, windfall size,

$^{13}$This means that for a range of values of the parameters where $S$ is relatively large and
$\Pi_X(\nu \cdot \sigma)$ relatively small, what $L$ would have to offer to both $T$ and $X$ to assuage the latter
becomes higher than what $L$ could expect to get in case of conflict. The optimal strategy
that $L$ will then pursue is to secure $T$’s support in the conflict rather than avoid conflict at
all costs.
and the capacities and costs of contestation. Less expectedly, when the target group is vulnerable, the comparative statics that matter will be the windfall size, the influence of the excluded group, and the nature of relations between the excluded group and the rest of the community. To simplify our exposition going forward, we refer to communities in which the risk of excluded group contestation is high (because the excluded group has both influence and bad community relations) as ‘competitive’ communities. We define ‘cooperative’ communities as those in which the threat of excluded group contestation is low because it is weak or has strong positive ties with the rest of the community that are costly to sever.

The goal of the model is to illuminate dynamics in the context of targeted aid transfers. Insofar as it explicates dynamics that prompt elites to distribute windfalls to powerless groups in non-electoral settings more broadly, the model could shed light on other types of transfers that target populations with limited bargaining power. The dynamics described by the model may also help explain how aid programs target subsets of communities within bigger systems. Finally, this model lends itself to extensions—such as relaxing the vulnerability assumption or allowing for repeated interactions—that are beyond the substantive and empirical focus of this particular paper but merit investigation in future work.

2.2 Predictions

2.2.1 Capture equilibrium

Our first set of predictions regards the amount of aid that is diverted from the target group and the source of such capture when aid is targeted at the vulnerable. The model allows us to differentiate between elite capture and excluded group capture and the conditions

---

14 We do not present comparative statics related to group sizes since they cannot be tested in our empirical context.

15 For example, targeting villages in areas controlled by an (excluded) armed group, or targeting internally displaced persons (IDPs) in host communities.
under which each occurs. In line with the literature on elite capture, the size of the windfall is an important predictor in capture. Contrary to predictions in traditional elite capture models, we predict that elite capture is less likely in competitive contexts (where the threat of excluded group contestation is high due to low costs and high influence).

**Prediction 1. (Diversion): Bigger aid windfalls cause more diversion from T in cooperative communities.**

**Prediction 2. (Elite capture): Bigger aid windfalls induce more elite capture in cooperative communities.**

**Prediction 3. (Excluded group capture): Bigger aid windfalls induce more excluded group capture in competitive communities.**

### 2.2.2 Equal sharing equilibrium

Another form of aid diversion can take the form of dilution through the extension of the pool of beneficiaries. An extreme form of dilution is distributing the aid windfall equally among the entire community. Even though such equal sharing defeats the purpose of targeting, it has been reported to occur in numerous countries and contexts where aid is targeted at

\[ \frac{\partial^2 \alpha_L^*}{\partial S \partial \Pi_X(\nu \cdot \sigma)} \leq 0 \] such that, in more cooperative communities, it is more likely that the threat of contestation by the excluded group will not be credible and that the elites will not distribute the windfall but rather capture it. Similarly, we have \( \frac{\partial^2 \alpha_T^*}{\partial S \partial \Pi_X(\nu \cdot \sigma)} \geq 0 \). This suggests that in communities where the excluded group is more likely to contest the distribution, the elites have incentives to offer a larger share of the windfall to the excluded group. Note that since \( \frac{\partial \alpha_X^*}{\partial S} \) is a function of \( \Pi_X(\nu \cdot \sigma) \), none of our assumptions allows us to interpret it straightforwardly. The same is true for \( \alpha_T^* \) and \( \alpha_L^* \): without controlling for \( \Pi_X(\nu \cdot \sigma) \), we cannot directly predict whether an increase in the windfall size will have a significant effect on diversion and capture (see full proof in Appendix A.3).
the vulnerable (Harragin and Chol 1998). Our second set of predictions pertains to the conditions in which such equal sharing is likely to occur.

**Prediction 4. (Equal Sharing):** As windfall size increases in intensely competitive communities (where contestation is very likely), distribution tends towards equal-sharing.\(^{17}\)

While equal-sharing is often explained as the result of communal norms of generosity (Harragin and Chol 1998), our prediction states on the contrary that equal-sharing will occur in very competitive environments, where open conflict in the form of forceful appropriation of the aid windfall by the excluded group is either barely avoided or has broken out. While not a direct interpretation of our comparative statics, this prediction also suggests that it may be more appropriate to interpret equal-sharing as a mechanism for conflict resolution than as a reflection of social justice or norms of generosity.

### 2.2.3 Conflict equilibrium

Finally, our model also calls into question the effect of bigger aid windfalls. The prediction is that bargaining will be more likely to breakdown, and conflict more likely to ensue, as the potential prize from such conflicts gets bigger. While this result is unsurprising in the context of competition models, it merits emphasizing in this application to aid and targeting as it challenges a still prevalent view that more aid is generally more beneficial.

**Prediction 5. (Conflict):** Bigger aid windfalls exacerbate divisions between the excluded group and the rest of the community.\(^{18}\)

\(^{17}\)This is a straightforward inference from our third set of comparative statics. In communities on the verge of bargaining breakdown, each group gets a share of the windfall proportional to its size, which means that, marginally, each individual in the community gets the same fraction of aid (that is \(\frac{1}{n}\)). Depending on the specifications, this equal sharing equilibrium can be sustained for a more or less large range of parameters (see full proof in Appendix A.3).

\(^{18}\)From our second set of comparative statics, using implicit differentiation, we have \(\frac{\partial f}{\partial S} \geq 0\).
3 Empirical Strategy

3.1 The Context

We test our predictions in the context of an aid program implemented in Aceh, Indonesia because it both meets the scope conditions of the model and has the added benefit of exogeneity in the size of the aid windfall. For nearly 30 years, GAM waged a separatist struggle in Aceh against the Indonesian government. While the conflict evolved in several stages, civilians frequently suffered the brunt of hostilities as the Indonesian military sought to undercut popular support for GAM by terrorizing suspected civilian supporters. The conflict resulted in approximately 30,000 deaths as well as widespread instances of murder, torture, rape, internal displacement, and property destruction.

The peace agreement reached in 2005 contained provisions to reintegrate GAM combatants and to provide assistance to civilian conflict victims. The Aceh Peace Reintegration Agency (Badan Reintegrasi-Damai Aceh, or BRA) was established to manage this process. In an effort to reach conflict-affected communities, BRA partnered with the World Bank-supported Kecamatan Development Program (KDP). The resultant BRA-KDP program was designed to deliver assistance to local conflict-affected communities. The central component of the program was the disbursement to more than 1,700 villages of aid windfalls ranging in size from 60 to 170 million rupiah (about USD $6,000-$17,000).\footnote{BRA-KDP resembles a game with perfect information in that the amount of aid going to each village was heavily publicized by implementation teams within recipient communities.}

Like other community-driven development programs, BRA-KDP aimed to promote both

\[
\frac{f = K_s \cdot S - \Pi_X(\nu \cdot \sigma)}{ceteris paribus}
\]

where \( f = K_s \cdot S - \Pi_X(\nu \cdot \sigma) \) represents an implicit function of the likelihood of contestation in equilibrium. Hence, \textit{ceteris paribus}, the likelihood of conflict in equilibrium increases with the size of aid windfalls. Note that we cannot infer a cross-partial prediction for both \( \Pi_X(\nu \cdot \sigma) \) and \( S \) from this (see full proof in Appendix \ref{app:proof}).

\footnote{BRA-KDP resembles a game with perfect information in that the amount of aid going to each village was heavily publicized by implementation teams within recipient communities.}
economic welfare and social cohesion by giving communities an aid windfall and decision-making authority over how to allocate the funds to development projects (Fearon, Humphreys and Weinstein 2009; Casey, Glennerster and Miguel 2011). The program targeted civilian conflict victims as the primary beneficiaries. Households eligible for prioritization were identified through a community-based process in which villagers held meetings to deliberate criteria and produce a list of conflict-affected households. This proved to be a contentious process in some villages where virtually all community members viewed themselves as conflict-affected. Thus, a central part of the socialization surrounding BRA-KDP involved emphasizing the importance of differentiating households according to their degree of affect edness and of scaling benefits accordingly (Morel, Watanabe and Wrobel 2009). This was especially important as conflict victims were indeed often viewed as among the most vulnerable in the community and lacking in influence. As one conflict victim stated: “Conflict victims have less education and are a minority in this village. We don’t have leverage in the community. If we rely on the community to determine who qualifies for assistance, we won’t get the benefits we deserve” (Morel, Watanabe and Wrobel 2009, 19). In the second stage, villagers developed proposals that were then voted on at community meeting. Communities had discretion over how to allocate funds but were instructed to give priority to conflict victims’ proposals.

In the context of BRA-KDP, civilian conflict victims are the target group (T) while elites (L) are defined as village leaders and those connected to the leaders. BRA-KDP actually presents a difficult context for identifying elite capture because the program was implemented in-depth evaluations of the BRA-KDP program conducted or sponsored by the World Bank in Indonesia. See Barron et al. (2009) and Morel, Watanabe and Wrobel (2009).

20 This section draws heavily on in-depth evaluations of the BRA-KDP program conducted or sponsored by the World Bank in Indonesia. See Barron et al. (2009) and Morel, Watanabe and Wrobel (2009).

21 The BRA defined conflict victims as those who had experienced the death or disappearance of family members due to conflict, house or property destruction, displacement, physical disability, psychological trauma, or loss of economic livelihood.
mented by facilitators employed directly by the program and not affiliated with the village
government. Nevertheless, there is qualitative evidence that village elites still managed to
influence the decision-making process. As one villager stated with respect to BRA-KDP
community meetings: “Meetings are normally attended only by village authorities. Hamlet
heads, religious figures, community leaders and village government officials attend.” And,
according to another: “It is always a group of people who are close to the village authorities
that monopolize the benefits” (Morel, Watanabe and Wrobel 2009, 27).

The excluded group (X) were former GAM combatants, who were expressly prohibited
from benefitting directly from BRA-KDP as they were supposed to have already received
aid through other channels. In many villages, former combatants constituted a powerful and
organized excluded group that was largely dissatisfied with their own reintegration assistance
(Morel, Watanabe and Wrobel 2009).

Anecdotal evidence from BRA-KDP implementers suggests that local context indeed
influenced whether ex-combatants played a positive or negative role in how funds were allo-
cated within communities. According to a World Bank report, former combatants supported
the implementation of BRA-KDP in some villages and tried to extort funds or influence com-
munity decision-making in others (Morel, Watanabe and Wrobel 2009). The notion that
former combatants felt entitled to BRA-KDP assistance is evident in the words of one for-
mer commander: “Everyone should understand that returning GAM are heroes. We should
receive money. There are 1,000 combatants here...and there’s potential for them to conduct
criminal acts if BRA-KDP doesn’t target them. GAM are conflict-affected people as well
and therefore we should also get money” (Morel, Watanabe and Wrobel 2009, 28).

\[\text{22BRA-KDP thus resembled a one-shot game in that the other reintegration aid had already}
\text{been disbursed, implying no expectations of repeated interactions over future aid. Moreover,}
\text{the fact that many former combatants were dissatisfied with their aid likely contributed to}
\text{the view that BRA-KDP presented one of the few remaining opportunities to benefit (Morel,}
\text{Watanabe and Wrobel 2009).}\]
There were also several villages that reportedly opted for equal distribution of funds to all households (known as *bagi rata*), despite strong discouragement from BRA-KDP organizers who feared funds would be spread too thin to provide for meaningful welfare improvements (Morel, Watanabe and Wrobel 2009, 18). Equal distribution reportedly occurred most often in villages where the targeting process had been particularly sensitive, where conflict victims were highly marginalized, or were GAM exerted pressure (Morel, Watanabe and Wrobel 2009, 19). All in all, while BRA-KDP aimed for a program that was transparent, democratic and inclusive, it’s targeting criteria nonetheless created the possibility of competition and conflict.

### 3.2 The Data

The primary data comes from original household surveys of a random sample of 504 civilians, former GAM combatants, and village heads from 75 villages that participated in BRA-KDP. The surveys were implemented in 2008, approximately 12 months after the BRA-KDP program ended. The household survey conducted with civilians provides data for the main outcomes and for classifying conflict victims. We supplement this data with survey data from former GAM combatants.

#### 3.2.1 Measuring ‘competitive’ versus ‘cooperative’ villages

The central empirical objective is to investigate whether the effect of targeting a bigger aid windfall varies conditional on historical relations between the target group (conflict victims) and the excluded group (former combatants). According to the model, outcomes depend on

---

23 For more on the sampling methodology, see the research design memo for the Aceh Reintegration and Livelihood Surveys available at [REDACTED].

24 Civilians are considered conflict victims if they meet any of the following objective criteria: death or disappearance of a family member, personal injury to themselves or a close family member, damage to their home or workplace, or displacement.
whether the threat of capture by the excluded group is credible, which is predominantly a function of its group size \((n_X)\) and its capabilities and costs of contestation \((\Pi_X(\nu_X \cdot \sigma_X))\).

There is little exploitable variation in terms of group size in our sample, so we focus our empirical efforts on measuring the threat of contestation\(^{25}\).

We overlap two measures from the village head survey to classify villages as ‘competitive’ or ‘cooperative’. We use data from the village head surveys that characterizes the nature of relations between ex-combatants and other community members from 2001-2005, the final—and bloodiest—stage of the conflict. Our measure for influence and capabilities \((\nu_X)\) captures whether the village was a GAM stronghold (‘basis GAM’) during that period. Our measure of the quality of group relations \((\sigma_X)\) reflects the extent to which village members supported GAM during the final stage of the conflict, consistent with the logic that the costs of contestation are higher if existing relations are good. We create a binary measure where competitive villages—those in which GAM had a stronghold and lacked village support—are coded as one (1), and all other villages are coded as zero for cooperative (see Appendix B for details). Qualitative reports from BRA-KDP reinforce the notion that both influence and community relations are relevant to understanding GAM’s involvement in BRA-KDP (Morel, Watanabe and Wrobel, 2009).

3.3 Exogenous variation in windfall size

To identify the causal effect of targeting a bigger aid windfall, we exploit exogenous variation in BRA-KDP windfall size. The World Bank initially selected 67 subdistricts to participate in BRA-KDP, with all villages in those subdistricts guaranteed some amount of aid \(^{2009}\). In high-conflict subdistricts, the World Bank imposed an arbitrary threshold at a village population of 300 persons to determine aid amounts. All villages with 0-299 people received an aid windfall in the amount of 120 million rupiah (about $12,000) while all villages with 300-599 people received an aid windfall of 150 million rupiah (about $15,000)—an increase

\(^{25}\)The size of the elite and excluded group is consistently small in the population.
of 30 million rupiah (about $3,000) at the cutoff. This is equivalent to an increase in 100,000 rupiah ($10) per capita, or 560,000 rupiah ($56) per household.

This feature of BRA-KDP makes a regression discontinuity design (RDD) a suitable strategy for estimating causal effects (Imbens and Lemieux, 2008). We use the fact that the area in the immediate vicinity on either side of the exogenous population cutoff resembles a randomized experiment to estimate the treatment effect of windfall size for individuals in competitive versus cooperative villages. Figure 1 shows the distribution of our full sample around the centered population variable as well as for villages classified as competitive and cooperative.

3.4 Estimation Strategy

To test our hypotheses we estimate both the direct effect of targeting a bigger aid windfall on conflict (Prediction 5) as well as whether the effect of targeting a bigger aid windfall varies for competitive versus cooperative villages (Predictions 1 – 4). The direct effect of targeting a bigger aid windfall can be estimated through a regression of the following form:

$$Y_{ij} = \alpha_{ij} + \tau Z_j + \omega R + \epsilon_{ij}$$

where $Y_{ij}$ refers to the outcome for individual $i$ in village $j$. $Z_j$ is a dummy for treatment assignment that equals one for villages to the right of the threshold and zero for those to the left. As $Z_j$ is the variable that captures the effect of windfall size, $\tau$ is the key coefficient of interest.

The $\omega R$ captures all terms included to model flexibly the relationship between the outcome and assignment variable in the vicinity of the threshold, which prevents distant obser-

---

26 This is a ‘sharp’ RD in that we proceed as if the cutoff completely determined treatment assignment.
vations from biasing estimates of the treatment effect at the threshold. We also restrict all analysis to a bandwidth of ± 150 around the centered assignment variable $\tilde{P}_j$, reducing the effective number of villages in our sample to 63. Finally, all analysis takes into account sampling weights and clusters standard errors at the village-level.

To estimate the heterogeneous effect of targeting a bigger aid windfall, we run regressions of the form:

$$Y_{ij} = \alpha_{ij} + \tau Z_j + \delta V_j + \theta Z_j V_j + \eta Z_j \tilde{P}_j + \omega R + \beta_m X'_{jm} + \epsilon_{ij}$$

(2)

where we introduce $V_j$, which equals one for competitive villages and zero for cooperative villages. The main coefficient of interest is $\theta$ on the interaction of $V_j$ and $Z_j$, which captures the interaction effect of targeting a bigger aid windfall in competitive versus cooperative villages at the threshold.

Additionally, in this equation we include a vector of $m$ village-level controls, $X'_{jm}$, to account for the fact that whether a village is competitive or cooperative is not exogenous. We obtain a rich set of pre-treatment controls using data from the 2000 PODES survey, an extensive survey conducted regularly in every Indonesian village. We control for village poverty; terrain and proximity to a forest; remoteness from services, markets and population centers; government capacity; security; and the presence of criminal networks. Descriptive statistics for the main outcomes, the measure of village ‘competitiveness’, and all controls

---

27 Specifically $\omega R = \beta_1 \tilde{P}_j + \beta_2 \tilde{P}_j^2 + \beta_3 Z_j \tilde{P}_j + \beta_4 Z_j \tilde{P}_j^2$, where $\tilde{P}_j$ is the centered population variable. Following on best practices ([Lee and Lemieux 2010](#)), we include linear and quadratic forms of $\tilde{P}_j$ and their interactions with $Z_j$ to control for quadratic trends estimated separately on either side of the threshold.

28 We run some robustness checks with observations from all 75 villages.

29 Centering $\tilde{P}_j$ implies that the effects of interest at the cutoff (where $\tilde{P}_{jk} = 0$) are wholly captured in $\tau$. 

24
Unbiased estimation in an RDD requires assuming that potential outcomes are continuous at the threshold; the context variable for heterogeneous analysis ($V_j$) is continuous at the threshold (Becker and von Ehrlich 2011); and units have not manipulated their scores on the assignment variable so as to affect treatment status (Lee and Lemieux 2010). We provide analysis in Appendix F to support these assumptions. Finally, a well-known concern with regression discontinuity designs is that results can be sensitive to the choice of specification and bandwidth (Lee and Lemieux 2010). We conduct a number of robustness checks to investigate the sensitivity of our main results to different specifications and bandwidths, detailed in Appendix I.

4 Main Results

4.1 Capture

We begin by examining evidence for Predictions 1 – 3, which state that excluded group contestation is more likely in competitive villages than in cooperative ones and that the target group will also receive more in competitive villages. The first results—presented in Table 1—come from questions on the household survey that inquire into whether or not a respondent or their household directly received benefits from BRA-KDP and the total amount (in monetary terms) of goods received. The model’s predictions regard changes in the overall share of resources allocated to each group as windfall size increases. Hence,

30 While examining the correlates of village competitiveness is beyond the scope of this paper, we present some insights into the determinants of village type in Appendix D.

31 Figures for all main results can be found in Appendix G.

32 We make the simplifying assumption that shares are distributed equally among group members.
we use the survey questions to look at changes both in the per capita share of the windfall received and the nominal amount received.\footnote{To relate the empirics to the model, we assume that we can draw conclusions about changes in shares from looking at changes in nominal amounts received. For example, if a group receives a smaller amount from a bigger windfall this implies that they actually received a smaller share.}

The descriptive statistics in Appendix C.1 indicate that approximately 67 percent of victim and 56 percent of former combatant respondents report their household received some assistance from BRA-KDP, with the average amount for victims totaling about 760,000 rupiah (about $76) and about 570,000 (57) for former combatants. Supplementary data shows that the overwhelming majority of funds were used for private goods, with about 95 percent of all recipients reporting that they primarily received goods in the form of cash that was then put towards livelihood activities (Barron et al., 2009; Morel, Watanabe and Wrobel, 2009). This suggests that the measures presented here capture how the bulk of BRA-KDP aid was allocated.

The results in Table 1 generally support the hypotheses. We see in the first column that targeting a bigger aid windfall in competitive contexts had no effect on the likelihood of conflict victims receiving aid. This is consistent with other suggestive evidence that targeting was effective, insofar as conflict victims were nowhere excluded from the program and effectively received assistance (see Appendix C for more evidence). Consistent with the predictions of the model, it is the amount they receive that varies with contexts. For the remaining columns, we regard a positive and significant coefficient on the interaction of windfall size and village competition as support for Predictions 1 and 3, indicating that the effect of windfall size on benefits received by $T$ and $X$ was bigger in competitive villages than in cooperative ones. The results show that targeting a bigger aid windfall clearly increased the amount of aid going to conflict victims on the order of about 1.26 million rupiah in competitive versus cooperative villages (about $126) (column 2, Panel A). Additionally, the
bigger windfall caused conflict victims to receive an additional .93 percent of the aid in competitive villages.

Our theory predicts that targeting a bigger aid windfall in competitive environments will increase both the probability that the excluded group (and elites) obtain benefits and the amounts they receive. The results for ex-combatants presented in Panel B of Table I are also consistent with Prediction 3. We find that targeting a bigger aid windfall had a significant effect on the likelihood a former combatant received aid in competitive villages compared to cooperative ones; ex-combatants, who weren’t supposed to receive anything in the first place, were 86 percentage points more likely to receive aid in those villages. There is also suggestive evidence that former combatants received an additional 860,000 rupiah (about $86) in competitive villages with bigger windfalls ($p = .069$), amounting to an extra .72 percent of the per capita share of the total windfall ($p = .051$). While we cannot directly estimate the amount or share of the windfall going to $L$ with this data, if both the target group and excluded group receive more in competitive villages then $L$ will necessarily receive less. We provide more direct evidence for Prediction 2 below.

While these results broadly support the hypotheses, we consider the possibility that they would not accurately reflect capture if there was secondhand redistribution. To assess this possibility, we use data from the surveys on what happened to goods from BRA-KDP within one month of receiving them. While the survey asked explicitly whether the goods were given or taken away, no one reported that this was the case. The same general pattern holds for former combatants (see Appendix H). This strongly suggests that the data reflects the genuine final allocation of goods in BRA-KDP.

We look for further evidence to support Predictions 1 – 3 in Table 2 which presents multiple measures of perceptions of who benefitted from BRA-KDP and whether capture occurred using data from conflict victims (Panel A) and all civilians (Panel B). We include all civilians here as these measures are relevant to all individuals within the community. Of note, whereas we can expect conflict victims and civilians both to report similar perceptions
of ex-combatant capture, the broader civilian population might under-report elite capture insofar as it includes members of the elites and their affiliates.

To shed more light on how the target group fared, we turn to the first two columns of Table 2. Column one reports whether people disagreed with the statement that ‘the activities selected [in BRA-KDP] did not benefit conflict victims.’ The second column presents a more general measure for whether people believe that conflict victims do relatively well compared to others when it comes to allocating resources within the village. These measures provide little additional support for Prediction 1, however. The third column provides further evidence to support Prediction 3, however. Targeting a bigger aid windfall in competitive villages had a significant positive effect on the share of both conflict victims and especially civilians who agreed with the statement that ‘the [BRA-KDP] activities benefitted ex-GAM...too much.’ Similarly, conflict victims in competitive villages with bigger windfalls were also significantly more likely to say that former combatants tend to do well relative to others in the community when it comes to allocating resources in the village (column four).

The final two columns present evidence for Prediction 2 that elite capture is more likely in cooperative villages. These columns report results from survey questions inquiring into whether people feel that ‘friends and family of the village leader’ (column five) or ‘people that are well connected with the local government’ (column 6) tend to do well relative to others when it comes to allocating resources within the village. The significant negative interaction in Panel C indicates that effect of targeting a bigger windfall on the benefits for elites and those connected to them is greater in cooperative communities. Notably, the pattern of results is also consistent with our expectations about the data; whereas both conflict victims and civilians report ex-combatant capture, conflict victims are more likely than civilians to report elite capture. All in all, the evidence presented so far generally supports the first

---

34 The weakly significant negative coefficients in the first column could reflect the fact that equal-sharing is also more likely in such contexts and the division of aid across all community members means that victims would have benefitted less.
three predictions.

4.2 Equal distribution

We next investigate Prediction 4 about the conditions under which equal distribution occurs. The model indicates that equal distribution is more likely in competitive communities on the brink of bargaining breakdown. We therefore regard as support any evidence that suggests that equal distribution was more likely to occur in more competitive villages as windfall size increased.

Table 3 presents results for conflict victims (Panel A) and for all civilians (Panel B) on whether they preferred equal sharing (columns 1 and 3) and whether the village actually decided on equal-sharing with BRA-KDP funds (columns 2 and 4). We find clear evidence that conflict victims—although not civilians in general—were more likely to want equal distribution in competitive villages as windfall size increased.

One challenge with these results is that using individual-level responses to report on a village-level outcome might introduce error if there is disagreement on what transpired amongst individuals within a village. We therefore create a village-level measure of equal distribution that equals one for all villages in which at least 80 percent of the respondents reported that equal distribution actually occurred and zero otherwise (19 of 63 villages). The results, presented in Panel C, further support the prediction that equal distribution is more likely in competitive villages that receive bigger windfalls.

Importantly, the notion that equal distribution was more likely to occur in villages with tense relations between former combatants and other villagers finds support not only in the quantitative data but also in qualitative reports. Morel, Watanabe and Wrobel (2009, 19-20) note that former combatants often pushed for bagi rata in BRA-KDP recipient communities and in some cases even imposed it. Also, consistent with our conceptualization of ‘competitive villages’, it was those locations with low levels of community trust and cohesion in which
villagers opted for equal division over collaborative projects.\footnote{This makes equal-sharing different from public goods provision. While both equal-sharing and public goods provision present an opportunity for all community members to benefit, the latter requires a greater capacity for collective action.}

Moreover, reports suggest that equal distribution was viewed by villagers as a means of conflict avoidance, consistent with broader trend in BRA-KDP of allocating benefits to needy non-victims to avoid “social envy and tensions that might result from excluding part of the community from the assistance” (Morel, Watanabe and Wrobel, 2009, 17-19). All in all, the prevalence of equal distribution strongly suggests that communities often opted for allocation solutions aimed at mitigating social divisions even if such solutions ran counter to the known targeting objectives and economic goals of the program. It also raises questions about whether equal-sharing succeeded in ameliorating tensions within recipient communities, which we explore next along with evidence for Prediction 5.

### 4.3 Conflict

Finally, we evaluate evidence for the effect of targeting a bigger aid windfall on conflict within the community, which we conceptualize as heightened divisions between the community and excluded group that arises when the latter contests the aid allocation. According to Prediction 5, the likelihood of contestation is increasing in the size of the windfall because the bigger the pie the greater the incentives for the excluded group to expropriate funds. This prediction is not conditional on whether villages are historically competitive so we focus on estimating the effect of windfall size using equation 1. We also investigate the possibility implied by (but not derived from) the model that, where equal-sharing occurs, bargaining breakdown is avoided and conflict averted. This suggests that targeting a bigger aid windfall would result in less conflict in competitive villages.

We look for evidence of these patterns in Table\[4\] which presents five measures of social divisions presented for conflict victims (Panel A) and civilians (Panel B). The first and second
columns present the proportion who agree with the general statement that “disagreements [over BRA-KDP] were not well handled.” Prediction 5 relates specifically to social divisions between the excluded group and the rest of the community, captured in columns 3-6, which report perceptions of divisions between ex-combatants and village members and as well as an index of social acceptance of former GAM. The final four columns report whether differences between “people who have received assistance from government and those who have not” are a source of division in the village (columns 7-8) and whether people feel that problems in the village normally tend to endure rather than be resolved satisfactorily (columns 9-10).

We find limited support for Prediction 5. While there is no evidence that targeting a bigger aid windfall increased perceptions that disagreements were badly handled or reduced acceptance of former combatants, we observe in column 4 suggestive evidence for a direct effect of windfall size on divisions with former combatants for both victims ($p = .054$) and civilians ($p = .058$) when controlling for village competitiveness and its interaction with windfall size. Since this specification controls for the possibility of conflict amelioration through equal-sharing, these results are informative. They are also consistent with findings from an impact evaluation of the BRA-KDP program that finds that the program decreased acceptance of former combatants (Barron et al., 2009).

The weaker evidence that BRA-KDP potentially, if unintentionally, exacerbated social divisions between former combatants and civilians is reassuring. In some ways, however, BRA-KDP presents a difficult context in which to find support for this prediction because program management actively intervened to mediate conflict and diffuse tensions throughout implementation. Of known attempts by former combatants to extort funds in eight subdistricts, further socialization and intervention by the donor led GAM to withdraw its demands in all known cases (Morel, Watanabe and Wrobel, 2009, 31).

Interestingly, the even-numbered columns in Table[4] provide some support for the notion that targeting a bigger aid windfall might reduce conflict in competitive villages compared to cooperative ones, consistent with the logic of equal-sharing. On one hand, evidence from
conflict victims suggests that bigger windfalls in competitive villages increased perceived divisions between those who received aid and those who did not (column 8). On the other hand, the data indicates that, for conflict victims and civilians alike, targeting a bigger aid windfall caused a greater decrease in the perception that village conflicts are more likely to endure in competitive villages (column 10). This pattern of results is consistent with the notion that equal-sharing occurs in very divided communities and can serve as a means of conflict avoidance.

4.4 Discussion

Overall, in accordance with the predictions of the model, we find that targeting a bigger aid windfall indeed caused more elite capture in cooperative villages and more excluded group capture in competitive villages. Moreover, we find that the target group received more of the benefits to which it is entitled in competitive villages with bigger windfalls. This supports the logic of the model that elites in competitive villages have an incentive to give more to the target group in such contexts to mitigate the threat of the excluded group expropriating the wealth. Importantly, we also find that equal-sharing—a particular form of capture in which the aid windfall is divided equally among all members of a community—was more likely to occur in intensely competitive villages where contestation is likely. While we find more limited evidence that targeting a bigger aid windfall resulted in overall higher levels of conflict, the results suggest that conflict is less likely to endure in competitive communities, consistent with the notion that equal-sharing serves to mitigate conflict.

While these results are based on a single instance of aid targeting in Aceh, Indonesia it is important to consider whether they generalize to other contexts. In some ways Aceh is an ‘easy’ case for testing the hypotheses because the targeting criteria coincided with the salient divisions within the community. Aceh is an ethnically and religiously homogeneous region, however, and one potential concern might be that this makes it difficult to extrapolate results to environments in which ethnic (or social) divisions interfere with the groups created
by targeting. While we might observe different results in such contexts, outcomes can still plausibly be explained by our theoretic framework. In ethnically (or otherwise) divided societies, donors have become increasingly aware of the dangers of reinforcing social divisions (Pottier, 1996) and now often intentionally target programs to cut across salient cleavages. Our framework suggests that, where this occurs, there will be better relations between the target and excluded groups, opening the door for more elite capture. There are, however, instances in which divisions and vulnerability correlate and donors target in a way that reinforces these cleavages. We would then expect more antagonistic relations between the target and excluded groups and more excluded group capture, similar to what we observe in ‘competitive’ villages in Aceh.

More broadly, we expect that the implications of the model could be tested in any context where the two scope conditions are met. This could include a wide range of communities, settlements, or refugee camps, regardless of whether they are post-conflict or not. While it is difficult to know how widely these conditions hold, the anecdotal research on distributional conflict over aid suggests they are widespread. For instance, in his research on emergency cash transfers for food in the Niger Delta, de Sardan (2014) explicitly links jealousy within the community to how beneficiaries were targeted and also that there is a big gap between what community members say to evaluators and what actually happens. Similarly, a representative of the donor agency Concern Worldwide commented that “As long as you choose one group that receives aid and one that doesn’t, there is tension.” De Sardan also notes that: “Cash transfers are not the devil...They are sharpening conflicts that are already there.” The theory and evidence presented here suggest that the unintended consequences of targeted aid transfers merit systematic investigation in different settings.

37 ibid.
5 Conclusion

This paper motivates the importance of considering the economic and social effects of targeting aid within communities when that aid is targeted at vulnerable groups and when donor agencies have low monitoring and enforcement capacity. We contend that in such contexts, targeting creates a bargaining environment in which three groups in the community—the target group, an excluded group, and elites—compete over how to divide the funds. By highlighting the potential for the excluded group to contest the distribution, we explain not only variation in elite and excluded group capture but also how the target group—a group that is too weak to contest the allocation—can nonetheless influence the outcome and receive more of the aid to which it is entitled.

Overall, the theory and findings presented here have four implications. First, they suggest that more attention should be given to the influence of competition and bigger windfalls on targeting outcomes, as it is the interaction of both that yields counter-intuitive dynamics. Second, they emphasize the importance of paying attention to the role and importance of the excluded group in explaining the outcomes of targeted programs. The analysis suggests that whether aid is distributed to the target group occurs not because of norms of generosity but rather because of the coercive power of the excluded group. This leads to the third, and most surprising, observation that targeting may be more effective in competitive environments because elites have greater incentives to distribute aid to the target group. This observation runs counter to preconceived notions that the target group will benefit more in cooperative villages and suggests that the final allocation of aid to vulnerable populations and the excluded group might follow a logic of conflict resolution rather than of social justice. Finally, the findings emphasize that equal-sharing—which is observed in numerous societies—may be better understood as a means to avoid conflict than as an expression of social justice.

Taken together, these results highlight a possible tension between the economic objec-
tives of targeting—efficiently reaching the target group to improve their welfare—and the humanitarian goal of not exacerbating divisions within communities. They also underscore the importance of recognizing that targeting under certain conditions invariably induces a bargaining process among different groups within a community and it is ultimately the nature of community-level power dynamics and group competition that drive the outcomes of that process.
References


**URL:** http://www.nrc.no


OCHA. 2015. “Global Humanitarian Funding in 2015: Totals per sector.”.


Wahlberg, Katerina. 2008. “Food aid for the hungry.”.

**URL**: https://www.globalpolicy.org/world-hunger/46251-food-aid-for-the-hungry.html


Figure 1: Distribution of individual-level observations around the population threshold centered at zero. Top panel shows the full sample; bottom panel shows the distribution of competitive and cooperative villages.
## 7 Tables

<table>
<thead>
<tr>
<th></th>
<th>Panel A Conflict Victims</th>
<th></th>
<th>Panel B Former Combatants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) Received Assistance</td>
<td>(2) Amt. received</td>
<td>(3) Share received</td>
</tr>
<tr>
<td>Prediction for θ</td>
<td>0</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Windfall x Competitive (θ)</td>
<td>0.30</td>
<td>1.26***</td>
<td>0.93**</td>
</tr>
<tr>
<td></td>
<td>(0.29)</td>
<td>(0.47)</td>
<td>(0.38)</td>
</tr>
<tr>
<td>Windfall (τ)</td>
<td>-0.22</td>
<td>-0.54</td>
<td>-0.58</td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.46)</td>
<td>(0.39)</td>
</tr>
<tr>
<td>Competitive (δ)</td>
<td>0.26</td>
<td>-0.48</td>
<td>-0.39</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.38)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>Constant</td>
<td>.77***</td>
<td>1.09***</td>
<td>.90**</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.45)</td>
<td>(0.37)</td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>129</td>
<td>129</td>
</tr>
</tbody>
</table>

Notes: *** p < .01, ** p < .05, * p < .10. All results are from survey weighted least squares regressions estimated separately for victims and former combatants. The main estimand of interest is the interaction on windfall size (Z) and village competitiveness (V); both parameters also enter separately. All regressions also fully interact Z with linear and quadratic forms of the centered running variable; include village level controls; and cluster standard errors at the village level.

Table 1: Allocations in BRA-KDP
<table>
<thead>
<tr>
<th>Benefits for T</th>
<th>X Capture</th>
<th>L Capture</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Victims benefited from BRA-KDP</td>
<td>(2) Victims benefit more than others</td>
<td>(3) Excom benefited from BRA-KDP</td>
</tr>
<tr>
<td>Prediction for ( \theta )</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**Panel A: Conflict Victims**

<table>
<thead>
<tr>
<th>Windfall x Competitive (( \theta ))</th>
<th>-0.13</th>
<th>0.18</th>
<th>.31*</th>
<th>.56**</th>
<th>-0.60**</th>
<th>-0.81**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windfall (( \tau ))</td>
<td>-0.02</td>
<td>0.10</td>
<td>-0.01</td>
<td>-0.13</td>
<td>.96***</td>
<td>.87***</td>
</tr>
<tr>
<td>Competitive (( \delta ))</td>
<td>0.04</td>
<td>0.00</td>
<td>-0.19</td>
<td>0.00</td>
<td>.53**</td>
<td>.66***</td>
</tr>
<tr>
<td>Constant</td>
<td>1.03***</td>
<td>0.32</td>
<td>0.06</td>
<td>0.00</td>
<td>-0.57**</td>
<td>-0.48**</td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>129</td>
<td>129</td>
<td>129</td>
<td>127</td>
<td>127</td>
</tr>
</tbody>
</table>

**Panel B: All Civilians**

<table>
<thead>
<tr>
<th>Windfall x Competitive (( \theta ))</th>
<th>-0.22*</th>
<th>-0.07</th>
<th>.48***</th>
<th>0.45</th>
<th>-0.17</th>
<th>-0.46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windfall (( \tau ))</td>
<td>0.00</td>
<td>0.17</td>
<td>-0.20</td>
<td>-0.36</td>
<td>0.12</td>
<td>0.20</td>
</tr>
<tr>
<td>Competitive (( \delta ))</td>
<td>0.05</td>
<td>0.28</td>
<td>-.35**</td>
<td>-0.12</td>
<td>0.16</td>
<td>0.30**</td>
</tr>
<tr>
<td>Constant</td>
<td>1.00***</td>
<td>0.31</td>
<td>.33***</td>
<td>0.24</td>
<td>-0.16</td>
<td>-0.17</td>
</tr>
<tr>
<td>N</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>317</td>
<td>314</td>
<td>312</td>
</tr>
</tbody>
</table>

**Notes:** *** \( p < .01 \), ** \( p < .05 \), * \( p < .10 \). All results are from survey weighted least squares regressions estimated separately for victims and all civilians. The main estimand of interest is the interaction on windfall size (\( Z_j \)) and village competitiveness (\( V_j \)); both parameters also enter separately. All regressions also fully interact \( Z_j \) with linear and quadratic forms of the centered running variable; include village level controls; and cluster standard errors at the village level.

Table 2: Perceptions of Capture
<table>
<thead>
<tr>
<th>Prediction for θ</th>
<th>Panel A: Conflict Victims</th>
<th>Panel B: All Civilians</th>
<th>Panel C: Village measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) Preferred bagi rata</td>
<td>(2) Vil chose bagi rata</td>
<td>(3) Preferred bagi rata</td>
</tr>
<tr>
<td>Windfall x Competitive (θ)</td>
<td>.75** (.30)</td>
<td>.65* (.35)</td>
<td>0.31 (.36)</td>
</tr>
<tr>
<td>Windfall (τ)</td>
<td>-0.33 (.28)</td>
<td>-0.38 (.41)</td>
<td>-0.39 (.26)</td>
</tr>
<tr>
<td>Competitive (δ)</td>
<td>-0.36 (.28)</td>
<td>-0.06 (.25)</td>
<td>0.13 (.27)</td>
</tr>
<tr>
<td>Constant</td>
<td>.66*** (.25)</td>
<td>.58* (.34)</td>
<td>.51** (.23)</td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>129</td>
<td>317</td>
</tr>
</tbody>
</table>

Notes: *** p<.01, ** p<.05, * p<.10. All results are from survey weighted least squares regressions estimated separately for victims objectively and all civilians. Panel C presents a village-level measure of whether a village chose equal division that equals 1 for all villages in which at least 80 percent of the survey respondents in that village recall that equal-sharing occurred. The main estimand of interest is the interaction on windfall size ($Z_j$) and village competitiveness ($V_j$); both parameters also enter separately. All regressions also fully interact $Z_j$ with linear and quadratic forms of the centered running variable; include village level controls; and cluster standard errors at the village level.

Table 3: Equal Distribution
<table>
<thead>
<tr>
<th></th>
<th>Disagreements handled</th>
<th>Divisions with excom</th>
<th>Acceptance of excom (index)</th>
<th>Divisions with aid recipients</th>
<th>Village conflict endures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Prediction for $\tau$</td>
<td>$+$</td>
<td>$+$</td>
<td>$+$</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Prediction for $\theta$</td>
<td>$-$</td>
<td>$-$</td>
<td>$-$</td>
<td>$-$</td>
<td>$-$</td>
</tr>
<tr>
<td>Panel A: Conflict Victims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windfall ($\tau$)</td>
<td>-0.02</td>
<td>0.00</td>
<td>0.06</td>
<td>0.16*</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(.04)</td>
<td>(.05)</td>
<td>(.08)</td>
<td>(.10)</td>
<td>(.10)</td>
</tr>
<tr>
<td>Windfall x Competitive ($\theta$)</td>
<td>0.01</td>
<td>0.02</td>
<td>0.08</td>
<td>.86***</td>
<td>-53**</td>
</tr>
<tr>
<td></td>
<td>(.06)</td>
<td>(.09)</td>
<td>(.11)</td>
<td>(.32)</td>
<td>(.23)</td>
</tr>
<tr>
<td>Competitive ($\delta$)</td>
<td>-0.04</td>
<td>0.02</td>
<td>-0.04</td>
<td>-.42*</td>
<td>.58**</td>
</tr>
<tr>
<td></td>
<td>(.05)</td>
<td>(.07)</td>
<td>(.10)</td>
<td>(.24)</td>
<td>(.24)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.02</td>
<td>0.03</td>
<td>-0.06</td>
<td>-0.08</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(.04)</td>
<td>(.04)</td>
<td>(.06)</td>
<td>(.10)</td>
<td>(.15)</td>
</tr>
<tr>
<td>N</td>
<td>129</td>
<td>129</td>
<td>129</td>
<td>129</td>
<td>129</td>
</tr>
<tr>
<td>Panel B: All Civilians</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windfall ($\tau$)</td>
<td>0.03</td>
<td>0.04</td>
<td>0.09</td>
<td>0.12*</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>(.05)</td>
<td>(.08)</td>
<td>(.06)</td>
<td>(.10)</td>
<td>(.10)</td>
</tr>
<tr>
<td>Windfall x Competitive ($\theta$)</td>
<td>0.07</td>
<td>-0.03</td>
<td>0.13</td>
<td>0.29</td>
<td>-55**</td>
</tr>
<tr>
<td></td>
<td>(.11)</td>
<td>(.06)</td>
<td>(.11)</td>
<td>(.29)</td>
<td>(.24)</td>
</tr>
<tr>
<td>Competitive ($\delta$)</td>
<td>-0.05</td>
<td>0.00</td>
<td>-0.06</td>
<td>-.34*</td>
<td>.45*</td>
</tr>
<tr>
<td></td>
<td>(.07)</td>
<td>(.04)</td>
<td>(.10)</td>
<td>(.19)</td>
<td>(.23)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.04</td>
<td>0.00</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>(.03)</td>
<td>(.06)</td>
<td>(.05)</td>
<td>(.09)</td>
<td>(.16)</td>
</tr>
<tr>
<td>N</td>
<td>317</td>
<td>317</td>
<td>316</td>
<td>317</td>
<td>317</td>
</tr>
</tbody>
</table>

Notes: *** $p<.01$, ** $p<.05$, * $p<.10$. All results are from survey weighted least squares regressions estimated separately for victims objectively defined (Panel A) and all civilians (Panel B). The main estimand of interest in odd-numbered columns is the effect of windfall size ($Z_{ij}$). The main estimand of interest in even-numbered columns is the interaction on windfall size ($Z_{ij}$) and village competitiveness ($V_j$); both parameters also enter separately. All regressions also fully interact $Z_{ij}$ with linear and quadratic forms of the centered running variable and cluster standard errors at the village level. Regressions in even-numbered columns also include village-level controls.

Table 4: Social conflict